

# English through Medicine

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STUDENT'S BOOK

English  
through Medicine

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through Medicine  
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*Dedicated to Adrienne Hunter*



## ACKNOWLEDGMENTS

*The authors of this book have had the great good fortune to work with English teachers and medical doctors all through the country. We would like to thank them all for their advice, encouragement and suggestions in all respects.*

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*Behind all of these people have been our families, who believed in this project from the start, and have supported and encouraged us all along the way.*

*We'd like to acknowledge each other for a productive and pleasant coauthoring experience.*



## FOREWORD

*It has been a rewarding experience to have a long and fruitful relationship with a hardworking and professional group of English teachers at the Camagüey Medical University. The most remarkable characteristic of this group is that it is almost entirely composed of intelligent and fine women. In my professional development they have been very helpful, especially with regard to the improvement of my English language skills and at the same time they have been receptive to my advice based on my personal experience while working in Anglo speaking countries. They, together with other experienced teachers from other medical universities, are the authors of these two books, one for students and the other for teachers. It is a particular pleasure for me to present to teachers and students these wonderful books **-English through Medicine I** -for both, students and teachers.*

*These books fulfil an important role in the English language preparation of health professionals who at some time in their careers should accomplish internationalist missions in Anglo speaking countries or attend international scientific meetings. I have witnessed the difficulties in proper communication in English of our health professionals in West Africa and Guyana, especially with regard to doctor-patient communication, interactions with other doctors, nurses, health technologists and medical students.*

*Therefore, a book “intended to develop skills for comprehension of written texts and articles, active listening and understanding spoken medical language, writing essays and short clinical reports” is very welcomed. Of course, the student’s book is not proposed for beginners. It is addressed to students of clinical years who already have some command of the language and have undergone or are attending the clinical rotations. Each unit is related to a relevant clinical topic, it means the text is very well based on medical care practice. At the end, a very interesting and important topic is*

*included -Introduction to the language of research, with which the textbook comprises a very complete and sound content. That is why; I strongly recommend the utilization of this material for English language training of health professionals, as part of their preparation for health missions abroad.*

*I cannot end this forenote without expressing my appreciation to the authors for the wonderful work they have done, one step forward towards excellence in foreign language education.*

*Professor Arturo Menéndez Cabezas, MD, PhD, Chairman of  
the Provincial Health Scientific Council, Camagüey.*

## **PREFACE**

*The first edition of this textbook including the teacher's book was published only 3 years ago. Over the period of some three years, it has been the subject of much debate, discussion and observation as has been the gratification for many who have found in it a helpful, practical and functional teaching/learning material. The fact is that we teachers will never run out of new questions, new problems, new ways of looking at our students, and new ways of looking at ourselves. The teaching of English is in a permanent state of flux, with new theories, practices and materials erupting all over the world almost on a daily basis.*

*In shaping and reviewing this new edition, the authors have committed themselves to making the student's and the teacher's book as useful as possible to both teachers and learners in the first year of their medical English coping with the demands of modern language acquisition and learning.*

*For this new edition, some units have been partially reworked to provide a more explicit approach to grammatical accuracy and a number of exercises have been extensively revised to come within the reach for more guided or freer language practice activities.*

*Some exercises have been grouped together to allow for extensive language work and to facilitate the thematic sequence of the topics introduced and developed during the tasks. New methodological implications and additional information for teachers' self preparation have been carefully considered and hopefully shared.*

*The newly inserted activities; both content and language focused have been taken from up to date materials; and the references and bibliography are intended to reflect much of our state of knowledge and interest.*

*A big problem is still the mass of materials which the textbook presents itself for inclusion in the syllabuses or course plan, what to put in or what to leave out is therefore the users' choice or teacher's-staff thoughtful decisions.*

*The authors, who are also the editors of this work, have checked with sources believed to be reliable that the information contained herein is accurate and in consonance with the standards accepted at the time of publication. However, teachers and learners will always be encouraged to confirm the medical information included in the tasks content. This recommendation is particularly important in connection with the diagnostic procedures suggested and the pharmacological management of the conditions chosen for each unit.*

*We wish to express our appreciation to our many colleagues, who have offered constructive criticism and helpful suggestions. We acknowledge specially Isabel Pérez Ortiz, EFL, Arturo Menéndez Cabezas, MD, PhD, Clara García Barrios MD, PhD and Alba Estrada Molné, MSc. Again, we thank our families for their love, patience, cooperation and support.*

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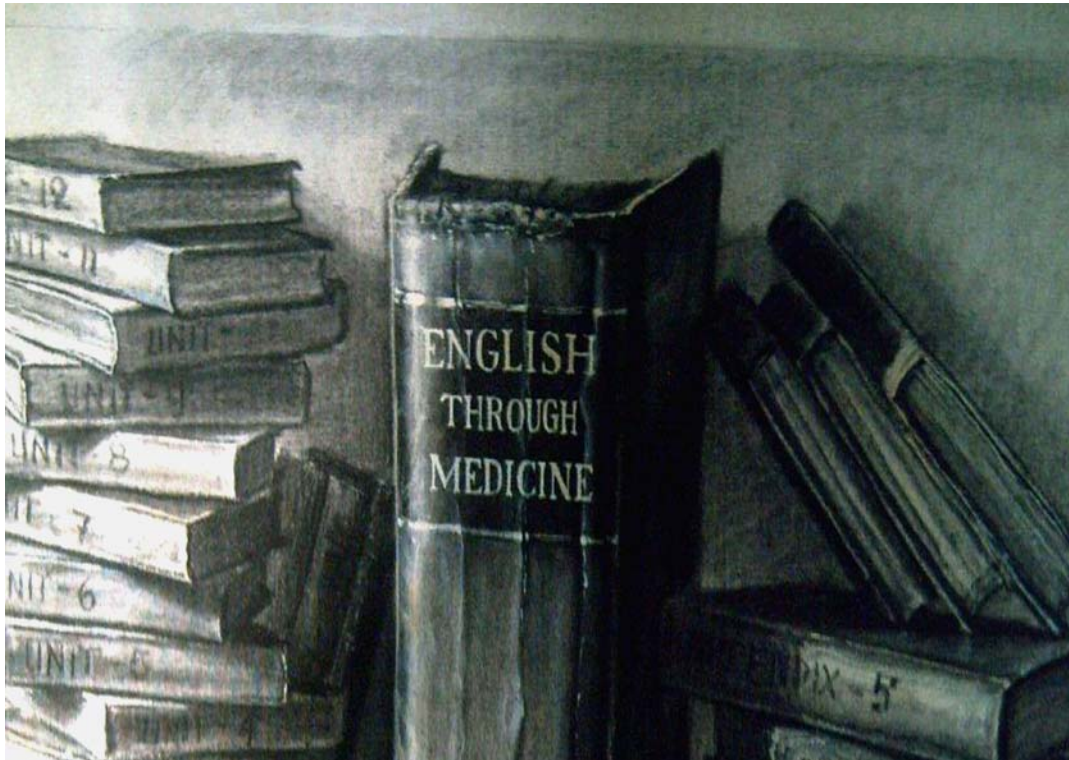
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**To the learner**

Good Medicine is a remarkable blend of science, technology, skill and humanism. Much of your education as a medical student takes place in the teaching hospital where the social contact between patients and physicians is extraordinary, incorporating a ready confidence and deep frankness unknown to any other human interaction. You as a student-physician have to honor this personal expectation while simultaneously learning new language skills and recalling a worth of basic science.

It is the need for communication skills in a foreign language that sets the stage for this textbook which the authors have reached out both to honor Hippocrates and to help you in your search for clinical medicine language use.

The authors hope that the wide variety of materials and activities included in it will stimulate your interest and involve you in a rewarding learning experience.

The following masterwork expresses in itself the philosophy this modest textbook kind-heartedly means to teach.

### ***The oath of Hippocrates***

*I SWEAR by Apollo the physician and Æsculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment,*

*I will keep this Oath and this stipulation — to reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction,*

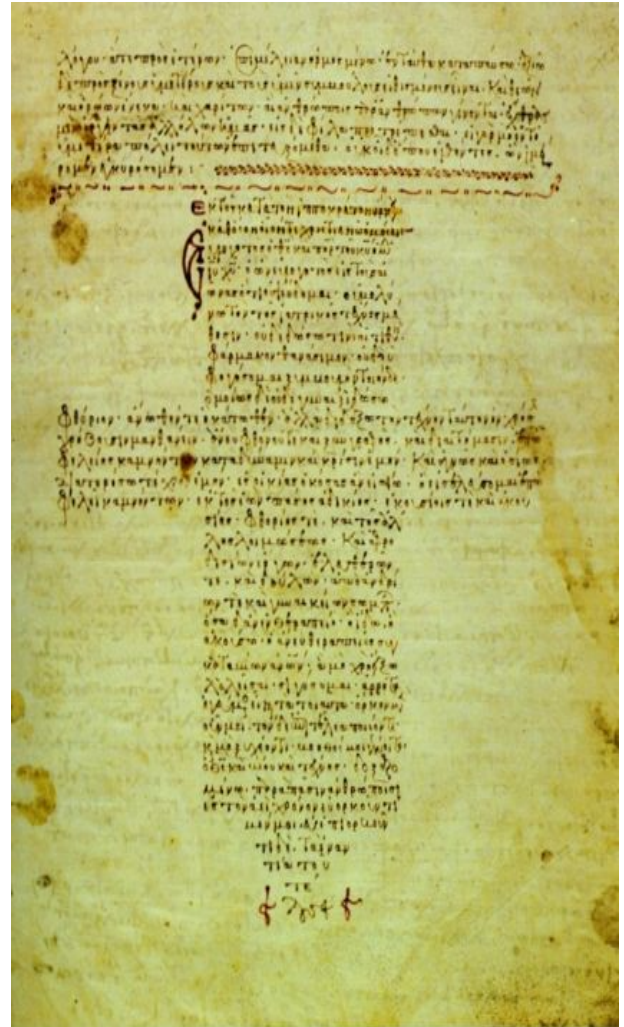
*I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others.*

*I will follow that system of regimen which, according to my ability and judgement, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous.*

*I will give no deadly medicine to any one if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art.*

*I will not cut persons labouring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further, from the seduction of females or males, of freemen and slaves. Whatever, in connection with my professional service, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad,*

*I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, in all times. But should I trespass and violate this Oath, may the reverse be my lot.<sup>1</sup>*



<sup>1</sup> *Oath of Hippocrates.* In: Harvard Classics, Volume 38. Boston: P.F. Collier and Son, 1910.

## ***Introduction***

***English through medicine I*** is the first of a two-level course addressed to students undergoing their medical school training. It begins with instruction in the language essentials of **data acquisition** and **analysis** (history, physical examination, investigations, diagnostic and therapeutic plan), as well as specific advice and practice on **medical case write-up**, through some of the topics of the core clinical and surgical rotations.

The course-book material has been designed to meet specified needs, particularly those which are associated with the role of English in doctor-patient communication, spoken interaction between doctors, doctors and nurses, medical students, practicing doctors, consultants and other medical personnel in hospitals.

The book is intended to develop skills for comprehension of written texts and articles, active listening and understanding spoken medical language, writing essays and short clinical reports. It exposes learners to language in use with opportunities to review areas of grammar, or functional language, which may still be posing special difficulties.

The general content and overall plan of the material is adapted to the needs of its users and conforms to the topics outlined for each of the units.

### **Introduction to English for Medicine**

**Unit 1:** Hypertension

**Unit 2:** Myocardial Infarction

**Unit 3:** Tonsillitis

**Unit 4:** Pneumonia

**Unit 5:** Bronchial Asthma

**Unit 6:** Peptic Ulcer

**Unit 7:** Appendicitis

**Unit 8:** Breast Cancer

**Unit 9:** Obstetrics and Gynecology

**Unit 10:** Coma

**Introduction to the language of research**

**How can the book help you?**

The course is designed both for use in a class setting, with the help of your teacher, and for individual training without access to a teacher. All the units are self-contained and deal with one particular topic indicated by the title of the unit.

Textbook materials provide different tasks, by means of varied materials and exercises in order to promote the skills of:

*Listening* , *speaking* , *reading* , and *writing*  about medical issues. They grant background for the systematic revision and review of both, forms and functions previously taught, allows for a general level of communicative competence in English, which will make it possible for you to determine the patient's own view of the problem during the history taking by inquiring about presenting symptoms, previous illnesses, illnesses in the patient's family, living environment, work, family relationships, and habits. It also includes language for giving instructions during the physical examination, informing the patient of the results of his examination, explaining to the patient the nature of the illness and any necessary investigations as well as giving instructions about treatment itself. On the other hand, it comprises practical activities for the use of specific language for doctor-doctor communication such as case presentations, reports and discussions on particular features of the disease management, all of which requires the ability to move from a technical to a standard register and vice versa. Vocabulary work is focused on basic medical lexicon apart from functional vocabulary such as prepositions, auxiliary verbs, articles, etc.

The *Have a look* sections  provide summaries of key grammar revision extended notes as well as essential language functions that can serve both, as basis for grammatical awareness and as means for practicing new or especially difficult structures. They can as well be used for immediate consolidation or for later revision or remedial work. These sections are followed by controlled and/or free communicative grammar activities which might serve as feedback inasmuch as they could help you look critically at your own performance.

**Course components**

The course consists of a **Student's Book**, a **Teacher's Book**, and a **compact disc containing the audio texts**.

**Student's Book:** The Student's Book contains an **introductory section** presented under the heading *Introduction to English for Medicine*; a unit which is designed to initiate learners into the rudiments of the job-specific English of non-native speakers who are being trained for a career in the field of medicine. **Ten units** that cover all four-language skills, aimed at providing a logical framework for learning and applying conceptual information based broadly around ten especially selected medical topics through a variety of exercise types used to develop skills in listening, speaking, reading, writing, grammar, vocabulary and pronunciation. A **closing unit** intended to furnish the learners with essential terminology that demonstrates how research findings can be understood, presented and/ or reported, followed by a **glossary of research terms** listed at the end of this unit for easy reference. Five **appendices** that contain useful language hints and additionally supplemented materials that may help students meet individual learning needs and a **general glossary of medical terms**.

#### **Appendix 1**

Contains key productive vocabulary lists presented in semantically related sets that comprise:

- ✓ Most common names of specialties, subspecialties and specialists.
- ✓ Layman's and medical terminology.
- ✓ Major roots, prefixes and suffixes from which medical lexis is formed.

#### **Appendix 2**

Provides a widely comprehensive set of hospital-English-questioning models.

#### **Appendix 3**

Holds a compilation of generic and brand drug names and their classification, some useful terms to express values and measurements, some routes of administration and their corresponding abbreviations.

#### **Appendix 4**

Includes a listing of useful language hints to describe investigations or diagnostic studies in the management of the medical conditions included in the general contents plan.

#### **Appendix 5**

Offers an inventory of common medical abbreviations and symbols.

#### **Using the glossary**

Both glossaries (research and medical) are reference sections alphabetically ordered that list, define and explain the core language for the range of topics included in the book.

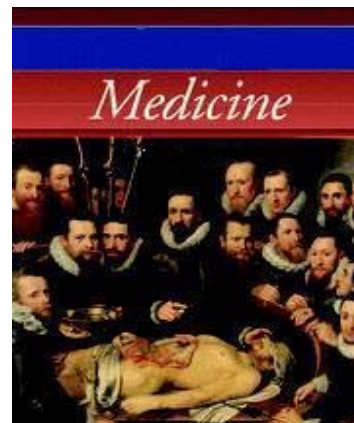


# Introduction to English for Medicine

## Task 1

Look at this passage. It goes back to the origin of the term **medicine**.

*Medicine is taken almost directly from the Latin **medicina**, which to the Romans, meant almost the same as “medicine” means to us. This word, in turn, is related to **mediri**, “to heal”. Both in ancient times and now, the same word \_ **medicina** or “medicine” \_ serves for both to the science of healing and to the means of healing, i.e., what we also call “drugs”.<sup>2</sup>*



3

A more up-to-date and comprehensive view of the term sees **medicine** as **the science and art of dealing with the maintenance of health and the prevention, alleviation or cure of disease**.

- Read the passage carefully and be ready to discuss about your personal motivation, driving forces, inspiration and/or enthusiasm in relation to your medical studies, then write your own definition of the word **medicine**.
- The words listed below are all connected in some way to the meaning of the term **medicine**. Read carefully and arrange them into any of the following word sets:

Fever                      Heart                      Hypertension                      Cardiovascular  
 Respiratory                      Pneumonia                      Gastrointestinal                      Lungs  
                                          Appendicitis                      Abdomen                      Pain                      Headache

| Disease | Symptoms & signs | Body parts | Body systems |
|---------|------------------|------------|--------------|
|         |                  |            |              |
|         |                  |            |              |
|         |                  |            |              |

<sup>2</sup> Taken from *Medical Meanings: A Glossary of Word Origins*, p.143 by William S. Haubrich, MD American College of Physicians, 2003

<sup>3</sup> The anatomy lesson. Rembrandt. (1606-1669) “Baroque Movement”.

- c) Can you add any other words to each group?
- d) What about **disease**? What synonyms or near synonyms could be used to designate this category?

## Task 2



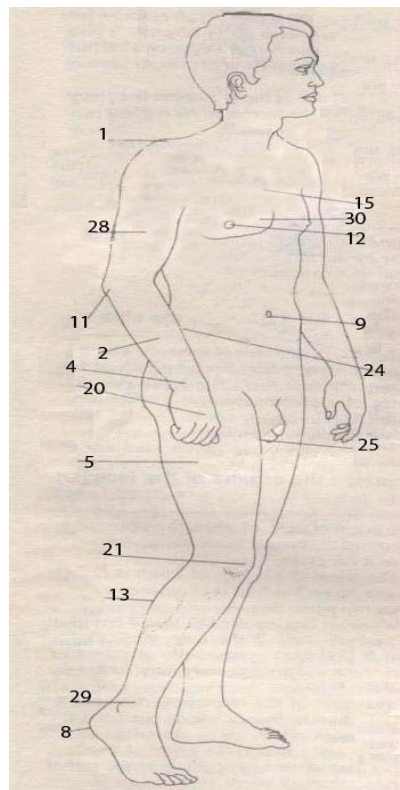
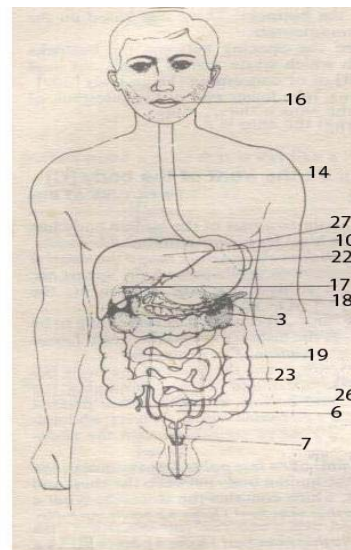
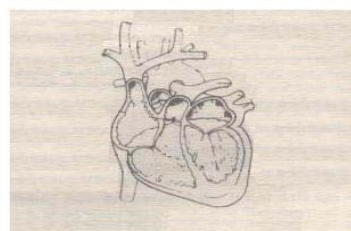
Look at the following diagrams showing the outer structure of a human body (on the left) divided into three main parts; *the head, the trunk and the upper and lower extremities* and some internal organs (on the right).

- a) In groups study the diagrams, match the words below to the numbers in the pictures, then, write the correct words for numbers 16 to 30 and then practice saying these words as your teacher provides you with a pronunciation model.

\_\_\_ shoulder  
\_\_\_ thigh  
\_\_\_ wrist  
\_\_\_ forearm  
\_\_\_ kidney

\_\_\_ heel  
\_\_\_ navel  
\_\_\_ elbow  
\_\_\_ liver  
\_\_\_ sphincter muscle

\_\_\_ calf  
\_\_\_ esophagus  
\_\_\_ chest  
\_\_\_ bladder  
\_\_\_ nipple



|           |           |           |
|-----------|-----------|-----------|
| 16. _____ | 21. _____ | 26. _____ |
| 17. _____ | 22. _____ | 27. _____ |
| 18. _____ | 23. _____ | 28. _____ |
| 19. _____ | 24. _____ | 29. _____ |
| 20. _____ | 25. _____ | 30. _____ |

☞ Notice that the definite article the is always used for body parts and organs. e.g. **the** spleen.

b) Work in pairs. Guess what part of the body or body organ is being defined.

1. The paired organs in the lumbar region. They are bean-shaped. They regulate the normal concentrations of the constituents of the blood.
2. The part of the upper limb between the arm and forearm.
3. The region of the junction of the arm and the trunk.
4. The part that extends from the hip to the toes.
5. The part that connects the head with the trunk.
6. Any of the digits of the hand.
7. The largest gland of the body, occupying the upper part of the abdomen especially on the right side. It is the central organ of metabolism of carbohydrate, proteins and fat.
8. The muscular organ, which keeps the circulation of the blood by its pumping action.
9. The paired organs of respiration, situated at each side of the mediastinum.

c) Write definitions for any two other parts of the human body.

d) The words listed in column A are very much used when doctors need to explain some of these parts or compounds. Could you match them?

| A            | B                                                                 |
|--------------|-------------------------------------------------------------------|
| 1. tube      | ___ for blood, the lymph, secretions.                             |
| 2. passage   | ___ for any junction or articulation of bones. e.g. the phalanges |
| 3. bag       | ___ for chemical compounds like bilirubin, hemoglobin.            |
| 4. lining    | ___ for the trachea, the esophagus, the rectum, the vagina.       |
| 5. fluid     | ___ for the heart, the deltoid, the biceps.                       |
| 6. substance | ___ for the cranium or skull, the tibia, the fibula.              |
| 7. layers    | ___ for the ureter, the urethra, the fallopian...                 |
| 8. gland     | ___ for the stomach, the bladder, gall bladder.                   |
| 9. muscle    | ___ for the skin – inner (dermis) outer (epidermis).              |
| 10. bone     | ___ for the liver, the pancreas, the thyroid.                     |
| 11. joint    | ___ for the pleura, the pericardium, the peritoneum.              |

### Task 3

This crossword<sup>4</sup> is not complete; you have only half the words, the other half is on sheet B. Work in groups to find out the words you don't have. Listen to the other team, they will describe the location of the word in the crossword and build up a possible definition for the term to be guessed. Be ready to do the same when you take turns for defining words. Follow these rules:

- Speak only in English
- Don't say the word in the crossword
- Don't show the other team your crossword sheet

e.g. word 1 across (→): It is the knee cap, a bone found in the knee joint.

word 1 down (↓): These are the main bones found in the digits.

### Sheet A

|      |    |     |      |  |      |     |      |      |  |      |     |   |      |  |      |  |      |
|------|----|-----|------|--|------|-----|------|------|--|------|-----|---|------|--|------|--|------|
| 1 P  |    | 2 T |      |  |      | 3 A |      | 4 A  |  | 5 O  |     |   |      |  | 6 A  |  | 7 I  |
| H    |    | E   |      |  |      | I   |      | N    |  | E    |     |   |      |  | R    |  | S    |
| A    |    | M   |      |  |      | D   |      | T    |  | D    |     |   |      |  | T    |  | C    |
| 5 L  |    | P   |      |  |      | S   |      | I    |  | E    |     | 8 | 8 C  |  | E    |  | H    |
| A    |    | L   |      |  |      |     |      | C    |  | M    |     |   | A    |  | R    |  | E    |
| N    |    | E   |      |  |      |     |      | 9 O  |  | A    | 9 L |   | R    |  | Y    |  | M    |
| G    |    |     | 10 N |  |      |     |      | A    |  |      | O   |   | O    |  |      |  | I    |
| E    |    |     | E    |  |      |     |      | G    |  |      | B   |   | 11 T |  | 11 B |  | A    |
| S    |    |     | B    |  |      |     |      | U    |  |      | E   |   | I    |  | L    |  |      |
|      | 12 |     | U    |  | 12 D |     | 13   | L    |  | 13 T |     |   | D    |  | O    |  |      |
|      |    |     | L    |  | I    |     |      | A    |  | A    |     |   |      |  | O    |  |      |
| 14 J |    |     | I    |  | S    |     |      | 14 N |  | R    |     |   |      |  | D    |  | 15 P |
| O    |    |     | Z    |  | T    |     |      | T    |  | S    |     |   |      |  |      |  | A    |
| I    |    |     | E    |  | A    |     |      |      |  | 15 A |     |   |      |  |      |  | P    |
| 16 N |    |     | R    |  | L    |     | 16 G |      |  | L    |     |   |      |  |      |  | U    |
| T    |    |     |      |  |      |     |      | A    |  | 17 S |     |   |      |  |      |  | L    |
|      |    |     |      |  |      |     |      | S    |  |      |     |   |      |  |      |  | A    |
| 18   |    |     |      |  |      |     | H    |      |  |      |     |   | 19   |  |      |  | R    |

<sup>4</sup> Adapted from English for medical students. IALS University of Edinburgh. Based on the dictionary of medicine. 2<sup>nd</sup> Ed. 1994

**Task 4** 

For the study of the different parts of the body and body systems, a wide range of specialties have been identified.

a) Look at the following word list. There are some words hidden on both sides. Could you help to find them?

**Specialties**

1. physiology
2. \_\_\_\_\_
3. cardiology
4. \_\_\_\_\_
5. surgery
6. nephrology
7. gynecology
8. bacteriology
9. \_\_\_\_\_
10. epidemiology
11. \_\_\_\_\_
12. oncology
13. obstetrics
14. \_\_\_\_\_

**Specialists**

- physiologist
- neurologist
- \_\_\_\_\_
- hematologist
- surgeon
- \_\_\_\_\_
- gynecologist
- \_\_\_\_\_
- dermatologist
- \_\_\_\_\_
- otorhinolaryngologist <sup>5</sup>
- \_\_\_\_\_
- obstetrician
- pediatrician

b) Now, write the name of the specialist or specialty that matches the definitions provided.

1. \_\_\_\_\_ The branch of medical science that is concerned with the lungs and other respiratory organs.
2. \_\_\_\_\_ The branch of medicine dealing with disorders involving mental life and behavior.
3. \_\_\_\_\_ A specialist in the treatment of eye diseases and defects.

---

<sup>5</sup> Also named ENT specialist

- c) Work with your partner to write a suitable definition for two other specialties or specialists. Notice the model examples provided in b) that is:

X may be defined as the branch of medicine which... or

a/an X is a person specialized in the branch of medicine which...

and continue using one of the following phrases:

is concerned with... deals with... relates to... involves...

(See **Appendix 1** for further reference.)

- d) What are the specialties you find more appealing? Explain why.
- e) The word *cardiology* means *the study of the heart, its actions and diseases*. This term is formed by the combination of *cardi* (which comes from the Greek *kardi* = *heart*) and *logy* which means *the study of* or *the science of*. The following exercise provides you with some other **major roots, prefixes and suffixes** from which medical lexis is formed. Study the two columns and match them accordingly.

**A**

1. hepat
2. derm
3. glyc
4. osteo
5. nephro
6. bio
7. hypo
8. itis
9. gast
10. gram

**B**

- \_\_\_\_\_ life
- \_\_\_\_\_ bone
- \_\_\_\_\_ below, insufficient
- \_\_\_\_\_ stomach
- \_\_\_\_\_ liver
- \_\_\_\_\_ mechanical recording
- \_\_\_\_\_ inflammation
- \_\_\_\_\_ skin
- \_\_\_\_\_ sugar
- \_\_\_\_\_ kidney

- f) Now write examples of use for each of the suffixes or prefixes above and then write sentences. You may wish to consult **Appendix 1** for further information on major roots, prefixes and suffixes.

**Have a look**

☞ In the previous tasks you may probably have noticed that we use **the** or **a/an** indistinctively or may not even use them at all.

Grammatically speaking, when do we use one or the other? When not?

We use **the**

(1) when we are thinking of one particular thing e.g. *The patient sat on **the** chair nearest the door.*

(2) *when* it is clear in the situation which thing or person we mean e.g. *Can you turn off **the** endoscope (= the one in this room)*

(3) when there is only one of something e.g. *I'd like to speak to **the** doctor in charge.*

In **Medical English**, however, these rules are made easier if you:

DO NOT USE **the** with diseases and symptoms e.g. cancer, vomiting, etc.

with substances e.g. agar-agar, carbon dioxide, etc.

with subject fields e.g. oncology, biochemistry, etc.

when referring to groups in general e.g. patients, men, etc.

DO USE **the** with parts of the body e.g. the head, the spleen, etc.

when referring to something specific e.g. something already mentioned.

☞ Notice that we do not use **the** with subject fields, e.g. Radiology applies to both diagnostic and therapeutic studies, but we use **a/an** when referring to a specialist, e.g. He is an orthopedic surgeon.

(We use **a/an** to say what kind of thing or person something/somebody is) You cannot use singular countable nouns alone (without **a/the/my** etc.) e.g., I have a headache/a stomach-ache.

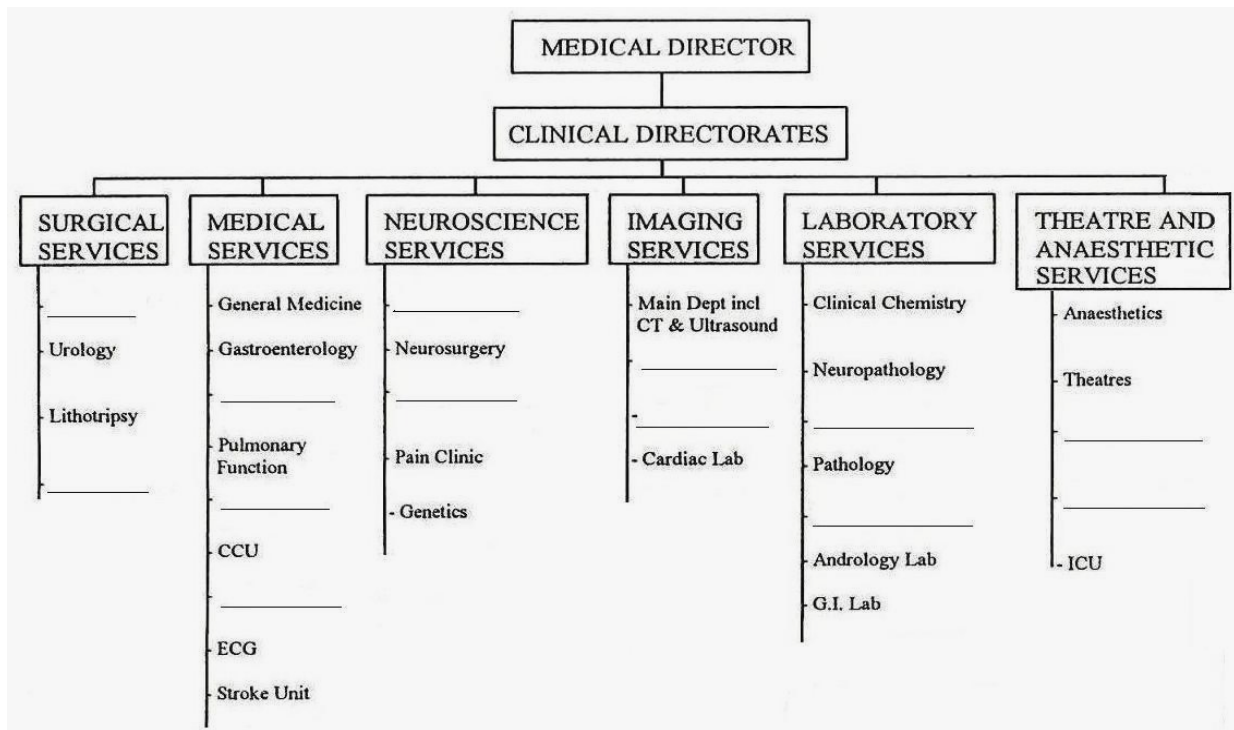
**Task 5**

As you have seen **the/a/an** are troublesome areas in medical language. Work in pairs and fill in the blanks **only when necessary**.

1. As a child he had had \_\_\_\_ scarlet fever and \_\_\_\_ varicella
2. It's important to immunize \_\_\_\_ children before the age of 5.
3. He works in \_\_\_\_ Faculty of \_\_\_\_ Medicine.
4. The patient presented with pain in \_\_\_\_ left arm.
5. Would you like to be \_\_\_\_ obstetrician?
6. He couldn't decide whether to specialize in \_\_\_\_ Pediatrics or in Anesthesiology.
7. All patients received \_\_\_\_ Amoxicillin 250 mg 6 hourly.
8. The drug was found to cause \_\_\_\_ nausea.

### Task 6

- a) The chart presented below describes *the anatomy of a Hospital*. The structure is arranged according to different fields of specialization. As you can see some important services have been whited out. Work with a partner and using the words from the list below insert them into the heading they belong in. Then listen to the pronunciation of these words and practice saying them with your partner.



rheumatology – X-ray – respiratory – cardiology – general surgery – recovery room – neurology – microbiology – diagnostic radiology – hematology – neuro OPD – breast services – sterile services

- b) Is there any difference between the model structure presented and the hospitals you are familiar with? Support your answers.
- c) Now you are members of a planning committee for an international conference that is going to be held at your hospital. During the conference, participants will need information about the services available in or near the conference centre. Work in pairs, choose one of the services above and produce a brief description for conference participants in a small paragraph. Be ready to share your ideas in plenary.

**Task 7** 

- a) Read the following conversation and in pairs tick (✓) the items that match the type of interaction described in the situation provided and a possible scenario for it.



A: Good morning, Mrs. Estrada. What seems to be the problem?

B: I'm not feeling well; I have been having trouble climbing stairs.

A: Is it something new?

B: No, but it's never been this bad before.

- |                                                     |                                    |
|-----------------------------------------------------|------------------------------------|
| _____ a patient getting information about treatment | _____ at a hospital theatre        |
| _____ a doctor interviewing a patient               | _____ at a microbiology department |
| _____ a specialist examining a patient              | _____ at an outpatient department  |

- b) In what other places of the anatomy of a hospital can this type of interaction also take place?
- c) These notes on the **medical work-up** were all found in the pages of a third year medical student jotter. Read them carefully and answer the questions at the end:

**I. Greeting the patient:** This is done in the conventional way.

**II. History Taking or Medical Interview:** Relates to the preliminary case history of the patient (Anamnesis) and includes the following:

**Date of history.**

**Identifying Data (ID):** age, sex, race, occupation, nationality, marital status, place of birth (some other type of data, such as religion, could be also taken).

**Source of referral:** General Practitioner (GP), other clinic, hospital, etc.

**Source of history:** patient, relative, friend, patient's medical record or a referral letter.

**Chief complaint:** current problem.

**History of the presenting illness (HPI):** A clear chronological, narrative account of the problem for which the patient is seeking care.

- Onset of the problem
- Setting in which it developed
- Its manifestations
- Previous treatments

**Symptoms:** All important: Depending on the chief complaint consider everything, document the essential (either present or absent).

- Location
- Quality
- Quantity or severity
- Timing (i.e. onset, duration and frequency)
- Setting
- Precipitating, aggravating and/or relieving factors
- Associated manifestations

(Consider Abdominal, Genitourinary, Respiratory, Cardiovascular, Neurological, Musculoskeletal, and Psychiatric involvement).

**Relevant data from patient's chart:**

- Lab reports (if any)
- Significant negatives; the absence of certain symptoms that will help in differential diagnosis.

**Past Medical History:** In this stage the doctor asks about any previous illnesses the patient has had, such as:

- Childhood illnesses: e.g. measles, mumps, chicken pox (varicella), scarlet fever, polio.
- Adult illnesses, psychiatric disorders, operations, injuries, hospitalizations, current medications including home remedies, allergies.
- Immunizations.

**Family History:** The occurrence within the family of any of the following conditions: diabetes, TB, heart disease, high blood pressure (HBP) kidney disease, cancer, anemia.

**Social History:** This is the stage in which the doctor asks about such things as the patient's living environment, work, family relationships, marriage, retirement and habits (dietary and sleeping patterns, exercise, alcohol, coffee, tobacco, etc). These may not only relate to the cause of the patient's problem, but also to its management.

**Review of systems:** In the systems review, the doctor finds out if the patient has any other important symptoms by inquiring about the different systems of the body and, if necessary, asking specific questions about them.

**III. Clinical Examination:** The doctor may need to give the patient instructions during this stage. He may also need to inform the patient of the results of his examination. What the doctor finds on examination constitute the signs of the patient's illness, that is; any objective evidence of disease. As opposed to the symptoms, which are the effects of the illness as reported by the patient. That is; any subjective evidence of disease.

**IV. Discussing the patient's problems with him/ her:** Recent research has made it clear that the doctor who neglects to determine the patient's own view of the problem misses an important factor not only in the etiology of the problem but in its management. In particular, he risks poor patient compliance; in other words, the patient may not follow the doctor's advice.

**V. Management:** This includes explaining to the patient the nature of the illness and explaining any investigations the doctor feels are necessary, as well as giving instructions about treatment itself.

**VI. Conclusion:** This consists of ending the consultation, making arrangements for follow up, and leave-taking.

1. How many stages are usually contained in a typical medical consultation? What are they?
  2. Which of these are present in the conversation? Which ones are left out?
- d) Now, go over the text again and with the help of your teacher brainstorm on some other questions you would ask to complete the conversation in the situation provided in a). You may go over **Appendix 2** for help.

**Have a look**

Verb tenses relate the meaning of the verb to a time scale. That is the reason why you should give some attention to the different kinds of meaning a verb may have. Thus:

☞ We use:

**Present continuous** [be (is, are, am) + ...ing] when we talk about things happening in a period around now. (Limited duration)

**Simple present** (I do) to say that something happens all the time or repeatedly. (Present habit, or a sequence of events.

**Simple past** (I did) is used when the past happening is related to a definite time in the past.

**Present perfect** (I have done) often refers to:

- A recent indefinite past e.g. Have you taken your medication yet?
- Habit in a period leading up to the present time e.g. He has taken his medication regularly.
- Past event with results in the present time (announcing an event) e.g. the patient has been admitted.
- State leading up to the present time (usually with the verb be) e.g. He has been a heavy drinker for a long time.

**Past perfect** (I had done) indicates past in the past (one event following another in the past) e.g. He had never had this trouble before.

**Task 8** 

The following questions focus on detailed information associated with the history of the present illness and the patient's past medical history. Work with a partner and supply the form of the verb **take** that best fits in each sentence to convey the intended meaning.

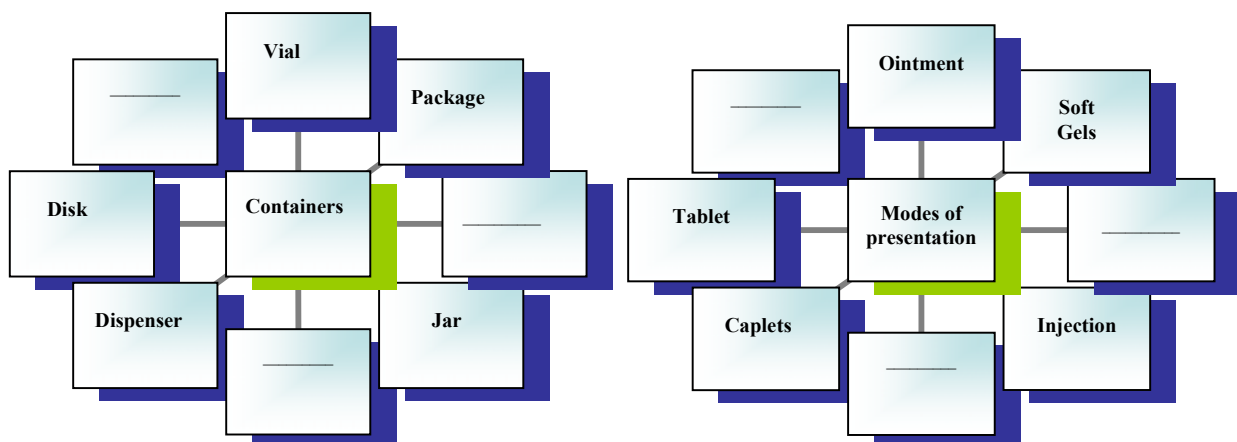
1. \_\_\_\_\_ you \_\_\_\_\_ any medication in this moment?
2. \_\_\_\_\_ you \_\_\_\_\_ any regular medication?
3. When \_\_\_\_\_ you \_\_\_\_\_ the last tablets?
4. How long \_\_\_\_\_ you \_\_\_\_\_ this medication?
5. \_\_\_\_\_ you \_\_\_\_\_ any other medication before this problem started?

## Task 9



Another important stage of the medical consultation in which doctors also need to deal with language connected to medications is *management*. Some useful terms include the notions of *containers*, *modes of presentation*, *purpose*, *uses*, *directions* and *adverse reactions*. See **Appendix 3** for help.

- a) This activity will allow you to learn some practical vocabulary associated with two of these; *containers* and *modes of presentation*. With the help of your teacher and the visual support provided in the picture supply the words missing in both diagrams.



- b) Use the words in the diagram to complete these sentences. Then compare with a partner. You may use each word more than once.

1. A bottle of Ibuprofen \_\_\_\_\_
2. A/an \_\_\_\_\_ of Nistatine ointment.
3. A bottle of Merthiolate \_\_\_\_\_
4. A/an \_\_\_\_\_ of inhalation powder.
5. A blister of Amoxicillin \_\_\_\_\_
6. A/an \_\_\_\_\_ of Vick's Vaporub.
7. A/an \_\_\_\_\_ of Penicillin.



- c) These are all examples of **warning or direction** expressions taken from different medicine labels. Choose the correct preposition to complete the ideas. Then be ready to discuss your answers in plenary.

1. Do not use \_\_\_\_\_ (by - for) mouth.
2. Avoid contact \_\_\_\_\_ (in - with) eyes.
3. It is important not to use this medication \_\_\_\_\_ (for - during) the last three months of pregnancy.
4. Take 1 tablet every 4 to 6 hours \_\_\_\_\_ (while- during) symptoms persist.
5. Apply \_\_\_\_\_ (with – to) minor cuts and scratches 1 to 3 times a day.
6. It may interact \_\_\_\_\_ (in – with) certain prescriptions.
7. Do not use the maximum dosage \_\_\_\_\_ (for- since) more than 2 weeks.

- d) In groups, study the notes below, then read the information labeled in the materials provided by your teacher and prepare a brief talk about it. Try to include everything you consider necessary for an accurate understanding of its **purposes, uses, directions and adverse reactions**. e.g.

- **Purpose:** antacid, dietary supplement.
- **Uses:** relieves heartburn and sour stomach, helps promote healthy immune function and general well-being.
- **Directions:** chew 2-4 tablets as symptoms occur, one tablet daily preferably with a meal.
- **Adverse reactions:** do not take more than..., ... may interact with certain prescription drugs.

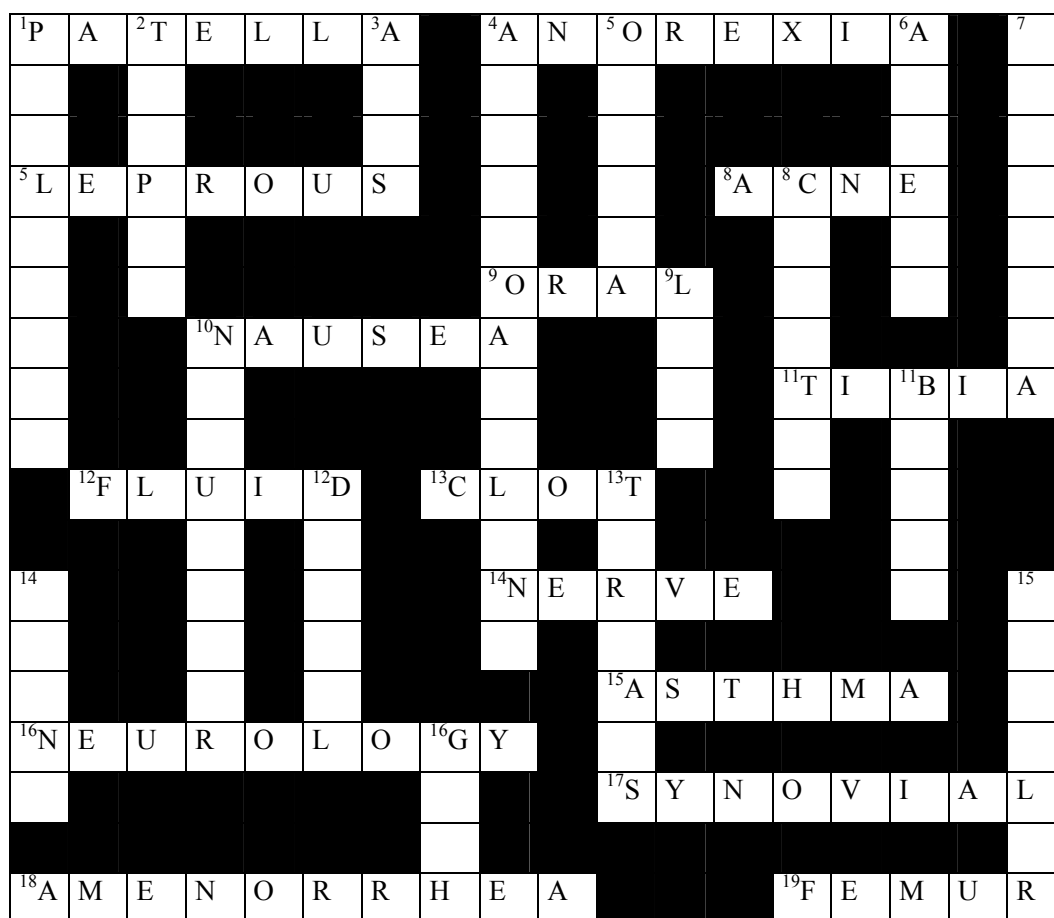
**Sheet B**

This crossword<sup>6</sup> is not complete; you have only half the words, the other half is on sheet A. Work in groups to find out the words you don't have. Listen to the other team, they will describe the location of the word in the crossword and build up a possible definition for the term to be guessed. Be ready to do the same when you take turns for defining words. Follow these rules:

- Speak only in English
- Don't say the word in the crossword
- Don't show the other team your crossword sheet

e.g. word 1 across: It is the knee cap, a bone found in the knee joint.

word 1 down: These are the main bones found in the digits.



<sup>6</sup> Adapted from English for medical students. IALS University of Edinburgh. Based on the dictionary of medicine. 2<sup>nd</sup> Ed. 1994



# Hypertension



## Unit 1

### Task 1

Cardiovascular problems are a major cause of disability and death. Hypertension is one of the most common conditions and nowadays affects approximately one billion individuals worldwide.

- ✚ Does it also rank high in your country/ community/ health area?
- ✚ Now, in pairs, complete this word diamond using the words in the box below.



H Y P E R T E N S I O N

nosebleed - normal - a - kidney - diastolic - risk - blood - low -  $\beta$  - measurement - pressure - heart  
- measure - BP - hypotension - systolic - age - high - HR - preventive - obesity - procedures

<sup>7</sup> Taken from URL: <http://cms.clevelandclinic.org>

**Task 2**  

- a) Mr. del Llano is shown into Dr. Smith's consulting room. Listen to the first part of the interview and write True (T) or False (F).
1. \_\_\_\_ The doctor greets the patient first.
  2. \_\_\_\_ The patient knows the doctor's name.
  3. \_\_\_\_ The doctor asks all the necessary questions to find out about the patient's identifying data.
  4. \_\_\_\_ The doctor gives the patient instructions as he proceeds with his examination.
- b) Listen again and when Dr. Smith says "... your doctor says here ...? What do you think the word "here" refers to?
- c) Now, listen to the interview and complete the referral letter below. Then practice reading the conversation.

## Clinical Details

Date: (1)

Dear (2) \_\_\_\_\_

*I would be most grateful if you were so kind as to see (3):*

*This (4) \_\_\_\_\_ year - old (5) \_\_\_\_\_ gives a history of (6) \_\_\_\_\_.*

*This has occurred several times before but never so severe.*

$$(\dots)$$

*Likely diagnosis:* (7)

*Thank you for seeing him.*

*Yours sincerely,*

Signature:  $mf$  هطضهض

Doctor: Hello, Mr.del Llano. I'm Doctor Smith.

Patient: Good morning, doctor.

Doctor: Mr.del Llano, your family doctor says here that you're 48, a police officer, and married. Is that correct?

Patient: Yes, that's right, doc.

Doctor: What's the problem?

Patient: Well. Look, I've had nosebleeds now and then, but the one I had this morning is the worst one I've ever had and I'm a bit worried about it.

Doctor: Did you bump your nose into something?

Patient: No, doctor. It started out of the blue.

Doctor: Have you had any indigestion? Diarrhea? Lost any weight? Anything like that?

Patient: No, I'm feeling well, eating well, sleeping well...

Doctor: Have you had your blood pressure checked before?

Patient: Not in quite a few years.

Doctor: Let me check it now. Please, roll up your sleeve, stretch out your right arm and just let me fix this around here. O.K.

(Sound of sphygmomanometer)

Doctor: All right. We're through.

Patient: How is it, doctor? Is it normal?

Doctor: I'm afraid it's a bit high at 160/100. But don't worry; there are no grounds yet to believe that you're a hypertensive person. And even if you are, the good news is that together we can sort it out. Just let me ask you a few more questions.

d) Listen to the conversation again while you look at the text. Then, in pairs, find synonyms for:

1. little \_\_\_\_\_
2. unexpectedly \_\_\_\_\_
3. hit, knock \_\_\_\_\_
4. It's over \_\_\_\_\_
5. reasons \_\_\_\_\_
6. solve it \_\_\_\_\_

**Short question forms**

Examples:

Have you had any diarrhea? → Diarrhea?

Have you lost any weight? → Lost any weight?

Have you had anything like that? → Anything like that?

☞ Notice the use of these short forms as the doctor interviews his patient.

e) Now, make this group of related questions shorter.

1. Have you had headaches? \_\_\_\_\_?
2. Have you had any chest pains? \_\_\_\_\_?
3. Are you having any problems at work/home? \_\_\_\_\_?
4. Are you eating well? \_\_\_\_\_?
5. Are you sleeping well? \_\_\_\_\_?
6. Have you tried to take things easy? \_\_\_\_\_?

f) Then, answer these questions:

1. At the beginning of the interview the doctor asks: "What's the problem? What similar questions could be used to obtain the chief complaint? You may consult **Appendix 2** for help.
2. How does the doctor reassure the patient?
3. Is a single high reading enough to make a diagnosis of hypertension? Explain.

**Task 3**

- a) At the end of the doctor-patient conversation, Dr. Smith says: “Just let me ask you a few more questions.” What other questions would you include in this interview? Group your questions according to each of the titles suggested. Then discuss your list with your partner.

|                                   | Possible Questions |
|-----------------------------------|--------------------|
| <b>History of present illness</b> |                    |
| <b>Past history</b>               |                    |
| <b>Family history</b>             |                    |
| <b>Social history</b>             |                    |
| <b>Habits</b>                     |                    |

- b) Now, work in pairs to recreate the consultation. Student A should start. You may consult **Appendix 2** for help.

**Student A:**

You are the doctor. Use the information in the doctor-patient dialog and the question inventory in a) to obtain as much information as possible from your patient. Inform the patient about the lab tests you are going to order.

(You may anticipate exercise c) to deal with the language for investigations)

**Student B:**

You are the patient. Answer the doctor's questions using the information in the doctor-patient dialog above. Use your medical knowledge and imagination to answer questions whose answers are not in the dialog. If you are not sure about an answer you may simply say “I haven't noticed.” Try to be consistent with a positive diagnosis of hypertension. Then, change roles and try the role play again.

- c) Sometimes it is very important to assess the presence or absence of target organ damage. The data needed for this evaluation are acquired through history taking, physical examination, routine lab tests (**ECG; urinalysis; blood glucose and hematocrit; serum potassium, creatinine and calcium; and a lipid profile**)<sup>8</sup> as well as other diagnostic procedures. Work with your partner and match columns A and B accordingly.

| Assessment of target organ damage |                                                             |
|-----------------------------------|-------------------------------------------------------------|
| A                                 | B                                                           |
| 1. heart                          | _____ Doppler ultrasonography: peripheral arterial disease. |
| 2. brain                          | _____ Urea and/or creatinine: renal impairment/disease.     |
| 3. eyes                           | _____ ECG: left ventricular hypertrophy, angina, prior AMI. |
| 4. kidneys                        | _____ CT scan, MRI: hemorrhages in the brain, strokes.      |
| 5. peripheral arteries            | _____ Funduscopy examination: retinopathy.                  |

- d) Now, write sentences to describe the purpose of at least three of the procedures above. You may use any of the following expressions:

-  A/an ... is useful/very important in the diagnosis of...
-  ... is a microscopic examination that may detect/determine/rule out/confirm...
-  A/an ... a painless procedure used to identify/to assess...
-  A/an ... is a simple, non-invasive procedure that measures/identifies/detects...
-  ... is one of the most common tests performed to evaluate...

You may consult **appendix 4** for further reference.

<sup>8</sup> Taken from the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication. No. 03 – 5233; May 2003.

**Task 4**

- a) Because of the importance of hypertension, a lot has been written about this condition. Go over the reading quickly and tick (✓) the functions that are present in the text. Then identify the paragraphs in which they are accomplished. Look at the example.

| The text ...                                                          | P.1 | P.2 | P.3 | P.4 |
|-----------------------------------------------------------------------|-----|-----|-----|-----|
| ✓ ___ defines HTN and states possible complications of the condition. | X   |     |     |     |
| ___ describes the main symptoms and signs of the condition.           |     |     |     |     |
| ___ explains body mechanisms that control blood pressure.             |     |     |     |     |
| ___ tells apart primary or essential from secondary hypertension.     |     |     |     |     |
| ___ gives suggestions to reduce stress.                               |     |     |     |     |
| ___ explains risk factors of hypertension.                            |     |     |     |     |

1.

To many people, the word hypertension suggests excessive tension, nervousness, or stress. In medical terms, hypertension refers to high blood pressure, regardless of the cause. Because it usually does not cause symptoms for many years—until a vital organ is damaged—it has been called "the silent killer." Uncontrolled high blood pressure increases the risk of problems such as stroke, aneurysm, heart failure, heart attack, and kidney damage. When blood pressure is checked, two values are recorded. The higher value reflects the highest pressure in the arteries, which is reached during systole. The lower value reflects the lowest pressure in the arteries, which is reached during diastole. Blood pressure is written as systolic pressure/diastolic pressure—for example, 120/80 mm Hg (millimeters of mercury). This reading is referred to as "120 over 80."

2.

The body has many mechanisms that control blood pressure. The body can change the amount of blood the heart pumps, the diameter of arteries, and the volume of blood in the bloodstream. These mechanisms are controlled by the sympathetic division of the autonomic nervous system and by the kidneys.

3.

High blood pressure with no known cause is called primary or essential hypertension. Between 85% and 90% of people with high blood pressure have primary hypertension. Several changes in the heart and blood vessels probably combine to increase blood pressure. High blood pressure with a known cause is called secondary hypertension. Between 10% and 15% of people with high blood pressure have secondary hypertension. Many kidney disorders can cause high blood pressure, because the kidneys are important in controlling blood pressure. For example, damage to the kidneys may impair their ability to remove enough salt and water from the body, increasing blood volume and blood pressure. In 5 to 10% of people with high blood pressure, the cause is a kidney disorder. Such disorders include renal artery stenosis, kidney inflammation, and injury.

4.

Obesity, a sedentary lifestyle, stress, smoking, and excessive amounts of alcohol or salt in the diet all can play a role in the development of high blood pressure in people who have an inherited tendency to develop it. Stress tends to cause blood pressure to increase temporarily, but blood pressure usually returns to normal once the stress is over. An example is "white coat hypertension," in which the stress of visiting a doctor's office causes blood pressure to increase enough to be diagnosed as high blood pressure in someone who has normal blood pressure at other times. In susceptible people, these brief increases in blood pressure are thought to cause damage that eventually results in permanent high blood pressure, even when no stress is present. This theory has not been proved.<sup>9</sup>

b) Read the text again and find the words or expressions that best suit the definitions:

Paragraph 1

1. A sudden seizure; the commonly used lay term for apoplexy: \_\_\_\_\_
2. A localized dilatation of the walls of a blood vessel, usually an artery: \_\_\_\_\_
3. The period during which the heart contracts: \_\_\_\_\_
4. The period when the heart fills with blood and dilates: \_\_\_\_\_

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<sup>9</sup> Adapted from The Merck Manual Online Medical Library. Home Edition for Patients and Caregivers.  
<http://www.merck.com/mmhe/sec03/ch022/ch022a.html>. 2007

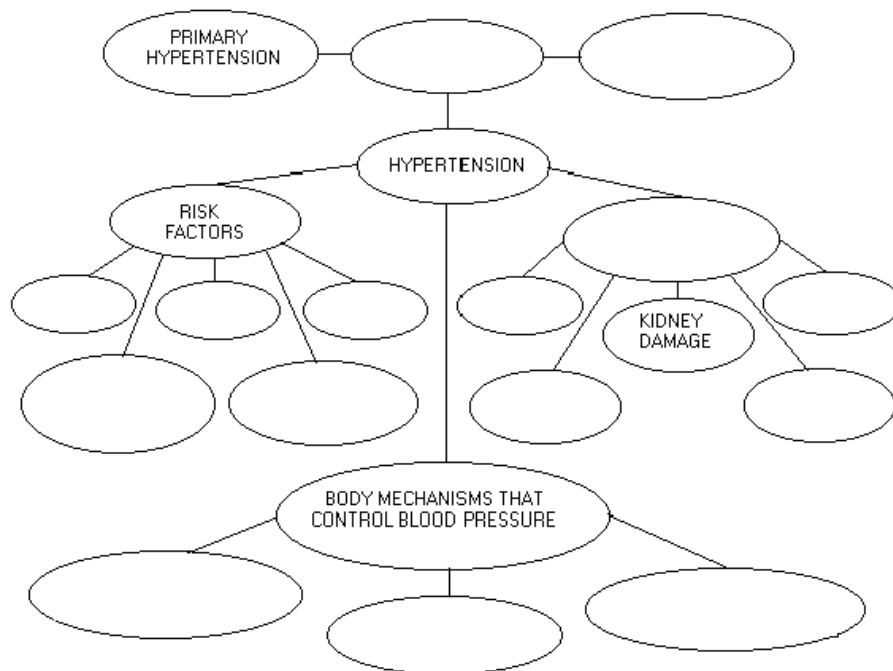
## Paragraph 2

1. The blood circulating through the body: \_\_\_\_\_
2. The part of the nervous system that regulates internal body processes requiring no conscious effort: \_\_\_\_\_

## Paragraph 3

1. injury or harm caused to a person or thing: \_\_\_\_\_
2. Narrowing of the artery supplying one of the kidneys: \_\_\_\_\_
3. To cause partial or complete loss of function of a body part, organ or system: \_\_\_\_\_

c) Read the text carefully once more and complete the chart following your teacher's instructions.



- d) Continue working in groups and use both the information in the chart in c) and the hints given below to tell your colleagues your own version of the text.



... is defined as...

... with no known cause is called ... whereas the other one is ...

Uncontrolled ... increases the risk of...

Risk factors for ... include ...

People with ... are at a higher risk for developing...

Many serious disorders are associated with...

The most common complication(s) is/ are...

Other complications associated with... include...

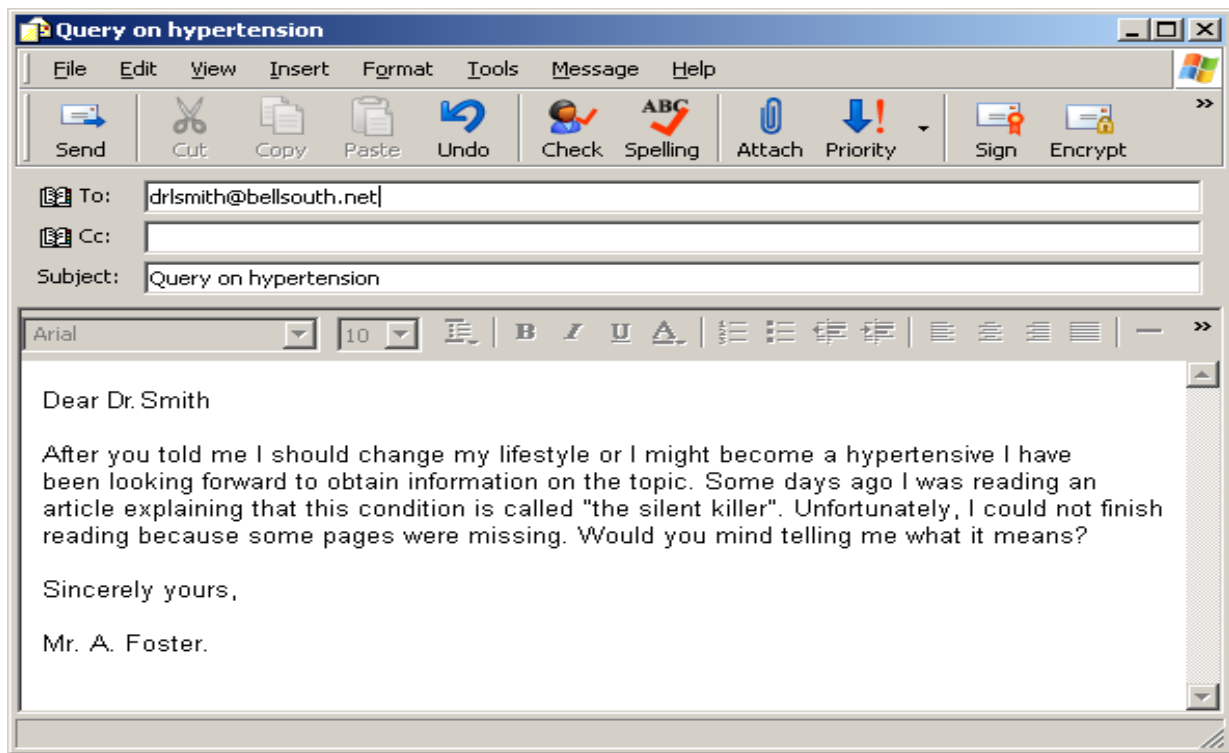
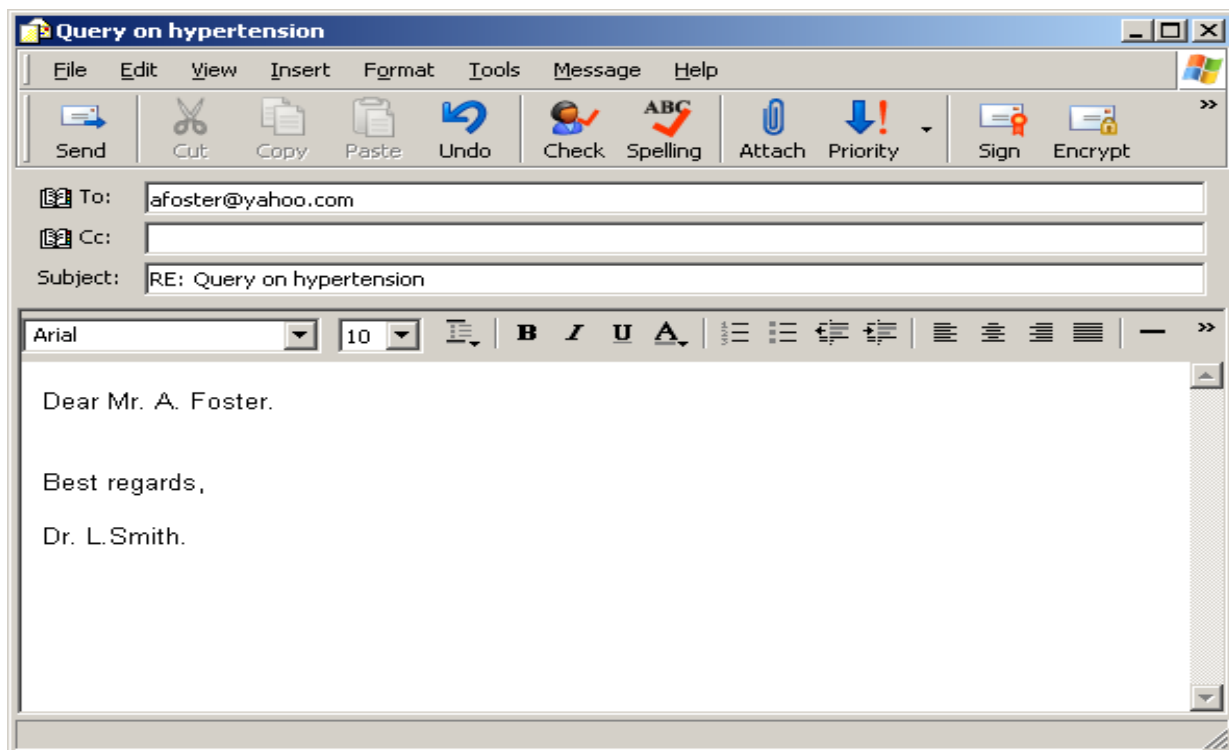
... are well-recognized complications of ...



- e) Now, discuss these questions with your partner.

1. Is it important to control high blood pressure? Support your answer.
2. In what ways do body mechanisms control blood pressure?
3. What is the difference between primary or essential hypertension and secondary hypertension?
4. How would you define “white coat hypertension”?

- f) Dr. Smith received this email from one of her patients, **Mr. Foster**, but she has been so busy that she has not been able to write back to him. Can you do it for her?



**Have a look.**

**Prepositions** are connecting words linking nouns to verbs, nouns to nouns and occasionally to other word classes. The choice of prepositions often depends on the meaning we want to convey, the preceding noun, verb, etc., and partly on the following noun. Prepositions may also function as other word classes, such as adverbs. Prepositions are among the most common words with a high frequency of occurrence.

Some common prepositions used in English are: *aboard, about, above, across, after, against, along, amid, (a)round, as, at, because of, , before, behind, below, beneath, beside, between, beyond, by, concerning, despite, during, except, for, from, in, in addition to, inside, into, near, next, of, off, on, onto, out, outside, over, past, regarding, round, since, through, throughout, till, to, toward(s), under, underneath, until, unto, up, upon, via, with, within, without, etc.* e.g.

- The higher value reflects the highest pressure **in** the arteries, which is reached **during** systole.
- This reading is referred **to** as "120 **over** 80 mm Hg."
- Have you had your blood pressure checked **before**? Not **in** quite a few years.

**Task 5** 

The paragraphs that follow deal with drug therapy and prognosis of hypertension, however, it is difficult to read them because most prepositions have been deleted. Can you restore them?

1. Complete by choosing a suitable preposition from the ones given between parentheses.

Drugs that are used \_\_\_\_\_ (in/near) the treatment \_\_\_\_\_ (with/of) high blood pressure are called antihypertensives. Treatment has to be tailored \_\_\_\_\_ (at/to) the individual and it is most effective when patient and doctor communicate well and collaborate \_\_\_\_\_ (on/between) the treatment program.

2. Pick out the correct preposition from the list below to fill in the blanks.

The blood pressure goals \_\_\_\_\_ antihypertensive therapy vary depending \_\_\_\_\_ what other disorders are present. For most people, lowering diastolic blood pressure \_\_\_\_\_ 70 mm Hg is safe. \_\_\_\_\_ people \_\_\_\_\_ coronary artery disease or angina, diastolic blood pressure should not go \_\_\_\_\_ 80 mm Hg. \_\_\_\_\_ people \_\_\_\_\_ diabetes, the target is \_\_\_\_\_ 130/80 mm Hg. For older people, the target is \_\_\_\_\_ 40/90 mm Hg.

between

below

for

under

with

to

on

3. Now, using the information you have learned, fill in the blanks with the appropriate preposition.

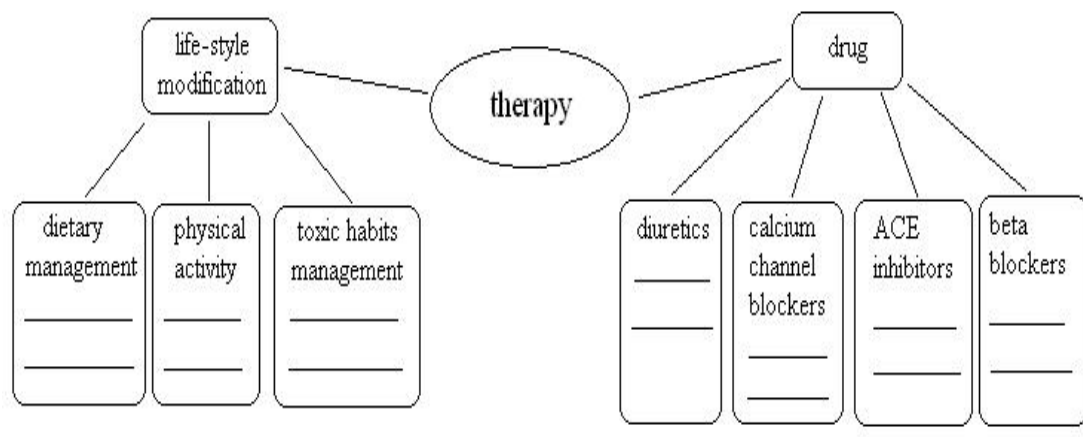
Untreated high blood pressure increases a person's risk \_\_\_\_\_ developing heart disease, kidney failure, or stroke \_\_\_\_\_ an early age. High blood pressure is the most important risk factor \_\_\_\_\_ stroke. It is also one \_\_\_\_\_ the three most important risk factors \_\_\_\_\_ heart attack that a person can modify (the other two are smoking and high cholesterol levels \_\_\_\_\_ the blood).

### Task 6



In the management of high blood pressure, doctors consider several factors such as age, sex, the severity of the problem, the presence of other medical conditions, such as diabetes or high blood cholesterol levels, etc. Accordingly, they devise a combination of different treatment strategies that may include both antihypertensive drugs and life-style modifications.

a) Arrange words or phrases from the list given below under the heading they belong in.



healthy diet  
aerobics  
no smoking  
brisk walking  
moderation of alcohol consumption  
sodium reduction

Nifedipine  
Enalapril  
Furosemide  
Atenolol  
Verapamil  
Chlorothiazide  
Propranolol  
Captopril

- b) Dr. Smith's patient, Mr. del Llano, finally gets a diagnosis of high blood pressure. Take the roles suggested and, in pairs, discuss treatment plan. Use the hints given below.

| Pharmacological                                                                                                                                                                                                                                                                              | Non-pharmacological                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▪ I'll start you on a combination of ...</li> <li>▪ You should take/ shouldn't take more than ...</li> <li>▪ Do not exceed ...</li> <li>▪ This medication may interfere with...</li> <li>▪ It might cause...</li> <li>▪ You must avoid....</li> </ul> | <ul style="list-style-type: none"> <li>▪ Consume a diet rich in...</li> <li>▪ Reduce the intake of... to...</li> <li>▪ Limit your consumption of... to no more than...</li> <li>▪ Lose weight if... and...</li> <li>▪ Engage in regular physical...(aerobics, brisk walking)</li> <li>▪ Avoid.../ ... ing...</li> <li>▪ Go on a healthy diet...</li> </ul> |

**Student A:** You are the doctor. Give your patient explanations and instructions for his treatment (both pharmacological and non-pharmacological). Take into account specific medications, dosage and warn him on possible adverse reactions.

**Student B:** You are the patient. Ask the doctor for repetition or clarification if you are not able to follow his explanations. Use expressions such as: Excuse me. I'm not sure I understand it. You mean that ...? Do I have to ...? Should I...? etc.

**Task 7**

- a) Dr. Smith usually typewrites relevant information about her cases at the end of each consultation. Complete this case report as you listen to the recording. Then compare your answers with a partner.



Mr. del Llano is a \_\_\_\_\_ year-old police officer who came in with a complaint of \_\_\_\_\_. He has no history of headache or \_\_\_\_\_ but for the past three weeks he has had \_\_\_\_\_ vision. Sometimes he has dyspnea on \_\_\_\_\_. There is no previous history \_\_\_\_\_ chest pain or ankle \_\_\_\_\_. In the last two years he \_\_\_\_\_ had several episodes of kidney \_\_\_\_\_. The most recent episode \_\_\_\_\_ about a week ago. His mother died \_\_\_\_\_ a stroke at 65. On examination, he was \_\_\_\_\_ moderately obese. His BP was \_\_\_\_\_. His \_\_\_\_\_ was 80 and regular. Respiration was \_\_\_\_\_ per minute and regular. Temperature \_\_\_\_\_ degrees. He is quite calm, in no apparent \_\_\_\_\_, and well oriented to time, place and \_\_\_\_\_. His liver is not \_\_\_\_\_, and he has no ankle edema. His kidneys are not palpable at present, and there are no \_\_\_\_\_ vascular bruits.

- b) Now discuss the answers to the following questions:

1. What's your impression about this case?
2. What symptoms and signs from this patient's history might help you support your diagnosis?

**Task 8****Crossword puzzle. Technical or common?**

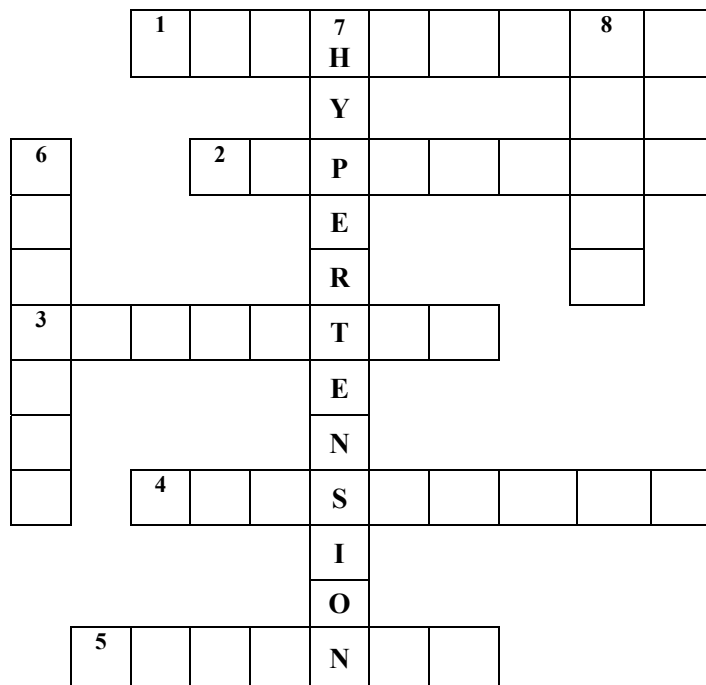
Doctors should be able to express themselves either in technical or standard language. This requires the ability to move from one register to another. Successful interviewing requires that you avoid medical terminology and make use of a descriptive language that is familiar to the patients. In pairs, complete the puzzle with words or expressions from the unit which are synonymous to the ones given.

**Across**

1. inability to breathe except in an upright position
2. headache
3. ringing or buzzing in the ear
4. nosebleed

**Down**

5. shortness of breath
6. dizziness
7. high blood pressure
8. swelling



**Task 9**

In reading medical documents, you will be confronted with a large number of abbreviations and acronyms that are an established part of the medical jargon. If you familiarize yourself with it early in your clinical career, you will save yourself much time and aggravation. Here are some of the ones most commonly used in this unit. Match them with their meanings. Write the numbers on the lines.

**A**

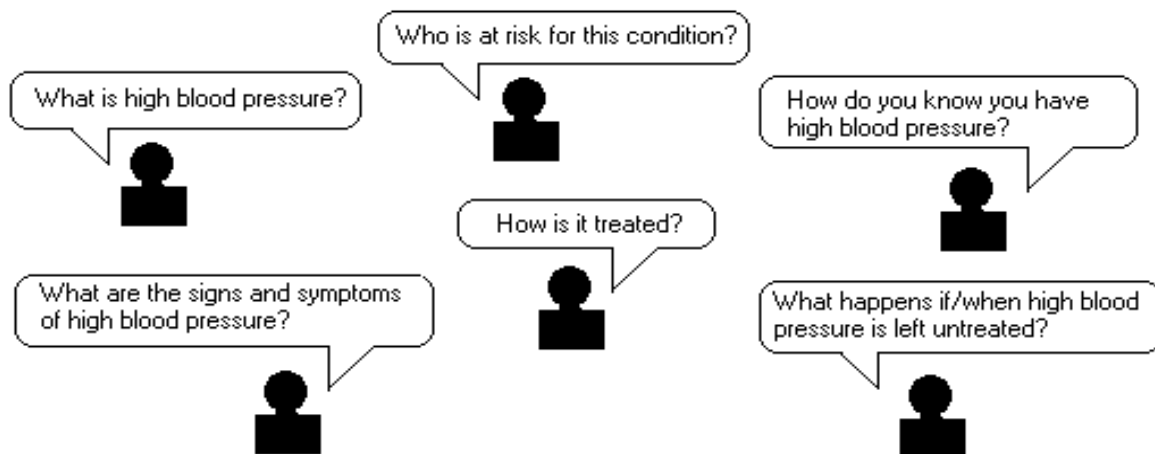
1. HBP
2. HPI
3. ACE
4. C/C
5. FH
6. PMH
7. SH
8. HTN
9. HR
10. T

**B**

- \_\_\_\_\_ angiotensin converting enzyme (inhibitor)
- \_\_\_\_\_ hypertension
- \_\_\_\_\_ temperature
- \_\_\_\_\_ family history
- \_\_\_\_\_ social history
- \_\_\_\_\_ chief complaint
- \_\_\_\_\_ history of the present illness
- \_\_\_\_\_ high blood pressure
- \_\_\_\_\_ past medical history
- \_\_\_\_\_ heart rate

**Task 10**

Doctors often take part in health education programs and prevention campaigns to fight diseases. You are now involved in a **High Blood Pressure prevention movement**. Work in teams and prepare a talk to be delivered in your community. The questions below may be used as a guide.





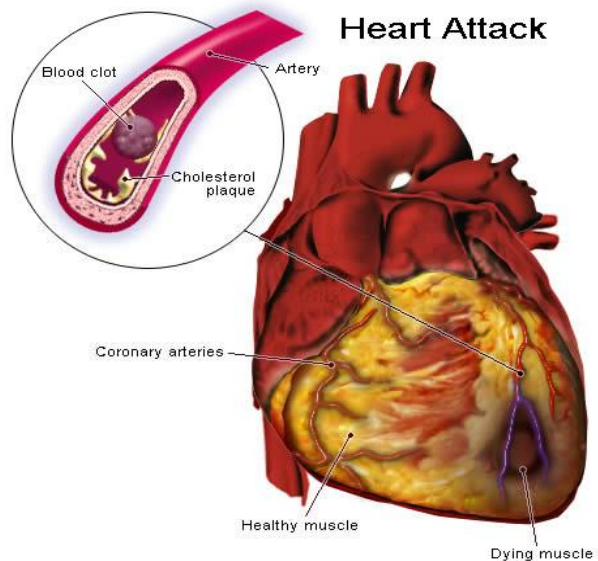
# Myocardial Infarction



## Task 1

a) Look at the picture below and discuss these questions with your partner.

- What kind of medical problem is being depicted?
- What metabolic disorder may have led to this anatomical affection?



10

b) This activity provides you with word phrases that are particularly useful when talking about the heart. Combine them using a word from each box. Some words could be used more than once. Then compare with a partner.

|          |             |
|----------|-------------|
| cardiac  | pressure    |
| heart    | muscle      |
| blood    | atrium      |
|          | ventricle   |
|          | beat        |
|          | relaxation  |
| muscular | organ       |
|          | vessels     |
| right    | rate        |
|          | contraction |
| left     | cycle       |
|          | pump        |

c) Now, using word combinations from the box and others of your own, work out a definition of the heart together with your partner. Then compare your answers with other pairs.

<sup>10</sup> <http://www.medicinenet.com> article: Coronary Artery Disease Screening Test.

## Task 2

“**Move for health**” is a day annual celebration intended to promote physical activity as essential for health and well-being. The following extracts are all in keeping with top priority topics included in the talks delivered during the World Health Report 2003. ***High blood pressure, high cholesterol, obesity, physical inactivity and insufficient consumption of fruits and vegetables.*** . Work in groups and proceed as suggested:

- a) Study the piece of information assigned by your teacher. Suggest a suitable title for it and be ready to report the piece of article back to the class. You may use any of the following essential opening statements to introduce your presentation or report.

I'd like to talk about... / I'm going to talk about...

This piece of article is about.../deals with.../defines.../describes.../emphasizes.../gives account of.../provides scientific evidence of...

I. \_\_\_\_\_

Blood pressure is a measure of the force that the circulating blood exerts on the walls of the main arteries. The pressure wave is usually felt as the pulse; the highest (systolic) pressure is created by the heart contracting, and the lowest (diastolic) as the heart fills. Raised blood pressure is almost always without symptoms. HBP levels damage the arteries that supply blood to the heart, brain, kidneys and elsewhere, producing a variety of structural changes. The main modifiable causes of high BP are diet, especially salt intake, levels of exercise, obesity and excessive alcohol intake. Most adults have BP levels that are sub-optimal for health and this indicates that about two thirds of strokes and half of heart disease, are attributable to sub-optimal BP (systolic blood pressure >115mmH)

II. \_\_\_\_\_

Cholesterol is a fat-like substance found in the blood-stream as well as in bodily organs and nerve fibres. Most body cholesterol is made by the liver from a wide variety of foods, especially from saturated fats. A diet high in saturated fat, low in unsaturated fat, heredity and some metabolic conditions such as diabetes, determine an individual's level of LDL or 'bad' cholesterol.

Cholesterol is a key component in the development of atherosclerosis; the accumulation of fatty deposits on the inner lining of arteries. Mainly as a result of this, cholesterol increases the risks of heart disease, stroke and other vascular diseases.

## III. \_\_\_\_\_

Fruits and vegetables are important components of a healthy diet. Accumulating evidence suggests that they could help prevent major diseases such as CVD and certain cancers, principally of the digestive system. There are several mechanisms by which these protective effects may be mediated, involving antioxidants and micronutrients, such as flavonoids, carotenoids, vitamin C and folic acid, as well as dietary fibre. These and other substances block or suppress the action of carcinogens and, as antioxidants, prevent oxidative DNA damage.

## IV. \_\_\_\_\_

Physical inactivity, along with other key risk factors, is a significant contributor to the global burden of chronic disease. Regular physical activity reduces the risk of heart disease, stroke, breast, and colon cancers. These benefits are mediated through a number of mechanisms. In general, physical activity improves glucose metabolism, reduces body fat and lowers blood pressure; these are the main ways in which it is thought to reduce the risk of CVD and diabetes. It can also help manage and mitigate the effects of these diseases. Physical activity may also reduce the risk of colon cancer by its effects on prostaglandins, reduced intestinal transit time, and higher antioxidant levels. It is also associated with a lower risk of breast cancer, which may be the result of effects on hormonal metabolism. Participation in physical activity can also improve musculoskeletal health, control body weight, and reduce symptoms of depression.

## V. \_\_\_\_\_

Overweight and obesity pose a major risk for serious diet-related chronic diseases, including type two diabetes, cardiovascular disease, hypertension and stroke, and certain forms of cancer. The health consequences range from increased risk of premature death to serious chronic conditions that reduce the overall quality of life. The non-fatal, but debilitating health problems associated with obesity include respiratory difficulties, chronic musculoskeletal problems, skin problems and infertility.

The more life-threatening problems fall into four main areas: CVD problems: conditions associated with insulin resistance such as type 2 diabetes: certain types of cancers, especially the hormonally related and large-bowel cancers; and gallbladder disease.<sup>11</sup>

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<sup>11</sup> Adapted from the WHO convention reports 2003.

- b) A few, largely preventable, risk factors account for cardiovascular morbidity and mortality worldwide. Listen to your teacher and group them into one of the categories presented in the chart below.

| Biological risk factors | Life style risk factors |
|-------------------------|-------------------------|
| _____                   | _____                   |
| _____                   | _____                   |
| _____                   | _____                   |
| _____                   | _____                   |

- c) Imbalanced nutrition can further be divided into some other factors. What are they?  
Work in pairs and discuss your answers with a partner.
- d) Compelling evidence indicates that at least three dietary strategies are effective in preventing CVD, and in helping manage the disease. Complete them using a suitable verb from the box below. Some words may be used more than once or may not even match the idea expressed.

- \_\_\_\_\_ consumption of omega-3 fatty acids from fish oil or plant sources.
- \_\_\_\_\_ a low- fat, high- fiber diet rich in fruits, vegetables, nuts and whole grains.
- \_\_\_\_\_ excessively salty or sugary foods.
- \_\_\_\_\_ in at least 30 minutes of regular physical activity daily.
- \_\_\_\_\_ smoking.
- \_\_\_\_\_ a healthy weight.

consume – avoid – maintain – engage – increase – involve

### Task 3

- a) You will hear a brief account of a medical case report. Work in pairs and be ready to answer these questions.
- What was Mr. Hanna's number one complaint?
  - What is relevant about his previous history?
  - Is there any significant ECG finding?
  - Does he have a positive family history?

- b) Now listen to the case again and discuss the answers to these questions in groups.
1. What do you suspect?
  2. What features from the history point to a diagnosis or diagnoses?



A 53-year-old man whose name is Mr. Hanna was admitted to the hospital complaining of a sudden excruciating, knife-like pain located in the front of the chest. During the course of the examination, he said that he could also feel the pain in his back between the shoulder blades. On close questioning he said he felt pain down the inner side of the arm. The patient had been well until three months earlier, when he began to have increasingly severe exertional dyspnoea, without chest pain. On the day of admission, he had been at work, lifting and transporting heavy objects, when a sensation of “heaviness” developed across his chest, accompanied by dyspnoea. An electrocardiogram obtained at the time of his arrival at this hospital showed elevated ST segments in leads V<sub>1</sub> through V<sub>4</sub>, with depressed ST segments in leads II and III.

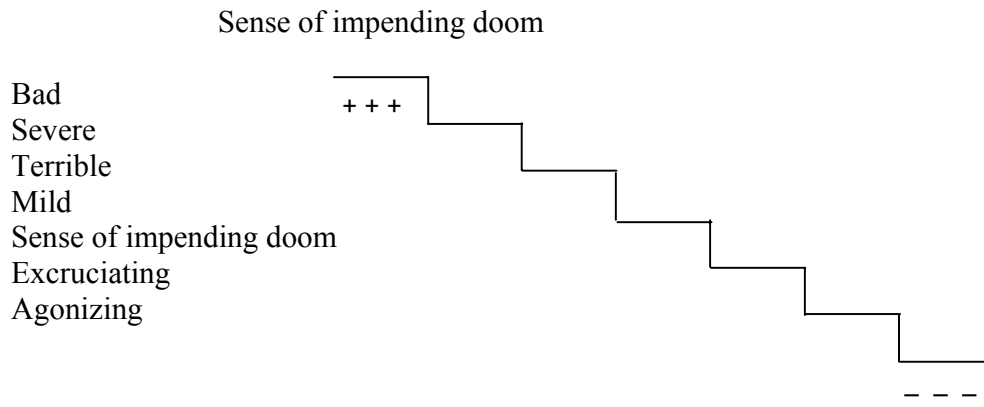
The patient had a 40-pack-year history of cigarette smoking; he drank little alcohol. He had hypertension and hyperlipidemia and took medications for both. There was no history of diabetes mellitus or previous chest pain and no family history of coronary disease.

On physical examination, the temperature was 38.3°C, the pulse was 85, and the blood pressure was 115/80mmHg. The patient was alert and comfortable. The jugular venous pressure was 8 cm of water. Bibasal crackles were present. A grade 1 systolic murmur was heard, with a third heart sound. The abdomen was normal, and there was no peripheral oedema.<sup>12</sup>

- c) Now, read the information in the case report and find in the text the words or expressions that match the definitions provided. Consult your answers with a partner.
1. Coming unexpectedly, abrupt: \_\_\_\_\_
  2. A broad flat body part also known as scapula: \_\_\_\_\_
  3. To a greater degree: \_\_\_\_\_
  4. Effort related: \_\_\_\_\_
  5. Perception of increased work of breathing: \_\_\_\_\_
  6. Quality of being oppressive: \_\_\_\_\_

<sup>12</sup> Adapted from case Records of the Massachusetts General Hospital .N Engl J Med, Vol. 346, No. 20 May 16, 2002 www.nejm.org

- d) The following words are all used to describe **degrees of severity** of the pain associated with MI. Rank them in the cline accordingly and be ready to discuss your answers in plenary. The first one has been done for you.



- e) Doctor – patient questioning is of key importance in history taking. Practice forming questions using the information given. Begin your question with the question word specified after each sentence. You may address the questions to the patient as in history taking.

1. ... 53-year-old ... admitted to the hospital for evaluation and treatment.

*How old...?*

---

2. .... a sudden excruciating, knife-like pain located in the front of the chest.

*What...like?*

---

*How bad...?*

---

*Where...?*

---

3. ... 40-packs a year.

*How much...?*

---

While cardiac **pain** is sometimes characteristic of the disorder itself, there is significant overlap in its **character, quality, radiation, location, severity** and **duration**. Associated factors must be sought as well as risk factors for cardiac artery disease-including lipid status, history of HTN smoking and FH. All of which play a major role in confirming the pain origin.

- f) Now work with your partner and go back over the set of questions you produced in e). Then, decide what further information is important to elicit from this patient's history? What are the questions? You may consult **Appendix 2** for reference.

#### Task 4

- a) Medical examination is normally carried out in four stages: **inspection, palpation, percussion** and **auscultation**. Read the list of clinical signs and decide which of the stages they belong in. Some of the findings may be elicited through more than one clinical procedure.

| inspection | palpation | percussion | auscultation |
|------------|-----------|------------|--------------|
|            |           |            |              |

|                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tachycardia - rapid RR - bradycardia or extrasystoles - restlessness - pallor - thready pulse -<br>distant heart sounds - atrial gallop - diaphoresis - cyanosis - thrill - murmur - rales |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- b) Underline the verb in each item that does not belong in the *italicized* category.

***Inspection***    look    examine    watch    inspect    take

***Palpation***    number    feel    palpate    check

***Percussion***    percuss    check    tap    measure

***Auscultation***    listen    observe    hear    auscultate

- c) Here is a list of some of the steps followed during the examination of the cardiovascular system. Choose the verb that fits best.

1. Begin with a careful inspection of the lips, tongue and nails. \_\_\_\_\_ the hands for cyanosis and clubbing.
2. \_\_\_\_\_ the radial pulse at the wrist.
3. \_\_\_\_\_ to the heart with a stethoscope, \_\_\_\_\_ the blood pressure and assess the jugular venous pressure.
4. \_\_\_\_\_ for thrills by pressing the ball of your hand firmly on the chest.
5. \_\_\_\_\_ the chest for the apex beat.
6. \_\_\_\_\_ for murmurs and other abnormal sounds, for example, friction rubs.

### Task 5



- a) The following incomplete paragraph summarizes the main features in the evaluation of AMI. Work in pairs to supply the missing words.

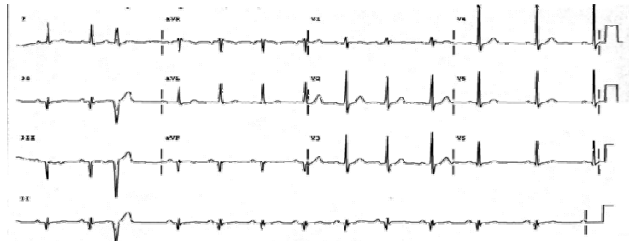
In MI \_\_\_\_\_ is the most common presenting complaint; it is described as \_\_\_\_\_, \_\_\_\_\_, a tightness, \_\_\_\_\_, \_\_\_\_\_ or indigestion like. There \_\_\_\_\_ a sense of impending doom. It's typically \_\_\_\_\_ and may \_\_\_\_\_ to the jaws, neck, throat, \_\_\_\_\_ and arms. It's a severe, long \_\_\_\_\_ pain that \_\_\_\_\_ little or only temporarily by \_\_\_\_\_ or nitroglycerin. It's evident from the \_\_\_\_\_, confirmed by the initial \_\_\_\_\_ (ECG) and supported by the \_\_\_\_\_ changes.<sup>13</sup>

oppressive – shoulders – radiate – expanding – relieves – squeezing – lasting – rest  
electrocardiogram – substernal – discomfort – burning – history – enzyme – may be

<sup>13</sup> Taken from Textbook of therapeutics. Drug and disease management. Sixth edition. Eric T. Herfindal. Dick R. Gourley. 1996. p. 831.

- b) **ECG** usually reveals electrocardiographic findings characteristic of an MI. The following statements explain the exploration of three important diagnostic procedures. Read them carefully and in pairs decide which one corresponds to the **electrocardiogram**.

1. \_\_\_\_\_ detects electrical changes associated with epilepsy, sleep disturbances, and metabolic or structural encephalopathies.
2. \_\_\_\_\_ is a non invasive diagnostic technique. Its single most valuable function is to provide the geography and characteristics of tissue structure within solid organs.
3. \_\_\_\_\_ is a tracing or drawing, produced by a device which records electrical activity in the heart.



- c) Now, match these findings with the pathophysiologic events occurring during the course of the disease.

#### Electrocardiograph findings

1. T – Wave inversion
2. S – T segment elevation
3. Pathologic Q waves

#### Pathophysiologic events

- \_\_\_\_\_ injury
- \_\_\_\_\_ ischemia
- \_\_\_\_\_ infarction (necrosis)

**Task 6**  

- a) The following D-P interview is incomplete. It is about a second patient named Mr. Rodríguez. Read the patient's answers and in pairs write down the **doctor's questions**.

**Doctor:** Hello Mr. Rodríguez. What seems to be the trouble?

Patient: I'm getting pains in my chest, doctor.

**Doctor:** \_\_\_\_\_

Patient: Here in the middle.

**Doctor:** \_\_\_\_\_

Patient: Nearly everyday now.

**Doctor:** \_\_\_\_\_

Patient: About 3 or 4 minutes.

**Doctor:** \_\_\_\_\_

Patient: About 6 months, I think. But they've been much worse recently.

**Doctor:** \_\_\_\_\_

Patient: Well, they seem to come on when I exert myself, like going up stairs.

**Doctor:** \_\_\_\_\_

Patient: I stop and have a rest

**Doctor:** \_\_\_\_\_

Patient: Yes, it does. After a few minutes.

**Doctor:** \_\_\_\_\_

Patient: Well, it's like something pressing on the chest.

**Doctor:** \_\_\_\_\_

Patient: No, not really. Only the usual childhood illnesses.

**Doctor:** \_\_\_\_\_

Patient: Well, I had an appendectomy when I was about 10.<sup>14</sup>

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<sup>14</sup> Adapted from Photocopied material. Course *English for Clinicians* by Joan Maclean. Edinburgh 1999

b) Then, work in pairs and take turns to read the conversation. Negotiate with your partner the roles to play while reading.

c) Go back to the conversation between Mr. Rodríguez and his doctor. In pairs complete the task and be ready for discussion in plenary.

1. The most likely diagnosis is \_\_\_\_\_
2. The features from the history of this patient that point to a diagnosis are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.
3. Other conditions to be considered may include \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

d) Now be ready to take roles for a doctor-patient communication. Use the model provided in a) for the doctor's role (Student A), and the cue notes below for the students who take the role of a patient (B)

You are a 53 year old businessman. You are married with three children. You have been getting a very bad pain in the centre of your chest. Your left arm also aches. The pain is like a heavy pressure on the chest. It lasts from a few minutes to a quarter of an hour in a really severe attack. You get it nearly every day now. The attacks tend to come on when you are exerting yourself, e.g. lifting something heavy, walking up a hill. If you stop and rest, the pain goes away in a minute or two. You have been getting the pain for about a year now and it has become more frequent. The attacks are associated with slight dizziness and sweating.

**Have a look**

☞ **There are typical moves for the sequence of tenses in case report writing.**

- The **past tense** is typically used to introduce c/c
- The **past** is also used to refer to the HPI sometimes contrasted with the **past perfect**.  
These two tenses are also used to refer to both PH and FH, though family history and habits tend to have a more flexible choice of verbs depending on the real time events take place.
- The past perfect is **had** + the **past participle** (been, suffered, noticed, etc)  
Notice that **Mr. Hanna was admitted to the hospital** is the starting point of the story. Then, if we want to talk about the things that happened before this time, we use the past perfect.
- **Present perfect have (has)** + the **past participle** is also used in most instances when there is a connection with the present.
- When reporting physical findings the **past tense** is dominant.

**Task 7**

- a) Now, go back to the case report in Task 3 and in pairs find suitable instances for the tenses discussed in the **Have a look section**.
- b) The statements below were all taken from a patient's history. Write the verb form that best suits the meaning expressed.
1. In retrospect, symptoms \_\_\_\_\_ (begin) 3 months earlier and have quickly progressed.
  2. He was trying to start his car when he \_\_\_\_\_ (develop) acute breathlessness.
  3. The only past history of note \_\_\_\_\_ (be) HTN and hyperlipidemia.
  4. He \_\_\_\_\_ (smoke) cigarettes but \_\_\_\_\_ (not drink) alcohol in excess.
  5. Before the day of admission, he \_\_\_\_\_ (notice) some mild swelling of his hands and feet.
  6. There \_\_\_\_\_ (be) no other physical signs of note at the time of admission
  7. Since then he \_\_\_\_\_ (suffer) similar episodes of SOB exacerbated on exertion.

**Task 8**

To understand how a language works, it is essential to know its “parts of speech”. That is, if the word is a noun, a verb, an adjective, an adverb, etc.

- a) The following incomplete word lists give you examples of two of these important categories; **nouns and adjectives**. Work in pairs and find the corresponding equivalents accordingly.  
e.g. cyanosis (noun) - cyanotic (adjective)

| A              | B            |
|----------------|--------------|
| 1. pallor      | _____        |
| 2. diaphoresis | _____        |
| 3. _____       | diagnostic   |
| 4. anxiety     | _____        |
| 5. _____       | healthy      |
| 6. diet        | _____        |
| 7. _____       | diabetic     |
| 8. _____       | hypertensive |
| 9. dizziness   | _____        |
| 10. digestion  | _____        |

- b) Are the underline words right or wrong? Correct the ones that are wrong.
- Most patients admit having had weakness prior to the acute attack.
  - Other prodromal symptoms are diaphoretic and fatigue.
  - Anxiety may have harmful effects on the CVS.
  - An important diagnosis feature of AMI is the deep, wide Q wave or Q-S pattern.
  - Adoption of health lifestyles is critical for the prevention of CVDs.
- c) Choose the correct word from the word list (noun or adjective) to complete the sentences.
- Fruits and vegetables are important components in a \_\_\_\_\_ due to their protective effect, and their role in the process of \_\_\_\_\_.
  - The severity of the pain makes the patient look \_\_\_\_\_; that is, colorless or anemic.
  - Silent infarction is seen most commonly in \_\_\_\_\_ patients.
  - Adverse effects from drug therapy may include headache and \_\_\_\_\_.
  - Exercise training reduces the risk of CVDs in \_\_\_\_\_ patients.

**Task 9**

Writing is essentially a reflective process that requires enough time to think about the specific topic and to analyze and classify any background knowledge. Therefore, it is important to promote ways of self correcting to improve your writing skills and help you achieve autonomy and self-sufficiency. Talk to your teacher about the **correction key** given below and agree on the use of these symbols or others. They will be used as basis for you to check your own work as well as that of others during peer correction sessions.

**Grammar Symbol**

WO

Agr.

Vt

Vf

Pron.

Prep

Sing.

Pl.

Art.

Neg

Coord.

Mod.

Pass.

Poss.

Rel.

Rep. sp

Vocabulary

Ww

Wf

Fc

Sp

Mechanics and Punctuation

P

Cp

Mech.

Style

U

Coh.

Inc.

Red.

Rep.

Awk.

Other symbols

Ø

^

?

**Error in:**

word order (syntax)

agreement (in number, gender, etc.)

verb tense (in relation to the sentence)

verb form (of the verb itself)

pronoun (number, gender, faulty reference)

preposition

singular

plural

article

negation

sentence coordination

modal verb

use of passive.

use of possessive and apostrophe

relative clause

reported speech

Vocabulary

wrong word (choice)

word form (noun, verb, adjective, adverb)

false cognate

spelling

Mechanics and Punctuation

punctuation

use of capital letter

other aspects of mechanics (wrong use of quotation marks, etc.)

Style

unity

coherence

incomplete thought

redundancy

repetition of a word or idea

awkward construction (not how we would express the idea in English)

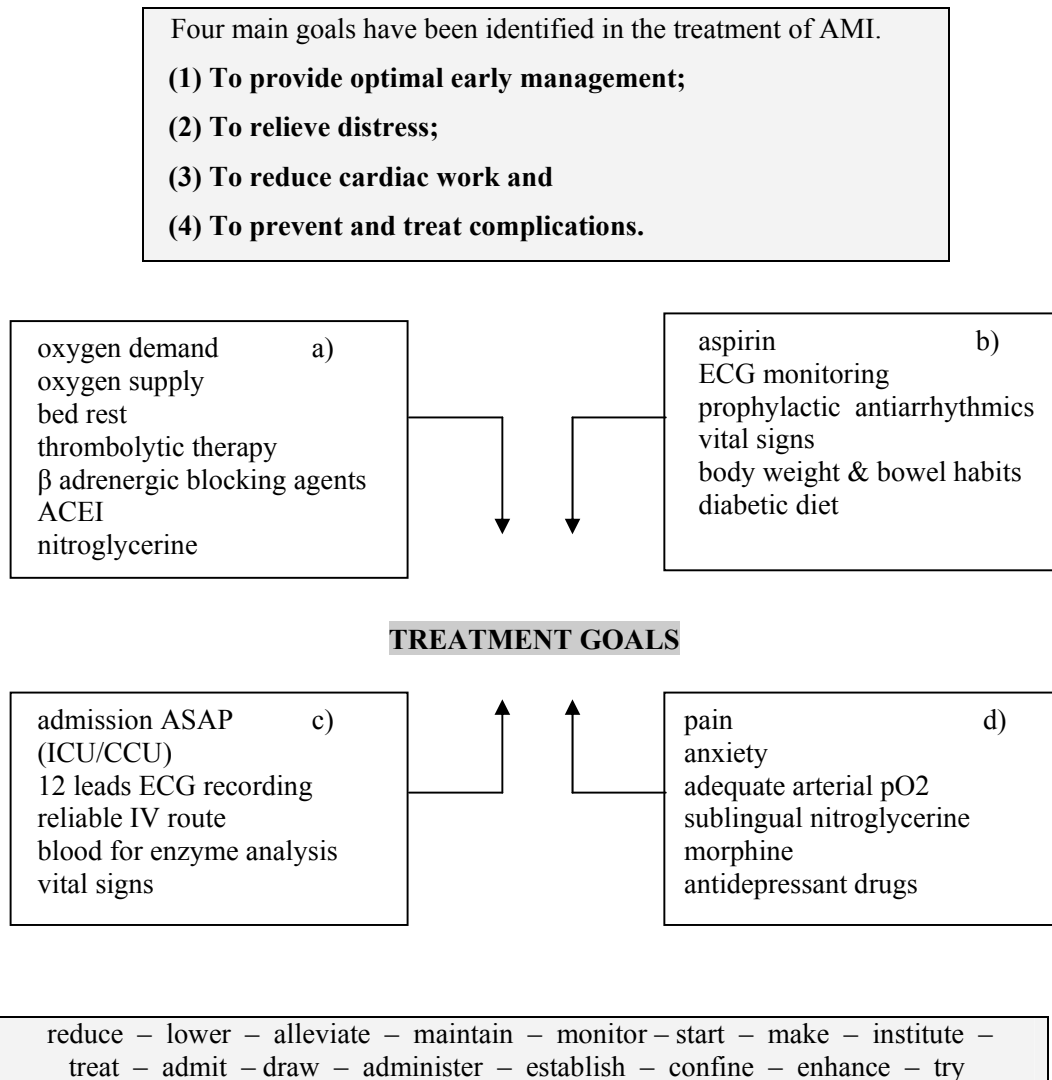
Other symbols

leave out the word

omission

unclear idea (vague)

- a) Read the information provided in the chart below and in groups decide which of the treatment goals is being described in each box. Then proceed as your teacher suggests and write a paragraph describing some of the actions that must be performed to achieve these goals. The verbs in the list below may be of help.



- b) If treatment goals fail complications may arise. Work with your partner and discover the name of the three complications of AMI boggled within these letters. Then make the words.

XEHPYOYAMI

TENHPYSONOI

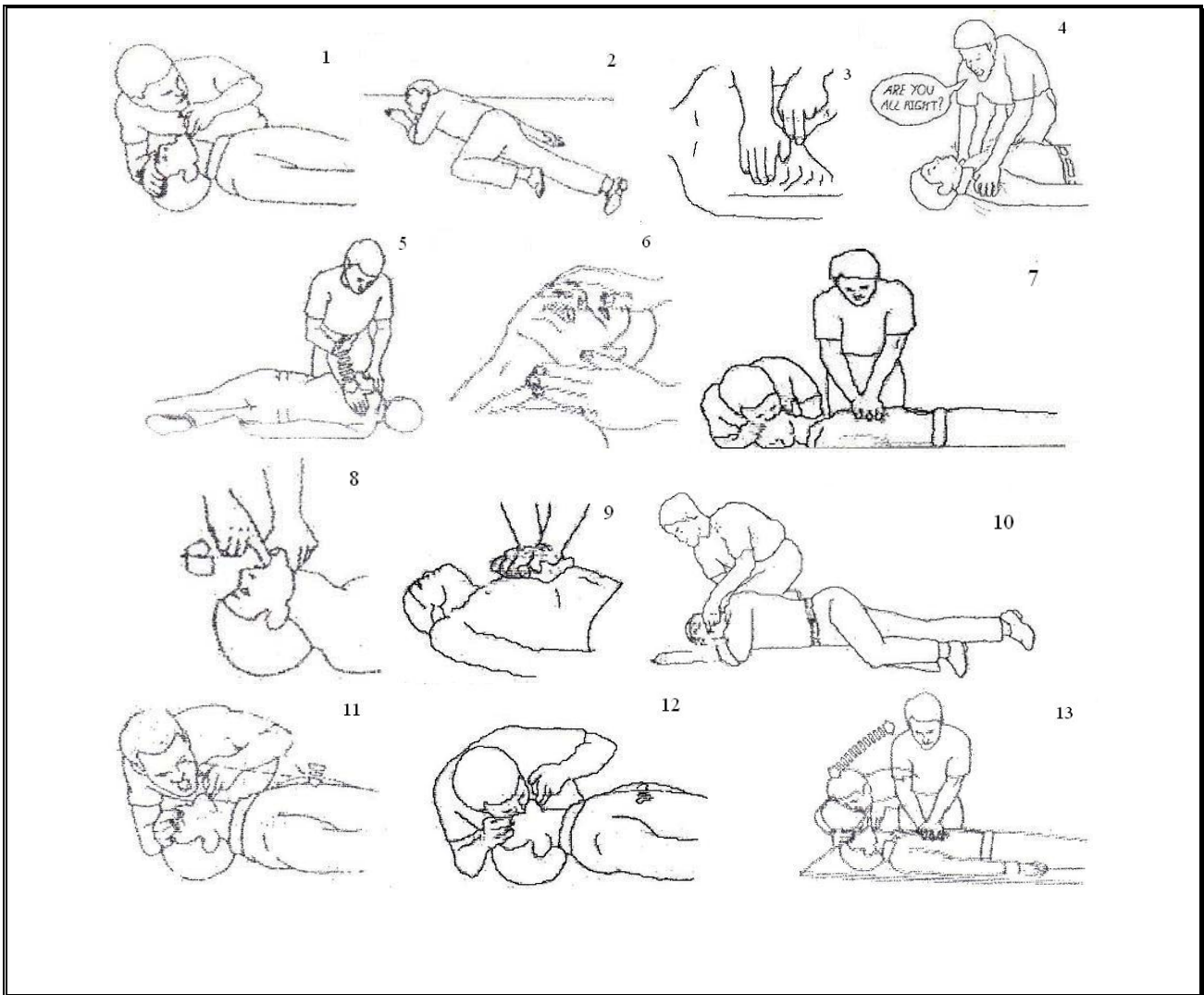
SEAUNRYM

- c) Could you add any other possible complications patients may develop during the course of the disease?

**Task 10**   

- a) Some of these complications may lead to a state of unconsciousness or shock. What needs to be done in such circumstances?

Look at this set of images illustrating the different techniques for a **cardiopulmonary resuscitation (CPR)**. Work with your partner and arrange them in the right order.



- b) Fill in the missing words using the list given below and you will have a detailed description of these techniques. Notice that the first letter of each word is provided. Words may be repeated more than once.

artery – back (wards) – breath – breathe – breathe out – chest – dislodge – elbows – exhale – expand – expired – fall – foreign body – lift – movement – pharynx – pinch – place – push – respiration – rise – seal – shaking – shoulders – sternum – straight – take – technique – upward

Establish whether the patient is conscious by shouting “Are you all right?” and (1) **s**\_\_\_\_\_ him gently. If you are certain the casualty is unconscious, make sure he has a patent airway and he can (2) **b**\_\_\_\_\_. Look for chest (3) **m**\_\_\_\_\_; listen for breath sounds, and feel (4) **e**\_\_\_\_\_ air on your cheek. If the patient is breathing, (5) **p**\_\_\_\_\_ him in the recovery position.

If the airway is obstructed, (6) **l**\_\_\_\_\_ the chin forwards while pressing the forehead (7) **b**\_\_\_\_\_. If this fails to establish an airway, consider an obstruction by a (8) **f**\_\_\_\_\_ **b**\_\_\_\_\_ and remove this by finger sweeps in the (9) **p**\_\_\_\_\_ or try firm blows to the back, which may (10) **d**\_\_\_\_\_ a foreign body by compressing what air remains in the lungs and causing an (11) **u**\_\_\_\_\_ force behind the obstructing material.

If the patient is not breathing, start expired air (12) **r**\_\_\_\_\_ immediately. (13) **T**\_\_\_\_\_ a deep breath, (14) **s**\_\_\_\_\_ your lips firmly around those of the patient, (15) **p**\_\_\_\_\_ the nose and then (16) **b**\_\_\_\_\_ **o**\_\_\_\_\_ until you see the patient's chest (17) **e**\_\_\_\_\_. Then lift your head away so that the patient can (18) **e**\_\_\_\_\_ and you can take another (19) **b**\_\_\_\_\_ of air. The chest should (20) **r**\_\_\_\_\_ and (21) **f**\_\_\_\_\_ as you breathe in and out of the patient.

If the patient does not have a pulse in a major (22) **a**\_\_\_\_\_, then circulation must be established with (23) **c**\_\_\_\_\_ compressions. The positioning of the hands and shoulders for this (24) **t**\_\_\_\_\_ is important. Place two fingers at the base of the xiphisternum, then (25) **p**\_\_\_\_\_ the heel of the other hand above these two fingers on the **s**\_\_\_\_\_. Put your second hand on top of the first hand and align your (27) **s**\_\_\_\_\_ above this position with the arms (28) **s**\_\_\_\_\_. (29) **P**\_\_\_\_\_ down firmly, not allowing your (30) **e**\_\_\_\_\_ to flex.<sup>15</sup>

- c) Follow your teacher's instructions to simulate the technique performance.

<sup>15</sup> Adapted from Photocopied material. Course *English for Clinicians* by Joan Maclean. Edinburgh 1999

**Task 11** 

These are some of the abbreviations used in this unit. Match columns A and B. Then check your answers with a partner.

ICU = intensive care unit

**A**

1. IV
2. ICU
3. ASAP
4. pO<sub>2</sub>
5. RR
6. HR
7. CPR
8. CVD
9. SOB
10. AMI

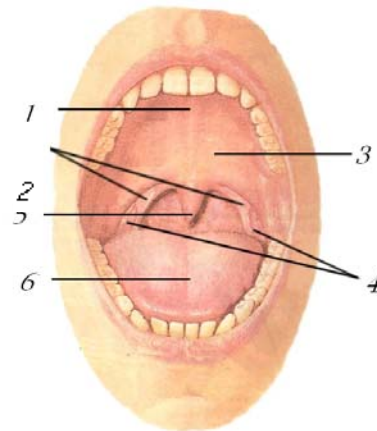
**B**

- \_\_\_ cardiopulmonary resuscitation
- \_\_\_ shortness of breath
- \_\_\_ respiratory rate
- \_\_\_ heart rate
- \_\_\_ cardiovascular disease
- \_\_\_ oxygen pressure
- \_\_\_ acute myocardial infarction
- \_\_\_ intravenous
- \_\_\_ as soon as possible
- \_\_\_ intensive care unit

**Task 1**

- a) This diagram illustrates a normally healthy oropharynx. Work in pairs to label it with suitable anatomical structures from the list given.

\_\_\_ uvula  
 \_\_\_ hard palate  
 \_\_\_ tongue  
 \_\_\_ soft palate  
 \_\_\_ posterior tonsillar pillars  
 \_\_\_ tonsils



- b) The paragraph that follows defines the term *tonsils*. Use the words listed below to fill in the blanks. Then compare your answers with a partner.

The tonsils are masses of \_\_\_\_\_ tissue of considerable \_\_\_\_\_ importance. According to their \_\_\_\_\_ they are known as \_\_\_\_\_ tonsils and \_\_\_\_\_ tonsils. The first are a common site of infection producing the characteristic \_\_\_\_\_ and \_\_\_\_\_. The \_\_\_\_\_ when enlarged are commonly referred to as \_\_\_\_\_.

nasopharyngeal - sore throat - adenoids - pyrexia - location - clinical - second - palatine - lymphoid

Micro organisms far outnumber humans, they are everywhere; in the soil, in the fresh air and seawater. Humans breathe, eat, and drink live microbes, but only a relatively few bacteria, viruses, fungi, etc., are capable of causing disease.

- c) Work in groups and discuss the answers to these questions.
1. Do you agree with this statement?
  2. What happens to individuals whose defense barriers are disrupted or when those organisms become invasive?
  3. What is an infectious disease?
  4. What do you call an infectious disease usually due to streptococcal or less commonly to viral infection for which the target organs are the tonsils?

### Task 2



- a) Listen to Mrs. Hayness and Dr. Martin talking about the boy's problem and complete this **medical chart**.

|                               |  |                 |  |
|-------------------------------|--|-----------------|--|
| <b>Name:</b>                  |  | <b>Surname:</b> |  |
| <b>Age:</b>                   |  | <b>Sex :</b>    |  |
| <b>Source:</b>                |  |                 |  |
| <b>C/C:</b>                   |  |                 |  |
| <b>HPI:</b>                   |  |                 |  |
| <b>Drugs:</b>                 |  |                 |  |
| <b>Significant negatives:</b> |  |                 |  |
| <b>PMH:</b>                   |  |                 |  |
| <b>Diagnostic procedures:</b> |  |                 |  |
| <b>Presumptive diagnosis:</b> |  |                 |  |

**Doctor:** Good morning, Mrs. Hayness. Hi, Willie. What's brought you along today?

**Mother:** Well, for the last two days Willie's had a bad sore throat and he's been running a temperature of 103.1 degrees intermittently.

**Doctor:** Have you given him anything for the fever?

**Mother:** We've been giving him baby aspirin tablets but I guess they haven't helped much.

**Doctor:** Has swallowing been painful?

**Mother:** Yes, very painful. Because of that Willie's been off his meals.

**Doctor:** Has Willie had a cough or runny nose?

**Mother:** No. I can't remember he has had anything of the sort.

**Doctor:** What about abdominal pain or vomiting?

**Mother:** Well, Doc, yesterday morning he had pain in his tummy and he threw up twice.

**Doctor:** Has your son complained of earache, headache or a stiff neck, Mrs. Hayness?

**Mother:** No, doctor.

**Doctor:** Has he had something like this before?

**Mother:** Sure, this is his fourth bad sore throat, but he's never complained so much about them.

**Doctor:** OK. How old is Willie?

**Mother:** He's three.

**Doctor:** OK, Willie. Sit up a bit for me. I want to have a good look at you, buddy. Open your mouth wide, please. That's right. Now stick out your tongue and say "ah." Good boy!

Well, Mrs. Hayness, according to the symptoms and the physical I think that Willie has a strep throat, but first I'm going to order a throat culture to confirm the diagnosis and rule out other conditions. Can you take Willie to the lab tomorrow morning?

**Mother:** Hmm. I'm afraid I can't because I work tomorrow morning but his father will since tomorrow is his day off. Doctor Martin, won't you write a prescription?

**Doctor:** Yes, of course. Look, since your son has had abdominal pain you should stop giving him aspirin so I will prescribe acetaminophen instead. You should also give Willie plenty of fluid.

**Mother:** And no antibiotics?

**Doctor:** Not for the time being. At least until we have the culture results. That'll be all for now.

**Mother:** OK, Dr. Harris. Thank you very much. Bye.

**Doctor:** My pleasure, Mrs. Hayness. I hope Willie gets well soon. Good-bye.

*(One hour later Willie's parents are talking at home)*

**Mother:** Hello, we're back.

**Father:** Hi, dear. Hi, son. What did Dr. Martin say?

**Mother:** Well, he asked many questions first. Then he examined Willie and said that he thought Willie had a strep throat but he was going to order a throat culture to confirm the diagnosis and rule out other conditions. He also asked if I could take him to the lab tomorrow morning.

**Father:** And what did you reply, honey?

**Mother:** Well, I told him that I was afraid I couldn't because I worked tomorrow morning but you would since it was your day off.

**Father:** All right, dear. No problem. I'll take care of it.

b) In pairs, discuss the answers to the following questions about the conversation.

1. What other expressions could you use instead of "What's brought you along today?"
2. Would you say that Dr. Martin uses the same level of formality with Mrs. Hayness and Willie? Why?
3. Do you think there is any particular reason for Dr. Martin to treat Willie that way? Explain.
4. Make a list of all the contractions used in the conversation. Can you explain them? Why do you think they are used?
5. Find equivalents for these words or expressions:
  - a. to have a fever: \_\_\_\_\_
  - b. I think: \_\_\_\_\_
  - c. he hasn't had any appetite: \_\_\_\_\_
  - d. stomach: \_\_\_\_\_
  - e. to vomit: \_\_\_\_\_
  - f. torticollis: \_\_\_\_\_
  - g. discard: \_\_\_\_\_
  - h. a lot of: \_\_\_\_\_
  - i. rhinorrhea: \_\_\_\_\_
6. Do you know any commercial name for acetaminophen?
7. Was it a good idea to give Willie acetaminophen instead of aspirin? Explain.

- c) Work in pairs and take turns to read the conversation. Negotiate with your partner the roles to play while reading.
- d) Work in pairs and re-create the situation in the conversation. A should start.

**Student A:** You are a doctor. Interview a parent of a boy/girl to find out what the patient is complaining of. If s/he insists on getting a prescription for antibiotics, persuade him/her that in his/her case it is not necessary and explain why.

**Student B:** You are a young child's parent seeking medical assistance. Although your child's symptoms and signs are very similar to Willie's in the conversation, insist on getting a prescription for antibiotics.

### Have a look

► Study the following examples:

Willie's mother wants to tell somebody else what the doctor said. There are two ways of doing this:

☞ She can repeat the doctor's exact words: (**Direct speech**)

**Dr. Martin said/says "I think that Willie has a strep throat, but first I'm going to order a throat culture to confirm the diagnosis and rule out other conditions."**

**Direct speech** gives the exact words used by the speaker or writer and they are usually enclosed by quotation marks ("...").

☞ Or she can use **reported speech**:

a) He **said (that)** he **thought** Willie **had** a strep throat but he **was** going to order a throat culture to confirm the diagnosis and rule out other conditions.

b) He **says (that)** he **thinks** Willie **has** a strep throat but he **is** going to order a throat culture to confirm the diagnosis and rule out other conditions.

☞ The choice between **a)** and **b)** depends on whether the idea expressed can be applied to the time of reporting or not.

Remember that:

When changes are necessary, the main verb in the sentence is usually past. e.g. (he **said** .../ they **replied** .../ she **wrote** ...) the rest of the sentence is usually past too.

Then, **present** becomes **past**; **is going to, are going to** change into **was going to, were going to**; **present perfect** becomes **past perfect**; modal verbs **may, can, will, shall, have to** become **might, could, would, should, had to**. Time and place references also change. For instance, **tomorrow** becomes **the next day**; **yesterday** becomes **the day before**; and **here** becomes **there**. **First** and **second personal pronouns** have to be changed to **third person**, unless the original participants are still involved in the conversation.

Example:

Mrs. Hayness: For the last two days Willie **has had** a bad sore throat and he **has been running** a temperature of 103.1 degrees intermittently.

Student A: What did Mrs. Hayness say?

Student B: Mrs. Hayness said (that) for the last two days Willie **had had** a bad sore throat and he **had been running** a temperature of 103.1 degrees intermittently.



### Task 3

- a) Now, report the following statements using indirect speech. Then, in pairs, practice asking and reporting as in the example provided.
1. Mrs. Hayness: We've been giving him baby aspirin tablets but I guess they haven't helped much.
  2. Mrs. Hayness: Because of that Willie's been off his meals.
  3. Mrs. Hayness: Yesterday morning he had pain in his tummy and he threw up twice.
  4. Mrs. Hayness: He's three.
  5. Mrs. Hayness: I'm afraid I can't because I work tomorrow morning but his father will since tomorrow is his day off.

*What did Mrs. Hayness say?*

She said \_\_\_\_\_

\_\_\_\_\_

b) Here are some other things Dr. Martin said to Willie's mother. This is direct speech.



*"His tonsils are swollen and enlarged, he may have difficulty breathing"*

*"If the pain becomes intense; your child may complain of an earache"*

*"There is swelling at both sides of his neck"*

*"Acetaminophen or ibuprofen can help reduce fever and decrease pain"*

*"I need to see Willie back in a couple of days"*

Later that day, Willie's mother is telling somebody else what Dr Martin said. Use reported speech.

1. Dr. Martin said that \_\_\_\_\_
2. She also advised that \_\_\_\_\_
3. She told me \_\_\_\_\_
4. She suggested \_\_\_\_\_
5. She remarked \_\_\_\_\_

c) **People used to believe**

If you feel like having some more practice on the language of reporting you may go ahead with this activity.

Work with a partner and speak about advanced scientific knowledge, bringing to mind some examples of what people used to believe.

*e.g. People used to believe that the growth of the tonsils during childhood was a pathological process.*

*But now we know that many people have quite normally large, even hypertrophied tonsils and there is no need for their removal.*

Think of some more examples of contrasts between past believe and present knowledge. You may recall your own misconceptions and produce similar sentences.

**Task 4**

Now, write a brief case report using the information collected in the patient's chart in Task 2. You may use the cue notes that follow.

 A \_\_\_\_ year old \_\_\_\_ was brought into \_\_\_\_ because \_\_\_\_\_. On this occasion, his mother also reported \_\_\_\_\_. On further questioning she admitted \_\_\_\_\_. However, \_\_\_\_ denied \_\_\_\_\_. The physical examination showed no significant findings. If the presumptive diagnosis of \_\_\_\_\_ is confirmed by \_\_\_\_\_ then \_\_\_\_\_ can be treated with \_\_\_\_\_.

**Task 5**

- a) The following text has been taken from a textbook of Pediatrics. Read the text and number the pieces of information according to the chronological order in which they are stated.
1. \_\_\_\_ how to prepare a child for surgery.
  2. \_\_\_\_ the change in tendency concerning the removal of adenoids and tonsils.
  3. \_\_\_\_ criteria to perform a tonsillectomy.
  4. \_\_\_\_ recommended age for removal of tonsils.

**Hypertrophy of Adenoids and Tonsils**

I. Much has been printed and taught in the past concerning these organs. The need for their removal was based on ignorance that the tremendous growth they show in childhood is a physiological process. The present tendency is to respect immunologic role of the tissues and to spare the child the pain and possible complications attendant upon the operation.

II. Usually invisible at birth, the tonsils normally show much growth in childhood, reaching a maximum around 5 to 7 years of age. The size alone is of no concern; many a pair of round, juicy-looking tonsils that touch each other in midline is perfectly well tolerated. As is true of adenoids, they too tend to swell like sponges in the presence of infection and, often, allergy. Their removal should not be considered before the age of 4 years, some say 5 to 7, and before a few months' treatment or observation.

III. Many a time, the child who has been referred for tonsillectomy does not need it by the time he is seen by the specialist. Infection as such is not an indication; there is no evidence supporting often-stated criteria such as 3 throat infections in 1 year. Tonsillectomy does not prevent subsequent throat infections, though the infections do present in the absence of tonsils. Nor does it lessen the number of days lost in school because of sore throats, especially if one takes into account the postoperative sore throat.

IV. Tonsillectomy is indicated (1) if significant obstruction interfering with feeding and sleep is present and persistent despite adequate observation and treatment (e.g. a long course of suitable antibacterial if infection is a factor), (2) after a peritonsillar abscess that has recurred in spite of adequate antibiotic treatment, and (3) in marked hypertrophy of only one tonsil, if required for biopsy purposes. Some clinicians are not convinced indication 1 ever exists.

V. The child who is to have nose or throat surgery should be prepared psychologically for it. A preliminary visit to the operating suite and familiarization with the anesthetic gear are of much help.

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b) Go over the text again and find out what the underlined words refer to:

Paragraph 1 ...concerning these organs and ...  
... for their removal ...

Paragraph 2 ... adenoids, they too tend to ...  
... Their removal should not be ...

Paragraph 3 ...does not need it by the time ...  
... Nor does it lessens ...

Paragraph 5 ...prepared psychologically for it ...

c) In the text, find synonyms for these words or expressions:

Paragraph 1  
elimination \_\_\_\_\_  
not to cause \_\_\_\_\_  
related to \_\_\_\_\_

Paragraph 2  
enlarge \_\_\_\_\_

Paragraph 3  
avoid \_\_\_\_\_  
reduce \_\_\_\_\_

Paragraph 4  
appropriate \_\_\_\_\_

Paragraph 5  
theater or operating room \_\_\_\_\_

<sup>16</sup> Pediatrics” by Mohsen Ziai, MD. Fourth Edition. Little, Brown and Company. 1990. pp 174-175

d) Read the text again and discuss the answers to these questions with a partner.

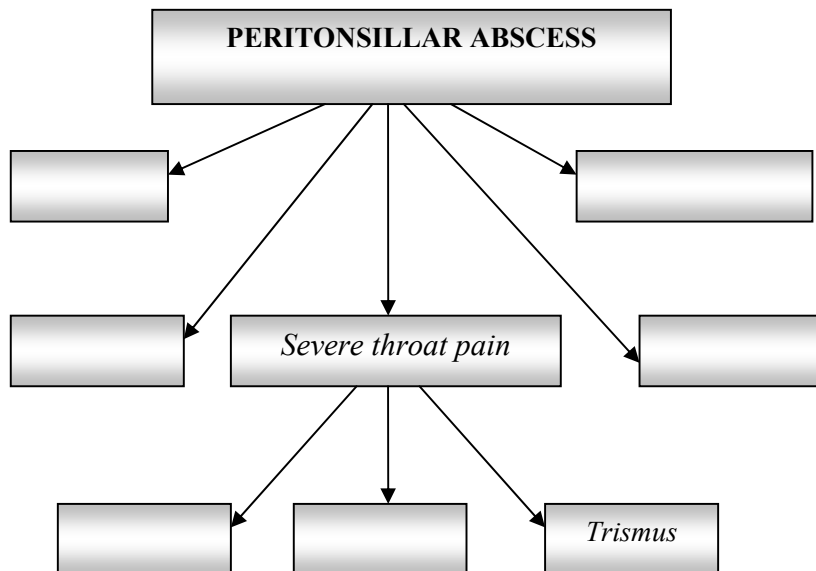
1. Has the point of view concerning the need for removal of the tonsils changed with time? Explain.
2. What processes may bring about swelling of the tonsils?
3. Is there consensus about the most appropriate age to remove the tonsils?
4. Can tonsillectomy guarantee that subsequent throat infections will not occur?
5. Is infection alone a safe indication for tonsillectomy? What professional criteria should be met to opt for this kind of surgical treatment?
6. How can a child be prepared psychologically to face a nose or throat surgery? Do you agree with the suggestion provided by the text? Why?

### Task 6



Brian, a fourth-year medical student missed some lectures while he was ill and now he is getting ready for his final examination. He arranges for a tutorial with Dr. Virginia Alcantud, a professor from the ENT Department, and asks her some questions on the topic of peritonsillar abscess. Read carefully, listen to the recording and proceed as suggested.

a) What characterizes peritonsillar abscess? Complete the chart.



b) Among the complications given below, tick (✓) only the ones mentioned by the professor:

- |                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> bleeding            | <input type="checkbox"/> mediastinitis      |
| <input type="checkbox"/> airway obstruction  | <input type="checkbox"/> rheumatic fever    |
| <input type="checkbox"/> pulmonary abscesses | <input type="checkbox"/> hypercapnia        |
| <input type="checkbox"/> sinusitis           | <input type="checkbox"/> glomerulonephritis |

c) Number the steps in the way they should be performed in the treatment of peritonsillar abscess.

- ☐ The patient is taken to the OR.
- ☐ The pus is drained through an incision.
- ☐ A peritonsillar abscess is diagnosed.
- ☐ Aqueous penicillin is administered.
- ☐ The patient is admitted to hospital.
- ☐ The patient is given local anesthesia.
- ☐ The tonsils are removed.

### Task 7



a) What follows is a protocol for the treatment of acute sore throat that was published in the South African Family Practice Manual<sup>17</sup>. As you can see, the information in the mid column of the chart (clinical picture) has been scrambled. Some of the information in the right-hand column (treatment) has been deleted by accident. Discuss with your partner the correct relationship between the organisms and the clinical picture given and rearrange the contents of the mid column by writing the corresponding numbers in the blanks. Finally, decide what the best choice of treatment should be in each case and write it in the missing parts of the right-hand column. The first one has been done for you.

<sup>17</sup> Adapted from The South African Family Practice Manual. No. 1. May, 1995. Page 7.30

| Organism                                                  | Clinical picture                                                                                                                                                                                                                                                                                                                                                                                                                                                | Rx                                                                                                                   |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 1. Adenovirus                                             | ___ White flecks on erythematous background – can be wiped off. Bottom and sides of tongue. Dysphagia if esophagus involved. Those at risk: <ul style="list-style-type: none"> <li>• Very young and old</li> <li>• Diabetes</li> <li>• Immuno suppressed, esp. AIDS</li> </ul>                                                                                                                                                                                  | 1. Symptomatic                                                                                                       |
| 2. Herpangina (Coxsackie or echovirus)                    | ___ Sore throat, fever, anorexia, malaise, LNS: posterior cervical nodes, periorbital oedema, petechiae on palate, splenomegaly, hepatitis and haemolytic anaemia. Ix: <ul style="list-style-type: none"> <li>- EBV antibodies</li> <li>- IgM implies current infection</li> <li>- IgG implies previous infection</li> <li>- Monospot / Paul Bunnell</li> </ul> Ampicillin: 70% get erythematous rash. Depression and lethargy may persist for months or years. | 2.                                                                                                                   |
| 3. Coxsackie A 16 "Hand, foot and mouth disease"          | ___ Very rare in immunized child. Membranous exudates of pharynx ("false membrane")                                                                                                                                                                                                                                                                                                                                                                             | 3.                                                                                                                   |
| 4. Group A beta Haemolytic Streptococcus (strep pyogenes) | ___ Vesicles or small ulcers on tonsillar pillars or soft palate. Headache, malaise, high fever.                                                                                                                                                                                                                                                                                                                                                                | 4.                                                                                                                   |
| 5. Diphtheria                                             | ___ In sexually abused child.                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5. Antitoxin and Erythromycin                                                                                        |
| 6. GC or Chlamydia                                        | ___ Ulcerations of buccal mucosa with papulo-vesicular lesions on the palms of the hands and soles of feet.                                                                                                                                                                                                                                                                                                                                                     | 6.                                                                                                                   |
| 7. Candida albicans (thrush)                              | ___ Causes about 15% of sore throat in children (varies). Tonsillar erythema with exudates and an enanthem on the soft palate. Usually fever and lymph nodes. Rarely sand paper-like rash or scarlet fever. If untreated, may develop acute rheumatic fever or acute glomerulonephritis. Carriers difficult to treat.                                                                                                                                           | 7. Nystatin drops ("Mycostatin") (BMS) 100 000<br>Infants: 0,5–2 ml 4 x day.<br>Children and adults: 4-6 ml 4 x day. |
| 8. Epstein-Barr virus (infectious Mononucleosis)          | <u>1</u> Exudative pharyngitis and some degree of nasal discharge or cough. Younger children.                                                                                                                                                                                                                                                                                                                                                                   | 8.                                                                                                                   |

b) Match the abbreviations in column A with their meanings in column B.

| <u>A</u> | <u>B</u>                                  |
|----------|-------------------------------------------|
| 1. Hx    | _____ Acquired Immune Deficiency Syndrome |
| 2. Ix    | _____ treatment                           |
| 3. LNS   | _____ Immunoglobulin G                    |
| 4. AIDS  | _____ gonococcus                          |
| 5. Rx    | _____ operating room                      |
| 6. OR    | _____ lymph-node seeking                  |
| 7. IgG   | _____ milliliter                          |
| 8. ENT   | _____ history                             |
| 9. ml    | _____ investigations                      |
| 10. GC   | _____ ear nose and throat                 |

### Task 8



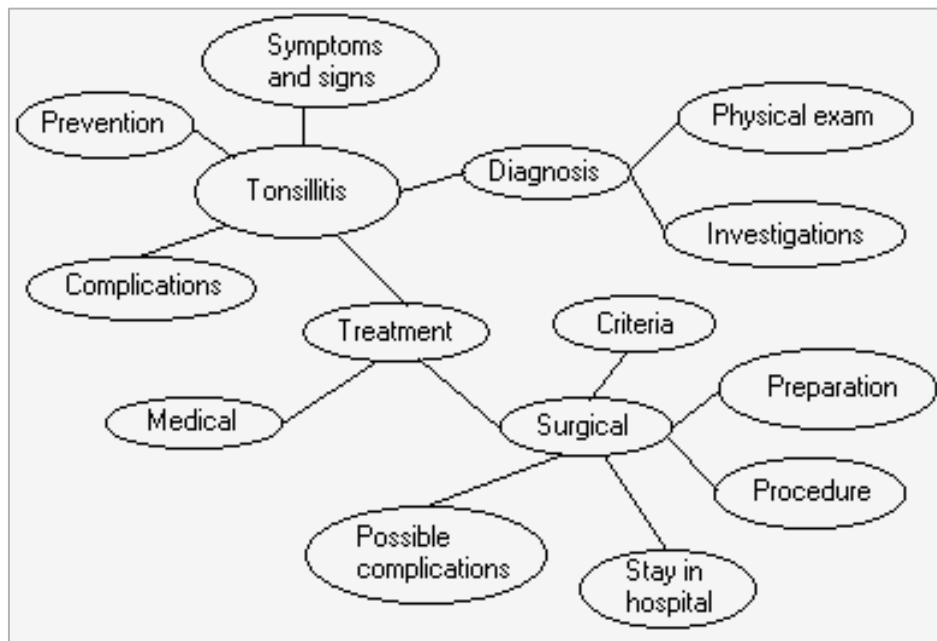
a) In the grid below there are ten words related to the topic of tonsillitis. Can you find them? They may appear horizontally, vertically or diagonally.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | S | S | O | T | U | D | Y | S | P | H | A | G | I | A |
| B | E | E | T | O | H | L | U | K | N | D | A | Y | K | O |
| I | A | M | D | R | O | O | L | I | N | G | U | I | T | T |
| D | I | U | R | G | E | G | O | N | G | H | I | L | L | O |
| A | M | O | S | E | R | P | C | A | I | R | E | S | A | N |
| D | Q | U | I | N | S | Y | T | I | O | M | E | R | A | S |
| E | B | B | A | N | O | R | G | O | G | G | I | U | J | I |
| N | J | I | F | X | I | E | W | Y | C | A | Z | I | O | L |
| O | W | A | Q | U | E | X | Y | O | N | O | C | A | A | L |
| P | I | M | A | L | A | I | S | E | R | E | C | W | A | I |
| A | N | D | H | E | S | A | T | H | E | R | U | C | S | T |
| T | O | R | T | I | C | O | L | L | I | S | A | V | U | I |
| H | I | F | I | B | O | L | M | E | T | E | R | O | U | S |
| Y | T | O | N | S | I | L | L | E | C | T | O | M | Y | O |

b) In pairs, define one of the words you found in the grid. Then compare your definition with the ones given in the glossary at the end of the book.

**Task 9**

Your class is in charge of preparing a short medical essay on Tonsillitis for your hospital web site. Work in teams. Discuss orally and reach an agreement on the contents that you wish to include in the essay. You may use the cluster below as a guide. If you turn the cluster into questions and order them in a logical way, it will be easier for you to produce your writing piece later on. Discuss your writing plan with the rest of the class and the possible answers to the questions you have written down.



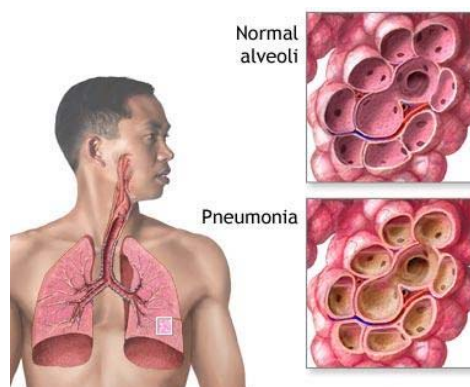


### Task 1



Here is a list of major **symptoms**. Study them and proceed as suggested below.

|                                  |             |
|----------------------------------|-------------|
| dyspnea (shortness of breath)    | fever       |
| cough (nonproductive/productive) | wheezing    |
| sputum production                | tightness   |
| (thick/ purulent/ rust-colored)  | chills      |
| pleuritic chest pain             | weight loss |
| tiredness, fatigue               |             |



d) What diseases are characterized by these symptoms? You may use the following phrases:  
...is typical of...    ... is a common feature of...    Usual symptoms of ... include...

b) Which **body system** is affected when someone has any of these ailments?

c) For better study scientists have divided this body system into **upper respiratory tract (URT)** and **lower respiratory tract (LRT)**. Work in pairs and decide how they match with the conditions presented below:

| upper respiratory tract | lower respiratory tract |
|-------------------------|-------------------------|
|                         |                         |
|                         |                         |
|                         |                         |
|                         |                         |
|                         |                         |

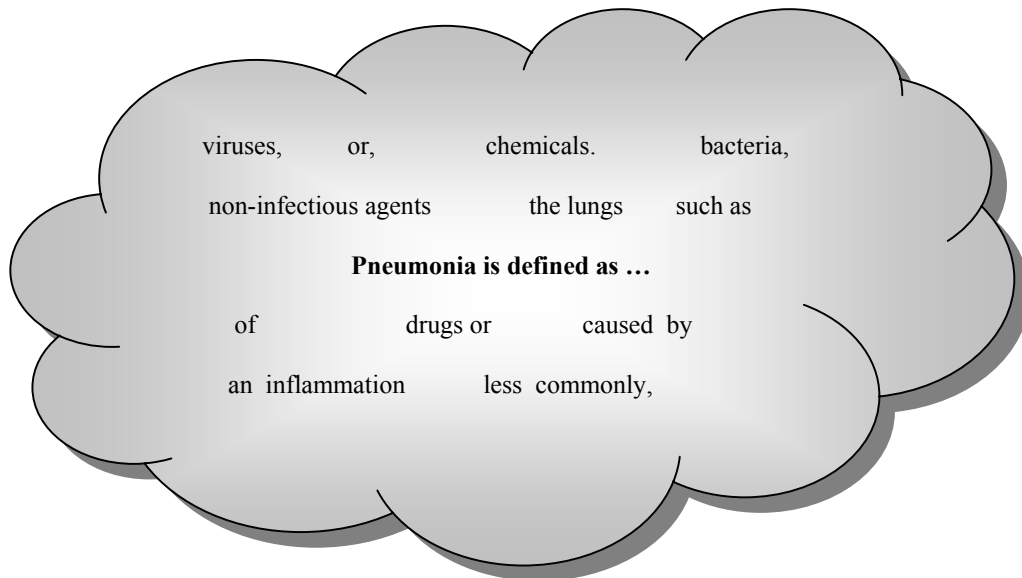
infections of the oral cavity - pharyngitis - bronchiectasis - common cold - otitis  
epiglottitis - atelectasis - sinusitis - tonsillitis - laryngitis - emphysema  
COPD (Chronic obstructive pulmonary disease) - bronchiolitis - pneumonia

- d) Now, reread the list of major symptoms in a) and complete the following paragraphs on the main features of ***Pneumonia***. You may use your background knowledge to add further information if you wish. Be ready to discuss your choices in plenary.

Most people who develop pneumonia initially have symptoms of a common cold which are often followed by \_\_\_\_\_, shaking \_\_\_\_\_ and a \_\_\_\_\_.  
The sputum is usually \_\_\_\_\_ and sometimes \_\_\_\_\_. People may become \_\_\_\_\_ of \_\_\_\_\_. \_\_\_\_\_ may develop and worsens when taking a deep breath.

### What is Pneumonia?

- e) Make up your own definition using the following jumbled words. Work in groups and be ready to report back to your class in plenary.



**Task 2** 

a) The following text offers an interesting account on **the causes of Pneumonia**. Go over it, reading for main ideas. Then, in pairs decide which of the following subtitles belong to each of the paragraphs.

- Bacterial Pneumonia
- Viral Pneumonia
- Other Types of Pneumonia
- Main causative agents

I. \_\_\_\_\_

Pneumonia has more than 30 different causes. Most cases of pneumonia result from infection with microorganisms, primarily viruses, bacteria, mycoplasmas (small, free-living particles with characteristics of both bacteria and viruses), and fungi. Pneumonia may also result from certain kinds of allergic reactions, inhalation of fluids or some gases, and the inhalation of ingested foods.

II. \_\_\_\_\_

About 50 percent of pneumonia cases are caused by viruses, particularly those viruses that cause upper respiratory infections, such as the viruses that cause influenza, adenoviruses, and rhinoviruses. Most cases of viral pneumonia are mild and resolve spontaneously without specific treatment.

One exception is severe acute respiratory syndrome (SARS), a type of viral pneumonia. SARS typically begins with a fever of 38.0°C or more, chills, headache, and malaise. Two to seven days later some people develop a dry cough and difficulty breathing. For these people SARS can cause death.

III. \_\_\_\_\_

Infection with the *Streptococcus pneumoniae* bacterium, also called pneumococcus, is the most common cause of bacterial pneumonia. Pneumococcus usually causes lobar pneumonia, attacking an entire lobe or portion of a lobe of the lung; in double pneumonia, pneumococcus attacks both lungs. Pneumococcal lobar pneumonia often occurs in winter after an acute, viral upper respiratory infection. Usual symptoms include a shaking chill followed by a fever of about 40°C (104°F), pain in the chest while breathing, a cough, and blood-streaked sputum. Other bacteria that cause pneumonia include *Klebsiella pneumoniae*, *Haemophilus influenzae*, *Legionella pneumophila* (the bacterium that causes Legionnaires' disease), and various staphylococci and streptococci bacteria. Infections with these organisms primarily cause bronchopneumonia. Onset of symptoms is generally slower than with lobar pneumonia, and the fever is lower.

IV. \_\_\_\_\_

One common type of pneumonia, formerly called primary atypical pneumonia, is caused by *Mycoplasma pneumoniae*, a mycoplasma. Epidemics of mycoplasma pneumonia occur in schools and in the military. The most prominent symptom of mycoplasma pneumonia is a violent dry cough. Some patients experience nausea or vomiting. *Pneumocystis carinii* pneumonia (PCP) is caused by a normally harmless fungus that may become deadly in people with impaired immune systems. It is the most common cause of death in people with acquired immunodeficiency syndrome (AIDS).<sup>18</sup>

b) These statements are all in keeping with the text. Show where they fit into the paragraphs by writing the appropriate Roman numerals (I, II, III, IV) on the lines. In some cases more than one choice is correct.

1. \_\_\_\_ Weather conditions play a role in the onset of the disease.
2. \_\_\_\_ This species causes pneumonia in immunosuppressed patients.
3. \_\_\_\_ If complications arise, this can become a life-threatening condition.
4. \_\_\_\_ Several reasons may explain the etiology of this condition.
5. \_\_\_\_ It is typical of places where large numbers of persons gather together for a long time.
6. \_\_\_\_ Mycoplasmas share features of both bacteria and viruses and cause a specific type of pneumonia.

c) Paragraph 3 focuses basically on the most common cause of bacterial pneumonia: Pneumococcal pneumonia. Go back to the text and fill in the following incomplete ideas for a description of main features:

Lobar pneumonia and double pneumonia can simply be differentiated by the fact that \_\_\_\_\_

Pneumococcal lobar pneumonia is a seasonal problem usually preceded by \_\_\_\_\_

Typical manifestations of this type of pneumonia consist of \_\_\_\_\_.

<sup>18</sup> Adapted from Mark Abramowicz 1993-2003 Microsoft Corporation

d) Circle the words in each item that belong in the underlined category.

1. **body parts**

lungs          particles          chest          infections

2. **symptoms of illness**

mild - blood-streaked sputum - malaise - dry cough

3. **life-threatening conditions**

headache - severe acute respiratory syndrome - influenza - pneumocystis carinii pneumonia

4. **causative agents**

staphylococci          alveoli          pneumococci          streptococci

**Have a look**

Go over the causative agents you have identified in **item 4**. What do the three have in common?

Now, if you read the passage again you will surely notice that sometimes the authors write **streptococcus** or **streptococci**.

Why does it happen? Why does the ending change?

☞ The reason is that they are **foreign words** and have **foreign plurals**. Foreign plurals tend to be commoner in technical language even if regular plurals are possible.

Notice how some of these words may change

★ **-us** changes to **-i** as in **stimulus** ➔ **stimuli**

★ **-a** changes to **-ae** (pronounced as /i/) **larva** ➔ **larvae**

★ **-um** changes to **-a** as in **curriculum** ➔ **curricula**

Other foreign words, however, only take **regular plurals**, i.e. **virus** ➔ **viruses**

**Task 3**

Now scan the whole unit to complete the table below and thus enlarge the list of some foreign plurals in medical English.

| Singular       | Plural   |
|----------------|----------|
| pneumonia      |          |
|                | alveoli  |
|                | fungi    |
| staphylococcus |          |
|                | bacteria |
|                | bronchi  |

**Task 4**

- a) Now, read the following **clinical example** and identify the risk factors and symptoms of pneumonia in this patient's current condition.

A 25-year-old man was rescued from a lake after falling through thin ice. The next day a severe cold developed, and 3 days later his general condition deteriorated. He became more febrile and started to cough up blood-stained sputum. At first, he had no chest pain, but later, when he coughed, he experienced a severe pain over the right fifth intercostal space in the mid-clavicular line. He was admitted to hospital for further investigations.

- b) Work in groups and add other risk factors and symptoms of this condition.

☞ To the clinician Pneumonia is a constellation of signs and symptoms. Some information (general condition, appearance, discomfort, anxiety, and dyspnea on exertion) is absorbed almost subconsciously as the patient walks from the waiting room to the office, whereas other general and respiratory information must be actively sought. The sequence of **inspection**, **palpation**, **percussion**, and **auscultation** applies to the examination of the respiratory system.

Typical findings include:

- |                             |                                                    |
|-----------------------------|----------------------------------------------------|
| ✚ ↓excursion ____           | ✚ tachycardia ____                                 |
| ✚ cyanosis ____             | ✚ ↑ vocal fremitus ____                            |
| ✚ pleural friction rub ____ | ✚ distant B.S ____                                 |
| ✚ fine crackling rales ____ | ✚ localized monophonic wheeze ____                 |
| ✚ tachypnea ____            | ✚ incoordination of respiratory muscle groups ____ |
| ✚ flaring of the nares ____ | ✚ dullness ____                                    |

- c) Work in pairs and decide which medical **procedure** is required to elicit each of the signs presented in the list above. Write **I** for *inspection*, **Pa** for *palpation*, **Pe** for *percussion* and **A** *auscultation* on the lines.
- d) Now, reread the situation in the clinical example and discuss with your partner typical signs patients with these clinical manifestations usually reveal during the physical examination. You may use your background knowledge to add further information if you wish. Then, write a brief description on these typical findings and be ready to discuss your choices in plenary. Use the following cues to introduce your ideas:

- On auscultation these patients are likely to have... <sup>19</sup>
- These patients may show evidence of...
- His/her lungs are found to be...
- There may be ... on examination
- There may be (no) evidence of ....
- His/her general condition is likely to ...
- Breath sounds...

<sup>19</sup> Apart from the normal breath sounds, there may be two other kinds of **added sounds**: 1. **crackles** (sounds like hairs being rubbed together and suggest the presence of fluid in the lungs.) 2. **wheezes** (more musical sounds, like whistling and indicate narrowing of the airways).

- e) Below is an incomplete summary on the main features in the evaluation of this medical entity. Listen to the recording or to your teacher and fill in the blanks. Swap notebooks for peer corrections.

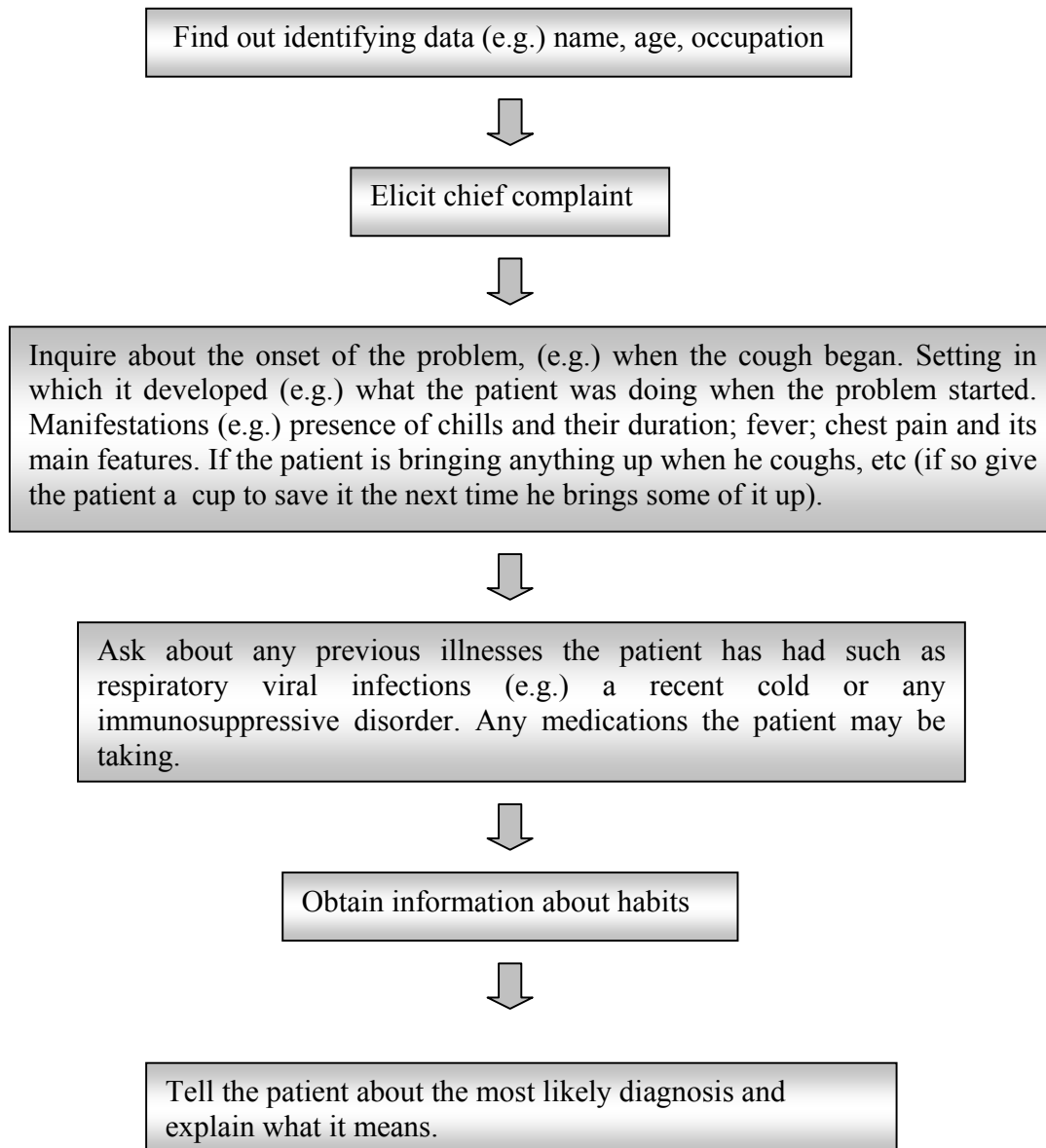
The diagnosis of pneumonia is based on \_\_\_\_\_, radiologic, laboratory and \_\_\_\_\_ findings. No single \_\_\_\_\_ is capable of diagnosing the \_\_\_\_\_ of pneumonia. An adequate \_\_\_\_\_ is helpful and should be obtained from all patients. \_\_\_\_\_ examination is an essential component in \_\_\_\_\_ the patient with pneumonia. Abnormal \_\_\_\_\_ signs include \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. The pulse usually \_\_\_\_\_ by 10 beats per minute for every \_\_\_\_\_ centigrade of temperature elevation. Auscultation of the lungs \_\_\_\_\_ fine crackling \_\_\_\_\_ and diminished breath \_\_\_\_\_ over the affected area. Percussion \_\_\_\_\_ is evident in approximately 30 % of patients and indicates the \_\_\_\_\_ of consolidation.

- f) The words in the left sided column are commonly used by doctors when they approach a pulmonary patient. Match them with their corresponding meanings in column B.

| A                       | B                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. nares                | ___ An abnormal sound heard on auscultation of the lung, indicating constriction of or excessive secretions in the air tubes. e.g sibilant, rhonchus, crackling... |
| 2. empyema              | ___ Rusty colored (reddish brown) expectorated matter.                                                                                                             |
| 3. rales                | ___ Difficult breathing usually with a relatively high whistling sound.                                                                                            |
| 4. mycoplasma           | ___ State of the lung in which the alveoli are filled with fluid produced by inflamed tissue.                                                                      |
| 5. wheezing             | ___ The nostrils.                                                                                                                                                  |
| 6. blood-stained sputum | ___ A collection of pus within a natural body cavity. The term generally used with reference to an abscess between two layers of the pleura.                       |
| 7. consolidation        | ___ A bacterial genus associated with outbreaks of severe respiratory disease.                                                                                     |

**Task 5** 

Now, take roles for a doctor-patient communication. The student who takes the role of the **doctor** will prepare a set of questions for the interaction using the map given below. The student who takes the role of the **patient** will answer the doctor's questions using the situation provided in the clinical example in the previous task. Ask about the most likely diagnosis and any implications the disease might pose for his/her personal health. See **Appendix 2**.



**Task 6**

The **case notes** in the next exercise are taken from a **medical student admission write-up**. As is usually the case with medical notes, many acronyms, abbreviations and symbols are used. Work with your partner and write your own version of this case report. Supply all verb forms as well as other function words (articles, prepositions, language connectors, etc).

**Remember that:**

The writing notes are presented in paragraph form to help you with the chronological organization of events.



- ☞ Once you introduce the ID and C/C (duration included), begin with a sentence describing the onset of symptoms that you perceive as the present illness.
- ☞ All active and significant inactive medical problems should be listed in the PMH. (e.g. date in which the problem was diagnosed, results of definite tests, surgeries or hospitalizations, current treatment regimens, etc).
- ☞ List family history (patient's siblings, parents and children) of diabetes, cancer, CVDs, or other diseases with significant genetic penetration.
- ☞ Document all drugs used by the patient.
- ☞ Smoking and drinking history must be quantitated in familiar units.
- ☞ Physical examination begins with a statement describing the overall appearance of the patient. Vital signs should be listed, as well as body weight. Look for specificity here (key to a good physical exam).

**Case notes****Paragraph 1**

1. 32 yr old non – smoking/ white woman / admitted / c/o cough / breathlessness
2. well until 2/52 previously / developed / headache / nausea followed / a cough / scanty sputum
3. progressive dyspnoea / orthopnea
4. GP prescribed amoxicillin / day / admission
5. part time cleaner / drank no alcohol / no history / foreign travel / IV drug use / blood transfusion

**Paragraph 2**

6. On admission / unwell / cyanosed / breathless / rest but alert / oriented / no fever
7. main abnormal signs / ↑HR (140 beats/min) RR (32 breaths/ min) / ↓ systolic BP 70 mmHg)
8. CXR /extensive consolidation /both lungs
9. ECG /sinus tachycardia /inferior T wave ↓
10. ABG tensions / pH 7.51
11. Total WBC  $17 \times 10^9$  (82%neutrophils) /serum concentrations / Na (129mmol/L) / urea (18mmol/L) creatinine (122  $\mu$ mol/L) / albumin (29g/l)

**Task 7** 

These are two excerpts from an article on the **management of pneumonia**. Sometimes whole lines from one excerpt are mixed up with the other excerpt. (This sometimes happens even in the best academic journals).

- a) Read carefully and say where you think this has happened. Then compare your answers with a partner and be ready to share your ideas in a plenary session.

**Diagnosis**

A physician can diagnose pneumonia by tapping the chest and listening with a stethoscope to the sound produced. Tapping the chest of a healthy person produces antibiotics to prevent bacterial pneumonia from developing during the course of their illness. In addition to drug treatment, a patient with pneumonia should stay in bed, eat healthy meals of pneumonia, a physician takes a sample of the patient's sputum. Analysis of the sputum in the laboratory may relieve chest pain and violent coughing, and oxygen may be administered if the patient has in determining treatment.

**Treatment**

Antibiotics can cure bacterial pneumonia and speed recovery from mycoplasma pneumonia and PCP. Antibiotics rarely have an effect on pneumonia caused by viruses. However, patients with viral pneumonia often receive a resonant sound because of the air contained in the lungs. In a person with pneumonia, the air spaces of the lungs become filled with fluid, and tapping produces a dull, flat sound. The diagnosis of pneumonia is confirmed by taking an X-ray picture of the chest. To determine the cause and drink large amounts of liquids. Medication may be given to identify the particular kind of microorganism causing the infection. Identification of the cause of pneumonia is important difficulty breathing.

- b) Now complete the following ideas with your own words.

1. Tapping the chest and listening with a stethoscope...
2. Antibiotics have proven effective... however...
3. ... is the laboratory test used to identify a particular kind of...
4. Bed rest and healthy meals...
5. ....people over 65 and those with chronic heart, lung, or liver disease.

- c) This piece of information was accidentally left out. In which of the two excerpts from the article above do you think it fits?

A vaccine that confers immunity against pneumococcus is available. The vaccine is given to people most at risk for developing pneumonia - those over the age of 65 and those with chronic heart, lung, or liver disease.

**Task 8**

Many people contract pneumonia while staying in a hospital for other conditions. This tends to be more serious because the patient's immune system is often impaired due to the condition that initially required treatment.

- a) Read the short text you are given. Try to do this as fast as you can. Guess the words in bold type by completing the blanks. Then be ready to read out your answers and compare your predictions with a partner.

A 32 year old woman was **adm**\_\_\_\_\_ in a **quadr**\_\_\_\_\_ state due to a spinal **inj**\_\_\_\_\_ when she had thrown herself **fr**\_\_\_\_\_ a bridge. She had made eighteen previous attempts at **suic**\_\_\_\_\_ over the previous five years, sometimes by taking an **over**\_\_\_\_\_ of tablets of various kinds and sometimes by **cutt**\_\_\_\_\_ her wrists. She had been injecting herself with **hero**\_\_\_\_\_ for the past seven years and had no close **relation**\_\_\_\_\_ with her family and no close friends. During her **st**\_\_\_\_\_ of two days in the intensive **c**\_\_\_\_\_ **u**\_\_\_\_\_ she developed pneumonia and died. A **consc**\_\_\_\_\_ decision not to provide **art**\_\_\_\_\_ **vent**\_\_\_\_\_ and resuscitation had been made beforehand.

- b) Continue working in pairs and confer about the possible factors that may have led this patient to develop pneumonia and the characteristic complications that result from this condition.



# Bronchial Asthma



## Task 1



This is part of a patient's-instructions-for-use leaflet. Work with your partner and determine which of the medications on the right is being presented in the box below.

### FLUTICASONE PROPIONATE AND SALMETEROL

**Indications:** Asthma, COPD (associated with chronic bronchitis)

**Cautions:** Avoid use during pregnancy or in nursing mothers.

**Side effects:** upper tract infections, headache, nausea, vomiting, diarrhea, throat candidiasis and musculoskeletal pain

**Dose:** The recommended regimens for asthma in individuals 3 yr and older is one inhalation twice daily (morning and evening)  
Approximately 12 h apart.

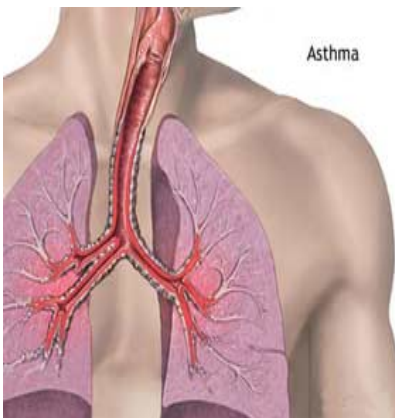


ADVAIR DISKUS® 250/50  
(fluticasone propionate 250 mcg and salmeterol 50 mcg inhalation powder)

## Task 2

Vocabulary is a complex activity. It includes being able to explain the meaning of words, store words in the mental lexicon, and recall them when required. One way of facilitating this process is by having a word list (with words organized into sets) because not only can the meanings of the words be more effectively learned in such sets but because they can be remembered better.

- Listen to your teacher and write down your own list.
- Group the words from the list into sets of related meanings, and be ready to identify the category they could fall into.
- Now, fill in the blanks with the words from the WORD LIST.



Asthma is defined as a \_\_\_\_\_ with the following characteristic features: airway obstruction, \_\_\_\_\_ and bronchial hyper-responsiveness. A number of factors may trigger asthma symptoms or exacerbations, such as \_\_\_\_\_ (animal dander, \_\_\_\_\_, molds, mites), viral respiratory tract \_\_\_\_\_, environmental irritants (\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_) exercise and \_\_\_\_\_ (aspirin, NSAIDs, \_\_\_\_\_).

<sup>20</sup> Symptoms of asthma include \_\_\_\_\_ or dyspnea, \_\_\_\_\_ and sputum production. In acutely obstructed patients \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ may also be present.

<sup>20</sup> [http://forte.fh-hagenberg.at/article: Medical Background](http://forte.fh-hagenberg.at/article:Medical%20Background).

- d) The use of specific language for doctor-doctor communication requires the ability to move from a technical to a standard register and vice versa. Work in pairs and match the words in column A with the corresponding equivalents in column B.

| A              | B                                  |
|----------------|------------------------------------|
| 1. dyspnea     | _____ bluish discoloration of skin |
| 2. asthenia    | _____ rapid heart rate             |
| 3. myalgia     | _____ rapid shallow breathing      |
| 4. arthralgia  | _____ joint pain                   |
| 5. bradypnea   | _____ shortness of breath          |
| 6. polypnea    | _____ fever                        |
| 7. tachycardia | _____ muscle pain                  |
| 8. pyrexia     | _____ abnormally slow breathing    |
| 9. cyanosis    | _____ weakness                     |
| 10. hypoxia    | _____ lack of oxygen               |

**Task 3**

- a) A respiratory physician has just received a 13-year-old girl with an asthma attack at the Pneumology out-patient clinic. Listen to the dialog and tick (✓) the items that belong in the interview.

|                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------|
| Patient's age _____<br>Main complaint _____<br>Drug history _____<br>Family history _____<br>Aggravating factors _____ |
|------------------------------------------------------------------------------------------------------------------------|

- b) Now, listen to the conversation again and underline the right answer(s).

The patient went to this out-patient-clinic because:

- ☐ She needed special care.
- ☐ She had convulsions and tachycardia.
- ☐ The GP didn't know what to do.

- c) Then, listen again and write down the notes for the items you ticked during the first listening.  
Compare your answers with a partner and be ready for discussion in plenary.

**Nurse:** Excuse me, Dr. Here is a 13 - year - old girl who has just been referred to our service because of an acute asthma attack. Her mother has come along with her.

**Doctor:** Let them in, please.

**Mother:** Good morning, doctor.

**Doctor:** Good morning. Hello, young lady. How are you feeling?

**Lizzie:** It's this coughing again. I think my asthma attacks are coming more frequently now.

**Doctor:** Oh, sorry. Do you cough up any phlegm?

**Lizzie:** No, but I cough all the time.

**Mother:** We went to our GP because Lizzie can hardly breathe and she has started to complain of chest tightness. She has this dry nagging cough as you can see. I gave her the prescribed medication, as usual, but it didn't work.

**Doctor:** What kind of medication does she take?

**Mother:** Salbutamol inhaler along with Beclomethasone.

**Lizzie:** This does not seem to be working. I've had several puffs of Salbutamol and I haven't had any relief.

**Doctor:** Have you felt like this before?

**Lizzie:** Several times, doctor.

**Mother:** Yes, that's right.

**Doctor:** When do the attacks usually come on?

**Mother:** In winter, especially when the weather changes.

**Lizzie:** I've also noticed that I get worse when I have to take exams at school.

**Doctor:** I see. I'll now examine you and then give you something to help you breathe more easily.

*The doctor is now examining Lizzie*

**Doctor:** Take deep breaths in and out through your mouth, please. Good. Now say "ninety-nine". Fine. There's nothing to worry about. We'll now change beclomethasone for fluticasone. This new medication will help you reduce the inflammation in your airways and improve the function of your lungs. Do you have any questions?

**Mother:** Does this medication have any side effects we should know about?

**Doctor:** I don't think so. I suggest that you read the medication leaflet carefully and if Lizzie feels unwell or has any other symptom that you do not understand, please, bring her back immediately.

**Mother & Lizzie:** Thank you very much, doctor.

d) Cross out the word(s) in each line that do (es) not belong. Tell the parts of speech (noun, verb, adjective) of the words that belong together. Reading the conversation may help you.

1. **breathe:**     respire     inhale     blow out     take in air
2. **breath:**     inhalation     exhalation     respiration
3. **nagging:**     persistent     unrelenting     intermittent     permanent
4. **care:**     concern     carelessness     disregard     attention
5. **attacks:**     crises     calm     episodes     bouts

e) The following statements belong to Lizzie's case. However, they are not chronologically arranged. In pairs, organize them accordingly using the words on the left. The use of punctuation marks, capital letters and pronoun references in the statements will help you. Notice that *who* should be used twice.

|           |                                                                                                                                                                                         |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Well      | ➤ <i>She had started to complain of difficulty breathing, chest tightness as well as a dry nagging cough.</i>                                                                           |
| Although  | ➤ <i>...it didn't work.</i><br>➤ <i>... referred the patient to a specialist.</i>                                                                                                       |
| Therefore | ➤ <i>... at the outpatient clinic, she was seen by the respiratory physician...</i><br>➤ <i>... recommended a new steroidal anti-inflammatory drug to improve her lung functioning.</i> |
| Once      | ➤ <i>...she was taking the prescribed medication ...</i>                                                                                                                                |
| who (2)   | ➤ <i>...her mother decided to take her to the family doctor ...</i><br><i>... this is a 13-year -old patient who was brought to the outpatient clinic with a bad asthma attack.</i>     |

**Task 4**

- a) Doctors should know all relevant data about their patients' history and questions are of paramount importance to gain their confidence, especially when they are children. In pairs, study the medical cases below and complete the questions you are likely to ask in situations like these.

I.

I am 14 years old. I have had asthma for more than 5 years. My mother is also an asthmatic patient.

I am taking some medications.

- ☐ What kind of \_\_\_\_\_?
- ☐ Is there any \_\_\_\_\_?
- ☐ How often \_\_\_\_\_?

II.

My name is Susan Strong and I am 12 years old. I feel a little tight and short of breath. I have had this problem for 2 days and became worse after I finished my exercises this morning. My mum gave me some pills but they do not seem to be working. I also have a fever. I'm afraid I've got a cold. I have a little puppy. She is my closest friend.

- ☐ Have you \_\_\_\_\_?
- ☐ Have you noticed \_\_\_\_\_?
- ☐ What sort of pills \_\_\_\_\_?

III.

I decided to bring my daughter to the emergency room because she doesn't seem to respond well to her medication. Her usual symptoms became worse last night. I have noticed she comes up with asthma when there is a weather change. Her asthma attacks have been more frequent and severe lately and I don't know what to do.

- ☐ What \_\_\_\_\_?
- ☐ What triggers \_\_\_\_\_?
- ☐ When \_\_\_\_\_?

- b) Take roles for a doctor- parent conversation Use the situation provided for the parent's role.

You bring your 4 – year - old boy to the emergency room. The boy started with wheezing, dry cough and fever, in addition to shortness of breath of 2 days' duration. He has been asthmatic ever since he was 3 and has been taking regular medications since then. You would like to know what's wrong with him.

### Have a look

During the conversation the doctor says,

**“Take deep breaths in and out through your mouth, please.”**

**“Now say ‘ninety-nine’ ”.**

**The doctor is giving instructions.**

Normally, when you give instructions your sentences are usually grammatically ‘incomplete’. In most cases you start with a verb e.g.

► **Breathe in/out**      ► **Take off your top things**      ► **Open your mouth**

**‘Please’** is generally used either at the beginning or at the end.

**Task 5** 

- a) You are now performing the physical examination of an asthmatic patient. Tick the instructions that best suit this situation.

1. \_\_\_ Bend forward to touch your toes.
2. \_\_\_ Take a deep breath and hold it, now let it out.
3. \_\_\_ Raise your left/right leg straight, please.
4. \_\_\_ Give a cough once more, please.
5. \_\_\_ Let me feel your pulse.
6. \_\_\_ Bend down, please.
7. \_\_\_ Put out your tongue.
8. \_\_\_ Just sit up straight.
9. \_\_\_ Roll up your sleeve.
10. \_\_\_ Please, put your hands by your side.
11. \_\_\_ Follow my fingertip with your eyes.
12. \_\_\_ Stand straight and keep your feet together.
13. \_\_\_ Please, breathe in and out slowly through your mouth.
14. \_\_\_ Lie down on the couch, on your back

Polite instructions

***Would you .... please.***

These expressions can be used to give instructions in a polite form:

Imperative: ***Give a cough.***

Polite form: ***Would you give a cough, please.***

- b) Now work in pairs and act out some of the instructions given in the a). Use the expression in the example to give polite instructions.

**Task 6**

- a) This patient has been referred to the Allergy Department of a University Hospital for further evaluation. Read the case and answer the following questions. Then compare answers with your partner.
1. What kind of letter is this?
  2. What's the purpose of the letter?

January, 2008

TO : Jim Reynolds, MD  
Head of Allergy Department.  
University Hospital

This is a 13-year-old Caucasian girl with a long history of bronchial asthma since age 5 who was seen at our service complaining of shortness of breath and dry hacking cough of 2 days' duration. On admission, the girl also complained of chest tightness and wheezing as well. Two days prior to this she had had a cold. Throughout her life she has experienced several asthma attacks mainly in winter time. She has been taking Ketotifen and Intal regularly. Her father has been an asthmatic patient since age 4 and her mother has been allergic to some medications. The patient doesn't smoke.

On the physical examination of the respiratory system, there were diminished breath sounds, dry inspiratory rales, intercostal retraction, and flaring of the nares. At the moment of her admission the respiratory rate increased; BP was 110/90 mm Hg. and there was a fever of 103 °F. No abnormalities were found on the cardiovascular system. There was no cyanosis, but the patient seems to be very anxious.

The diagnosis of acute bronchial asthma was made on the basis of clinical picture and physical examination. Initially, she was given oxygen by mask and Salbutamol by inhalation. But the patient doesn't seem to respond well to treatment and we have decided to refer her to your specialized service for further evaluation.

We would appreciate very much if you could assess this patient and start her on the right treatment. Please, keep us informed.

Thanks very much for your help.  
Yours faithfully ,

*Gerard Valdivia, M.D.*

- b) This is the patient's **medical record**. Read the letter again and complete the chart. Feel free to add information of your own if necessary.

|                        |  |                               |  |
|------------------------|--|-------------------------------|--|
| <b>Name:</b>           |  | <b>Surname:</b>               |  |
| <b>Age:</b>            |  | <b>Sex :</b>                  |  |
| <b>Source:</b>         |  |                               |  |
| <b>C/C:</b>            |  |                               |  |
| <b>Drugs:</b>          |  |                               |  |
| <b>PMH:</b>            |  |                               |  |
| <b>Family history:</b> |  |                               |  |
| <b>Physical Exam:</b>  |  |                               |  |
| <b>RS:</b>             |  | <b>CVS:</b>                   |  |
| <b>HR</b> ____         |  | <b>RR</b> ____ <b>BP</b> ____ |  |
| <b>Diagnosis:</b>      |  |                               |  |
| <b>Management:</b>     |  |                               |  |

### Task 7



- a) In the introductory unit you first encountered **drug facts**. Now, we will go deeper into drug classes, dosage, modes of presentation, routes of administration, indications, and side effects. Chart A is not complete; you have only part of the information; the other part is on chart B at the end of the unit. Work in pairs to find out the information you don't have. Please, do not show your chart to your partner. These questions will help you find the missing parts in each of the charts.

- What is hydrocortisone?
- What drug class does epinephrine belong to? /What type of drug is ...?
- What is Salbutamol used for? When is it prescribed? /administered?
- How is aminophylline administered?
- How is penicillin available? /
- Is it an inhaler/a shot/ syrup/ an ointment?
- What side effects is epinephrine likely to produce?

**Chart A (for students "A")**

| Drugs          | Class                  | Indication                                                             | Route            | Availability                                | Side effects                                                 |
|----------------|------------------------|------------------------------------------------------------------------|------------------|---------------------------------------------|--------------------------------------------------------------|
| hydrocortisone | anti-inflammatory drug |                                                                        |                  | vials/100 - 500 mg                          |                                                              |
| salbutamol     |                        |                                                                        | oral/<br>inhaler | pressurized aerosol/syrup<br>tablets/sprays | muscle cramps/<br>palpitations/<br>occasional<br>tachycardia |
| aminophylline  | bronchodilator         | severe acute asthma/<br>congestive heart failure                       |                  | tablets/<br>suppositories                   |                                                              |
| penicillin     |                        | gram-positive infections/otitis media/<br>leptospirosis/<br>pneumonias |                  | vials                                       |                                                              |
| epinephrine    | bronchodilator         |                                                                        | IM/<br>SC/<br>IV |                                             | tachycardia<br>high blood pressure                           |

b) Now, you may talk about the drugs like this. Consult **Appendix 3** for further help.

**Salbutamol** is a bronchodilator that is used in the treatment of bronchial asthma. It is available in pressurized aerosol sprays, (inhalers) tablets and syrup. In children the dosage is ... In adults, the recommended dosage is ...Some side effects are... (unpleasant taste, nausea, vomiting, headache, etc)

**Task 8**

- a) The stimuli that incite acute episodes of asthma can be grouped into several major categories. Before listening to the recording try to figure out what to insert into each of these sets. Then, listen to a brief talk on the topic and write down the ones you hear. Then check your predictions and compare your answer with a partner.

| <i>Triggering factors</i> |                      |                      |                  |               |
|---------------------------|----------------------|----------------------|------------------|---------------|
| <i>Allergenic</i>         | <i>Environmental</i> | <i>Pharmacologic</i> | <i>Emotional</i> | <i>Others</i> |
|                           |                      |                      |                  |               |

- b) Is there any other triggering mechanism you find worth including in the list?
- c) Some preventive measures are commonly recommended to keep asthma under control at home. Below are some of these measures but they are scrambled. Work individually and arrange them. Then, compare your answers with a partner.

- |                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. wash - bedding - It - all - weekly – hot - in – water - important - is - to<br>2. important - to - is – and - It – avoid – like - dust - pollen- mold - allergens - animal dander<br>3. pets - indoor – kept - away - should- Asthmatic- from – patients – be |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- d) Now, in pairs add your own actions for the asthma care program of your health community. The following cues may help you.
- .....place mattresses and box springs in an impermeable casing.
  - Reduce or limit your exposure to.....
  - .....wear a mask while cleaning.
  - Avoid use or intake of...
  - .....intense emotions.
  - You ..... bathe pets regularly.

**Task 9** 

- a) This medical article contains several facts about bronchial asthma. Work individually and try to find out in which of the paragraphs you can get the information below. Then write the corresponding number in the lines. Finally, compare your answers with a partner.

-  Physical findings \_\_\_\_
-  Treatment \_\_\_\_
-  Risk factors \_\_\_\_
-  Clinical picture \_\_\_\_
-  Investigations \_\_\_\_



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**I.**

Bronchial asthma is a chronic obstructive pulmonary disease that is triggered by many stimuli like pollens, house dust-mites, animal dander, cigarette smoking, cold air and exercise.

Infections are the most common triggering factor in asthma as well as weather changes, analgesics, especially aspirin, food preservatives and dyes. Emotional stress may become an important precipitating factor in asthma attacks.

**II.**

Bronchial asthma is characterized by dry hacking cough, shortness of breath, wheezing, and chest tightness and it usually occurs in attacks or episodes. Asthma attacks vary in frequency and severity. Sometimes, a chronic dry cough may be the only symptom of mild asthma. The attack may last a few minutes or long hours and should be controlled by means of avoiding triggering factors. If the factors that trigger an asthma attack are identified and avoided, the patient may have a good prognosis and the attacks may disappear for a while. Patients who have a prolonged severe attack of asthma that is unresponsive to initial standard therapy may have a complication known as status asthmaticus, which is especially characterized by dyspnea, dry cough, wheezing, and hypoxemia, and that may lead to respiratory failure.

<sup>21</sup> [http://forte.fh-hagenberg.at/article: Medical Background](http://forte.fh-hagenberg.at/article:Medical%20Background).

**III.**

On the physical examination there may be intercostal retraction and dry inspiratory rales may be heard on auscultation. In addition, during an asthma attack, shortness of breath may become severe, creating a feeling of anxiety. The persons tend to sit upright and lean forward, using the neck and chest muscles to help in breathing. Confusion, lethargy, and blue skin color (cyanosis) are signs that the person's oxygen supply is severely limited, and emergency treatment is needed.

**IV.**

A doctor suspects asthma based largely on a patient's report of characteristic symptoms. However, determining what triggers a person's asthma is often difficult. The allergy skin test is usually made to know the type of allergy that's causing the patient's problem. Sputum and blood eosinophilia and measurement of IgE levels may also be helpful. Determination of ABGs and pH is essential to an adequate evaluation of the severity of the attack. Pulmonary function tests are valuable in differential diagnosis and in known asthmatics to assess the degree of airway obstruction, disturbance in gas exchange, etc.

**V.**

As asthma is a condition that causes inflammation and obstruction of the airways, it is important to treat the patient quickly when he comes to the emergency room mainly to open his airways. During the attacks the patient should be treated with oxygen by mask as well as salbutamol aerosol. The pharmacological treatment also includes prednisone, theophylline IV fluid if dehydration, antibiotics if infection, IV corticosteroids, and IV infusions of aminophylline.<sup>22</sup>

- b) So far you have read and studied some interesting facts about bronchial asthma, some pieces of information, however, are more relevant for you than others. Take down notes and prepare an outline – list of points to be covered in the order you want to cover them. Feel free to do this by yourself, with a partner or in small groups. You may wish to add information of your own. Then be ready to move around the class to report what you have just read.

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<sup>22</sup> Adapted from the Merck manual of Medical information. Home edition.USA; 1999.p 556-560

**Task 10**

Your teacher will read a short text at normal speed. Note down the words you recognize (it is not necessary to write all the words, just those you consider important). Then, in groups, pool resources and try to reconstruct the text in an acceptable paraphrase.

**Chart B (for students “B” Task 7)**

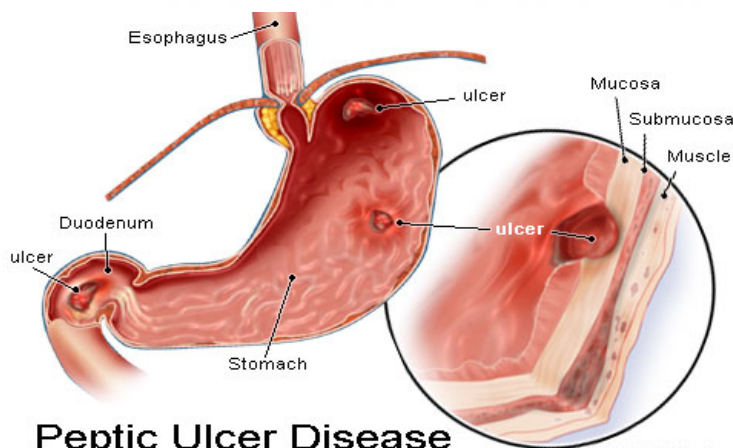
This chart is not complete; you have only part of the information; the other part is on **chart A. Task 7**. Work in pairs to find out the information you don't have. Please, do not show your chart to your partner. These questions will help you find the missing parts in each of the charts.

- What is hydrocortisone?
- What drug class does epinephrine belong to? /What type of drug is ...?
- What is Salbutamol used for? When is it prescribed? /administered?
- How is aminophylline administered?
- How is penicillin available? /
- Is it an inhaler/a shot/ syrup/ an ointment?
- What side effects is epinephrine likely to produce?

| Drugs          | Class          | Indication                                                                                                    | Route                      | Availability    | Side effects                                               |
|----------------|----------------|---------------------------------------------------------------------------------------------------------------|----------------------------|-----------------|------------------------------------------------------------|
| hydrocortisone |                | allergic diseases/<br>bronchial<br>asthma/rheumatic<br>disease                                                | IV/IM                      |                 | sodium retention/<br>edema/ nausea/<br>vomiting/ diarrhea. |
| salbutamol     | bronchodilator | bronchial<br>asthma/airways<br>obstruction/<br>bronchospasm/<br>chronic obstructive<br>pulmonary disease      |                            |                 |                                                            |
| aminophylline  |                |                                                                                                               | IV/<br>Rectally/<br>orally |                 | nausea/ vomiting<br>tachycardia /headache                  |
| penicillin     | antibiotic     |                                                                                                               | IV/IM                      |                 | anaphylactic shock/<br>dryness of mouth/<br>others         |
| epinephrine    |                | bronchial asthma/<br>acute hypotension/<br>anaphylactic<br>shock/<br>life-threatening<br>allergic<br>reaction |                            | ampoules<br>1mg |                                                            |



# Peptic Ulcer Disease



Peptic Ulcer Disease

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## Task 1



This is an excerpt of an **emergency report** about a patient who tries to treat a sprained ankle and ends up with a far more serious problem. Read carefully and advance toward the goals below:

### I.

Mitchell Cobb, age 37, arrives at the emergency department (ED) at 2 a.m. complaining of severe epigastric pain, nausea, and episodes of haematemesis. For the past two days, he's had foul-smelling, tarry stools. He also mentions he sprained his ankle 10 days before and has been taking recommended doses of both aspirin and ibuprofen to control the pain.

### II.

Mr. Cobb's vital signs: heart rate, 80; blood pressure, 120/72; and respiration, 12. His abdomen is not distended. The ED physician examines him and orders an IV started with lactated Ringer's solution as well as a nasogastric (NG) tube to be inserted at low intermittent suction. This will decompress Mr. Cobb's stomach and allow you to monitor his fluid loss.

### III.

The tube is inserted and a small amount of coffee-ground-like aspirate is returned. Its pH is 2, and it's positive for blood. The physician orders CBC, ABGs, coagulation times and electrolytes and admits Mr. Cobb to the medical-surgical unit for further evaluation and testing.

### IV.

At 5:30 a.m., Mr. Cobb asks the nurse to disconnect his NG tube so he can use the bathroom. When he stands up, he becomes lightheaded, dizzy, diaphoretic, and pale. She immediately assists him back to bed. After reconnecting the tube to low wall suction, she notes that there's a larger quantity of drainage than before and it's bright red. Her assessment finds Mr. Cobb still alert and oriented to person, place, and time, but his heart rate has risen to 128, his blood pressure has dropped to 105/70, and he continues to report epigastric pain. She pages the physician.<sup>24</sup>

<sup>23</sup> Taken from MedicineNet.com

<sup>24</sup> Adapted from AJN February 1996/Vol. 96, No 2

- a) Paragraphs divide reading material into topics. In the selection above, there are numbers next to the four paragraphs. Work in pairs to match the paragraphs with the issue or point they give account of and write the numbers of the paragraphs on the lines.

|                                                                          | P.1 | P.2 | P.3 | P.4 |
|--------------------------------------------------------------------------|-----|-----|-----|-----|
| Preliminary results and diagnostic studies                               |     |     |     |     |
| Immediate measures to release compression and help stabilize the patient |     |     |     |     |
| Warning signals indicating probable complications                        |     |     |     |     |
| Report on the patient's current complaint and early history              |     |     |     |     |

- b) Follow the instructions carefully. You may wish to go back over the reading passage for help.

1. Underline the words with opposite meaning.

drop      fall      low      rise      descend

2. Put a check (✓) by the nouns. Underline the verbs.

doses      examine      assessment      admit      assist

3. Circle the nouns and write their corresponding adjectives.

tarry      dizziness      diaphoresis      surgery      pallor

4. Draw vertical lines to divide the words as in hemat/emesis. Then match the words with their definitions by writing letters on the lines.

a. intravenous      \_\_\_\_\_ performed by intubation of the stomach through the nasal passages.

b. lightheadedness      \_\_\_\_\_ occurring within or entering by way of a vein.

c. nasogastric      \_\_\_\_\_ fainting sensation, dizzy feeling.

5. There are three abbreviations in the text. What do they stand for?

a) \_\_\_\_\_ : \_\_\_\_\_  
 b) \_\_\_\_\_ : \_\_\_\_\_  
 c) \_\_\_\_\_ : \_\_\_\_\_

What about **Peptic Ulcer Disease**? \_\_\_\_\_

You do not need to look up the meanings of all new words if you can guess them from the context. Sometimes there are examples of the meaning of a new vocabulary item in another sentence or sentence part. This information may be in parenthesis ( ), after a dash ( - ), or after a coma (,). Or the words *for example, in fact, that is, such as* may introduce examples.

- c) Find the meanings of the underlined words in the sentences and write them on the lines. An example is given.

e.g. This patient arrives at the emergency department complaining of severe epigastric pain, nausea, and episodes of hematemesis. He was in fact bringing up large amounts of vomits of blood. What does hematemesis mean? It means "vomits of blood".

1. For the past two days, the patient had had foul-smelling, tarry stools—fetid, bad odorous dark brown fecal matter \_\_\_\_\_
2. The only history of note was a sudden twist of his ankle not sufficiently severe to produce a rupture; that is, he reported having had a sprained ankle ten days before. \_\_\_\_\_
3. The doctor inserted the tube and a small amount of coffee-ground-like aspirate was returned. (When the doctor inserted the tube, the material removed by aspiration contained digested blood).  
\_\_\_\_\_
4. In this case the nurse pages the physician when she realizes that the patient's condition is progressing, so that she found it necessary to send for a doctor in medicine. \_\_\_\_\_

- d) Now, discuss the answers to these questions with your partner.

1. Which body system is the unit topic moving to?
2. What made this patient seek medical care?
3. What associated manifestations did he report having?

- e) This is Mr. Cobb's **medical record**. Read the emergency report again and complete the chart. Then be ready to report it orally to a senior doctor in a role play. See **Appendix 2** for help.

|                                                                                            |           |            |             |
|--------------------------------------------------------------------------------------------|-----------|------------|-------------|
| <b>Name:</b> <i>Mitchell</i> <b>Surname:</b> <i>Cobb</i>                                   |           |            |             |
| <b>Age</b>                                                                                 | <i>37</i> | <b>Sex</b> | <i>Male</i> |
| <b>Source:</b> <i>pt who seems reliable</i>                                                |           |            |             |
| <b>C/C:</b> <i>severe epigastric pain ...</i>                                              |           |            |             |
| <b>HPI:</b> <i>foul-smelling...</i>                                                        |           |            |             |
| <b>Drugs:</b>                                                                              |           |            |             |
| <b>PMH:</b>                                                                                |           |            |             |
| <b>Family history:</b> <i>Nothing remarkable</i>                                           |           |            |             |
| <b>Physical Exam:</b>                                                                      |           |            |             |
| <b>HR</b> <i>80</i> <b>RR</b> <i>__</i> <b>BP</b> <i>__</i>                                |           |            |             |
| <b>Diagnostic procedures:</b><br><i>CBC, ABGs, coagulation time, electrolytes: Pending</i> |           |            |             |
| <b>Assessment:</b>                                                                         |           |            |             |

- f) You may have come up with these questions in your D-D interaction. But if you missed these points it would be advisable to discuss them in class.
1. Which pharmacological group do these medications belong to?
  2. What other medications are included within these categories?
  3. What dangers do these medications pose to patients?
  4. What features are particularly helpful in the evaluation of this patient's condition? What do they suggest?

## Task 2



a) Study the information in the tables and transform them into mini-texts using the clues provided.

## Drug Type/Mechanism

## Dose

|          |                               |                                                                    |
|----------|-------------------------------|--------------------------------------------------------------------|
| Antacids | Mylanta,<br>Tums,<br>Gaviscon | 100-140 meq/L after meals and hs*<br>*at bed time (hours of sleep) |
|----------|-------------------------------|--------------------------------------------------------------------|

*Antacids* { *such as... may be ingested pc and ... to **neutralize**...*

|                                     |                                                        |                                                  |
|-------------------------------------|--------------------------------------------------------|--------------------------------------------------|
| H <sub>2</sub> receptor antagonists | Cimetidine,<br>Ranitidine,<br>Famotidine<br>Nizatidine | 400 mg bid<br>300 mg hs<br>40 mg hs<br>300 mg hs |
|-------------------------------------|--------------------------------------------------------|--------------------------------------------------|

*H<sub>2</sub> receptor antagonists* { ***block** the action of... the body chemical that **triggers** acid secretion,  
and have been shown to **induce** healing of...*

|                        |                                                           |                                          |
|------------------------|-----------------------------------------------------------|------------------------------------------|
| Proton pump inhibitors | Omeprazole<br>Lansoprazole<br>Rabeprazole<br>Pantoprazole | 20 mg/d<br>30 mg/d<br>20 mg/d<br>40 mg/d |
|------------------------|-----------------------------------------------------------|------------------------------------------|

*Proton pump inhibitors* { ***inhibit** ... by disabling the cellular pumps that **pump** acid into...*

|                           |              |         |
|---------------------------|--------------|---------|
| Mucosal protective agents | → Sucralfate | 1 g qid |
|---------------------------|--------------|---------|

*Cytoprotective agents* { ***form** a layer that... Sucralfate is usually **administered** ...times ...*

|                        |               |            |
|------------------------|---------------|------------|
| Prostaglandin analogue | → Misoprostol | 200 µg qid |
|------------------------|---------------|------------|

*Misoprostol* { *is **effective against**...caused by... The **dosage** should be ... four...*

|             |                                                                              |                                              |           |
|-------------|------------------------------------------------------------------------------|----------------------------------------------|-----------|
| Antibiotics | Amoxicillin<br>Metronidazole<br>Tetracycline<br>Clarithromycin <sup>25</sup> | 1g bid<br>500 mg bid<br>500g qid<br>500g bid | × 14 days |
|-------------|------------------------------------------------------------------------------|----------------------------------------------|-----------|

*Antibiotics* { *such as ... may be used to **eradicate**..., **accelerate** healing and **reduce** the rate of recurrence  
The course of treatment **lasts**...*

<sup>25</sup> Adapted from <http://www.harrisonsonline.com/> Copyright© 2001 McGraw-Hill.

- b) Now, listen while the teacher pronounces the following words. Notice that the underlined part(s) of the word contain the stressed syllable. Practice saying them.

|                     |                                |                     |                              |
|---------------------|--------------------------------|---------------------|------------------------------|
| cim <u>e</u> tidine | ome <u>p</u> ra <u>z</u> ole   | sucra <u>l</u> fate | <u>a</u> mo <u>x</u> icillin |
| ra <u>n</u> itidine | lan <u>z</u> opra <u>z</u> ole |                     | <u>m</u> etronidazole        |
| fa <u>m</u> otidine | ra <u>b</u> epra <u>z</u> ole  |                     | tetracycline                 |
|                     |                                |                     | clarithromycin               |

- c) Now go back to Mr. Cobb's case and in pairs decide the best treatment options according to the patient's condition.

### Task 3

- a) The presence of certain symptoms and signs in the emergency report presented above suggests a common complication observed in PUD. Read the following paragraph to reach a working diagnosis of this patient's current state. The words in the box below will help you.

Epigastric pain with hematemesis is a classic sign of a \_\_\_\_\_ gastric ulcer, and Mr. Cobb's low gastric pH, bloody aspirate, and melanic stools also suggest upper GI \_\_\_\_\_. His pallor, tachycardia and orthostatic blood pressure changes are signs of \_\_\_\_\_ and blood \_\_\_\_\_.

hypovolemia - hemorrhage - loss - bleeding

b) Work in pairs and discuss with your partner other complications patients with this condition may possibly develop. Then, read the information, identify the complications and write the term for each complication on the proper line.

- It is the second most common ulcer-related complication. It is characterized by a sudden, intense, steady epigastric pain that spreads rapidly throughout the abdomen. There is a tender and board like abdomen (rigid abdominal muscles). Rebound tenderness is intense. It usually requires immediate surgery.  
\_\_\_\_\_

- It is secondary to ulcer-related inflammation and edema in the peripyloric region. Recurrent vomiting of large volumes is common as well as persistent bloating and loss of appetite. Presence of succussion splash is usually found and indicates retained fluid in the stomach. \_\_\_\_\_

- It is a form of perforation in which the ulcer bed tunnels into an adjacent organ. DUs tend to enter posteriorly through the pancreas, whereas GUs tend to pass into the left hepatic lobe. Pain may be intense, persistent referred to sites other than the abdomen. \_\_\_\_\_

c) Underline the features of each complication that help you distinguish one from the other.

#### Task 4

In this activity you will read some interesting controversial excerpts about the main causes of PUD. Do it carefully and in the lines enclosed within the autosshapes, write **F** (for) if you are in favor of the arguments or **A** (against) if you don't agree. Then, join a team and proceed as suggested:

- Think of as many ways of giving opinions and agreeing or disagreeing as you can. Look at the *Useful Language* list. Which expressions do you think are the most or least strong? Practice saying them with the correct intonation.
- Include your personal background knowledge on the topic and try to suggest other suitable reasons.

- c) Write an essay using the ideas put forward at the debate. Remember to express your thoughts clearly and concisely and use linking words (and, but, however, furthermore, additionally, etc.) to connect sentences and paragraphs together. Then, compare your essays with other groups and be ready to report them back to the class.

### *Useful language hints*

#### **Giving opinions**

In my opinion...

I think / believe...

It is clear / obvious that...

There is no doubt that...

#### **Agreeing**

That's true.

Possibly but...

I agree absolutely.

#### **Disagreeing**

I'm sorry but I just can't accept that.

There is no strong evidence to support that.

I don't really think...

I entirely disagree



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<sup>26</sup>[http://forte.fh-hagenberg.at/article: Medical Background](http://forte.fh-hagenberg.at/article:Medical%20Background).

The direct cause of peptic ulcers is the destruction of the gastric or intestinal mucosal lining by hydrochloric acid, an acid normally present in the digestive juices of the stomach.

\_\_\_\_\_

Contrary to popular belief, alcohol, coffee, colas, spicy foods, and caffeine have no proven role in ulcer formation. Similarly, there is no conclusive evidence to suggest that life stresses or personality types contribute to ulcer disease.

\_\_\_\_\_

Genetic predisposition has also been considered to play a role in ulcer development. First-degree relatives of DU patients are three times as likely to develop an ulcer; however, the potential role of *H. pylori* infection in contacts is a major consideration.

\_\_\_\_\_

It is believed that, although all three of these factors -- lifestyle, acid and pepsin, and *H. pylori* -- play a role in ulcer development, *H. pylori* is considered to be the primary cause.

\_\_\_\_\_

Cigarette smoking not only causes ulcer formation, but also increases the risk of ulcer complications such as ulcer bleeding, stomach obstruction and perforation. It is also a leading cause of ulcer medication treatment failure.

\_\_\_\_\_

It is now clear that *H. pylori* and NSAID-induced injury account for the majority of DUs. Gastric acid contributes to mucosal injury but does not play a primary role.

\_\_\_\_\_

A once popular belief was that stress causes ulcers. This is not true. Stress may make you experience more pain from an ulcer and it may make it more difficult to heal from an ulcer. But, stress does not cause an ulcer.

\_\_\_\_\_

**Have a look**

To guess the meaning of a new word from context, you might find it helpful to know its “part of speech”; that is, if the word is a noun, a verb, an adjective, an adverb, etc. Sometimes you can tell the part of speech from the suffix (the word ending). Here are some common suffixes, listed by the part of speech that they usually indicate.

| <u>Nouns</u> | <u>Adjective</u> |
|--------------|------------------|
| -ment        | -ive             |
| -tion / sion | -able            |
| -ance / ence | -ic (al)         |
| -ness        | -ous             |
| -oscope      |                  |

**Task 5**


- a) Look at the following word list and in pairs come to a decision as to how they match with the suffixes presented above. In some cases more than one answer is correct. Write the new words on the lines. The first item has been done for you.

- |                               |                      |
|-------------------------------|----------------------|
| 1. diagnose <u>diagnostic</u> | 11. avoid _____      |
| 2. assess _____               | 12. reduce _____     |
| 3. locate _____               | 13. epithelium _____ |
| 4. epigastrium _____          | 14. ulcer _____      |
| 5. detect _____               | 15. duodenum _____   |
| 6. laparoscopy _____          | 16. attribute _____  |
| 7. measure _____              | 17. mucosa _____     |
| 8. evaluate _____             | 18. assist _____     |
| 9. develop _____              | 19. recur _____      |
| 10. prescribe _____           | 20. tender _____     |

- b) Now complete each sentence with a suitable word from your list of new words, and then look back at the list of suffixes to check for the part of speech they specify. Write **A** for adjectives and **N** for nouns in the parentheses at the end.

Example: The differential diagnosis helps doctors rule out various conditions to clearly diagnose a given disease. Some *diagnostic* procedures are usually paramount. (Adjective form)

1. An ulcer is defined as disruption of the \_\_\_\_\_ integrity of the stomach and/or duodenum leading to a local defect or excavation due to active inflammation. ( )
2. Malignant \_\_\_\_\_ ulcers are extremely rare. ( )
3. Genetic predisposition has also been considered to play a role in ulcer \_\_\_\_\_. ( )
4. Epigastric \_\_\_\_\_ is the most frequent finding in patients with GU or DU. ( )
5. The physician's goal in treating PUD is to provide relief of symptoms (pain or dyspepsia), promote ulcer healing, and ultimately prevent ulcer \_\_\_\_\_ and complications. ( )
6. An increase in the number of \_\_\_\_\_ procedures for treatment of PUD is expected. ( )

### Task 6

- a) Talk to your partner and discuss the likely questions doctors ask patients with digestive complaints that may lead to PUD. Then, listen to a D-P interview and see whether your predictions are true. The second time you listen to the dialogue complete the first two columns in the table below. You may compare your answers with a partner.

| Symptoms manifestation                 | Specific questions                           | Purpose |
|----------------------------------------|----------------------------------------------|---------|
| between the breastbone and the navel   |                                              |         |
|                                        | What kind of pain is it?                     |         |
| on and off for the last 3 or 4 months. |                                              |         |
|                                        | How bad is the pain?                         |         |
| when excited or worried about things.  |                                              |         |
|                                        | What do you do when the pain comes on?       |         |
| sometimes, it takes hours to disappear |                                              |         |
| nausea, vomiting                       |                                              |         |
|                                        | Have you recently lost your appetite?        |         |
| diarrhea or constipation               |                                              |         |
|                                        | Have you ever passed blood from your rectum? |         |

- b) Doctors have a specific purpose in mind when they ask questions during the interview. In pairs read the information you have just completed in the table above and write the purpose of each question.

**Intern:** Hello, Mr. Parrado. I'm Dr. Gener.

**Patient:** Hello, Dr. Gener.

**Intern:** What seems to be your trouble?

**Patient:** Well, I think it's something I ate. I feel bloated. I've had to loosen my clothing.

**Intern:** Did you add something different to your diet?

**Patient:** I don't think so, but I have a very uncomfortable feeling in my stomach.

**Intern:** Have you had any pain with this?

**Patient:** The pain that I always have.

**Intern:** Where is that?

**Patient:** Right here. Between the breastbone and the navel.

**Intern:** What kind of pain is it?

**Patient:** It is a sort of burning pain.

**Intern:** How long have you had this pain?

**Patient:** I've had it on and off for the last 3 or 4 months, but it had never been this bad before.

**Intern:** Do you get these pains at any special times?

**Patient:** I think I get it when I am excited or worried about things.

**Intern:** What do you do when the pain comes on?

**Patient:** I take a glass of milk or two.

**Intern:** Does milk relieve it?

**Patient:** Yes, for an hour or two.

**Intern:** When you have the pain, how long does it last?

**Patient:** Sometimes, it takes hours to disappear.

**Intern:** Have you had any nausea or vomiting?

**Patient:** None.

**Intern:** Have you recently lost your appetite?

**Patient:** Well, sometimes when I'm under much stress I forget about my meals.

**Intern:** Have you noticed any change in your bowel habits?

**Patient:** No, I haven't really.

**Intern:** Have you ever passed blood from your rectum?

**Patient:** No, not that I ever noticed.

**Intern:** All right, get undressed. I'll be back in a few minutes to examine you.

- c) Now, work in pairs and take turns to read the conversation. Negotiate with your partner the roles to play while reading.
- d) What features from the history of this patient point to the diagnosis of ulcer?
- e) What other questions would you ask to complete this patient's history?
- f) On each line write the word or expression from the dialogue that fits each definition.
1. Digestive disturbance that relates to a sensation of being swollen or filled to capacity \_\_\_\_\_
  2. Free from restrain, release, untie \_\_\_\_\_
  3. Opposite of easy, restful, well being \_\_\_\_\_
  4. Sternum \_\_\_\_\_
  5. Like a fire effect, ardent \_\_\_\_\_
  6. Habits of defecation \_\_\_\_\_
  7. Enterorrhagia \_\_\_\_\_
- g) Then, take turns again to act out a doctor- patient conversation using the situation given. You may go back to the information you completed in the table for further help.

This is a patient whose discomfort is described as an ill-defined, aching sensation or a hunger pain. His/her typical pain pattern occurs 90 min to 3 h after a meal and is frequently relieved by antacids or food. The pain awakes the patient from sleep (between midnight and 3 A.M.)

- h) Documentation of an ulcer requires either a **radiographic** or an **endoscopic procedure**. The following paragraph provides you with a model example for one of these two procedures. Read it carefully and in groups decide which of the two procedures is being described and then, write a similar paragraph explaining the other procedure to a patient in English. Consult **Appendix 4** if you find it convenient.

"I'd like you to have a special x-ray called a barium meal. This is to find out if there is anything in your stomach that's causing the pain. It's quite a simple test. You'll be given a mixture to swallow. It's rather thick but not unpleasant. After that, you'll be placed on the table under the x-ray machine and turned around and upside down while they take the x-ray pictures. It isn't at all painful, and only takes about 10 minutes."

27

<sup>27</sup> Adapted from photocopied material. English for Medicine course. 1999

**Task 7** 

These notes were also taken from a **medical student admission write-up**. Again a great deal of acronyms, abbreviations and symbols are used. You may go back to Unit 4, Task 6 for help. Work with your partner and analyze the data, pay close attention to all pertinent positives and negatives, then decide which grammatical items are necessary to write a full version of a case report. Then be ready to report your versions to the rest of the class.

**Paragraph 1**

1. 55 yr/ retired businessman / living alone / 3 yr / since / wife death
2. admitted / sudden onset / acute localized epigastric pain
3. pain / burning / nature
4. belching / bloating
5. BMs normal

**Paragraph 2**

6. + + + bronchitis / some years
7. age 28 appendectomy
8. FH negative
9. heavy smoker / 3 cups /coffee daily

**Paragraph 3**

10. O/E pallor / mild perspiration / restlessness
11. T: 36.9°C P: 110bpm BP: 160/90 mmHg
12. R: 28 breaths pm
13. Abd: soft & slight epigastric tenderness

**Task 8**  

Your patient asks you **what an ulcer is**. To explain, you probably have to make a comparison with something rather similar which is more common to your patient or which he possibly knows better.

For example: An ulcer is an open sore or lesion, something like an erosion, a wearing away or a breach usually found in the skin or membranes of the body.

Of course, what you have to say depends on the precise questions which the other person asks. Suppose the following questions were all addressed to you for an informative speech at a community with a high incidence of digestive disorders, but you were allowed to **write a plan** to organize your ideas on the topic. Use these sample questions and introductory notes to prepare your communication report.

Peptic ulcer is rather like ...

**What is peptic ulcer?**

The most important difference between DU and GU ...

DU differs from GU in ..

The difference between them lies in ...

**What is the difference between DU and GU?**

Although ulcers do not always cause symptoms, the most common ...

Less common ulcer symptoms include ...

**How do I know I have an ulcer?**

In the past it was believed lifestyle factors, such as stress and diet caused ulcers. Later, researchers determined that stomach acids -- hydrochloric acid and pepsin -- contributed to ulcer formation. So, what you can do ...

**Is there anything I can do to avoid this from happening?**

Specific treatment will be determined by your physician(s) based on:

**Is treatment the same for every patient?**

There is no conclusive evidence that...  
However, ...

**Can patients with ulcer disease lead normal lives without lifestyle changes or dietary restrictions?**



# Appendicitis

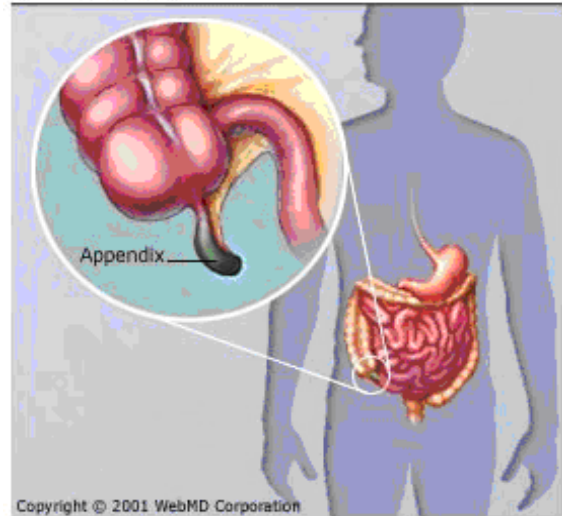


## Unit 7

### Task 1

- a) This picture shows some of the organs of the **abdominal cavity**. Talk to your partner and write the name of the organs under the heading they belong in. You may use your background knowledge to include the remaining organs of both systems

| Gastrointestinal system | Genitourinary system |
|-------------------------|----------------------|
|                         |                      |



- b) Notions such as *color, shape, location, texture, size, function* are relevant in defining and describing anatomical structures. Here is a list of these notions and the words required to express them. Match them accordingly. Feel free to add any other word to each group.

#### A

- Shape
- Color
- Location
- Function
- Size
- Texture

#### B

- \_\_\_\_\_ right/left, lower/upper, anterior/posterior, superior/inferior, outer/ inner, proximal/distal, near, in the rear of, next to.
- \_\_\_\_\_ store, secrete, produce, transform, filter, synthesize, mix.
- \_\_\_\_\_ dark/light, white/whitish, brown, red, pink, yellow, green.
- \_\_\_\_\_ tubular, round, sac-like, like a wedge, bean-like, bulky, triangular, blunt (rounded), sharp.
- \_\_\_\_\_ small/big/ medium sized, enlarged.
- \_\_\_\_\_ smooth, irregular, racemose, nodular, hard, soft.

In **Unit 1** some body organs were defined. For instance, the liver was described as *the largest gland of the body, occupying the upper part of the abdomen especially on the right side... central organ of metabolism of carbohydrate, proteins and fat*. Other definitions, however, are also possible, especially if we want to emphasize the laparoscopic appearance of the organ. e.g.

*The liver is a wedge like organ which is located in the right upper quadrant of the abdomen. It has many functions, among them the metabolism of fats is a very important one. On laparoscopy it may look dark red or brownish, its surface is smooth and the borders are sharp.*

- c) Can you complete these definitions? Use the words above to denote notions like *color, shape, location, texture, size, function conveniently*.

1. The *pancreas* is a racemose gland...
2. The *kidneys* are two reddish brown organs situated...
3. The cecum is the first part of the large intestine...

- d) A medical student who was taking down notes during a lecture on the anatomy of the GI system missed and confused part of the information. Can you help him get these notes right?

The stomach occupies the (*left/right*) (*upper/lower*) quadrant, epigastric, and umbilical regions whereas the esophagus is a (*round/tubular*) structure that joins the pharynx to the stomach. The gallbladder, on the other hand, is a (*pear-shaped/wedge-like*) sac that projects (*above/below*) the (*superior/inferior*) border of the liver. The short thin blind-ended tube that is attached to the end of the cecum, also known as the small worm-like projection from the first part of the colon is the ..... which is liable to become infected and inflamed, especially in young adults leading to.....

- e) Pain is a key feature in the diagnosis of this condition. **Sharp** and **dull** are the most common words used by patients to describe the character or quality of a pain. **Sharp** means “knife-like”. **Dull** means “not sharp”. Sharp pains are often acute and localized; dull pains are often chronic and diffuse. The following words are also used to describe the quality of pains. How do they match with the descriptions in column **B** and the conditions in **C**?

| <b>A</b>              | <b>B</b>                            | <b>C</b>                     |
|-----------------------|-------------------------------------|------------------------------|
| 1. Stabbing           | like a fire effect                  | as in migraine               |
| 2. Throbbing          | severe spasmodic gripping pain      | as in MI                     |
| 3. Heavy crushing     | that strikes repeatedly, pulsating. | as in cystitis               |
| 4. Burning            | pressing, squeezing                 | as in appendicitis           |
| 5. Colicky (Cramping) | like a knife wound                  | as in angina pectoris        |
|                       |                                     | as in intestinal obstruction |
|                       |                                     | as in neuralgia              |
|                       |                                     | as in dysmenorrhea           |
|                       |                                     | as in peptic ulcer           |

## Task 2



- a) Appendicitis also has other typical features. You will now listen to part of a conversation between a consultant and a team of 4th year medical students discussing how to assess appendicitis. Talk to your partner and try to anticipate what they will be talking about. Then listen to the conversation and check your predictions.

**Mr. Romero:** The diagnosis begins with a thorough history and physical examination. Acute appendicitis classically starts with poorly localized, colicky central abdominal visceral pain...

**Student:** Isn't it also the typical presentation of any other abdominal disorders?

**Mr. Romero:** Yes, but when assessing possible appendicitis you should ask the patient to point to where the pain began and where it is now. Ask the patient to cough and determine whether and where pain results.

**Student:** Isn't the pain likely to begin near the umbilicus?

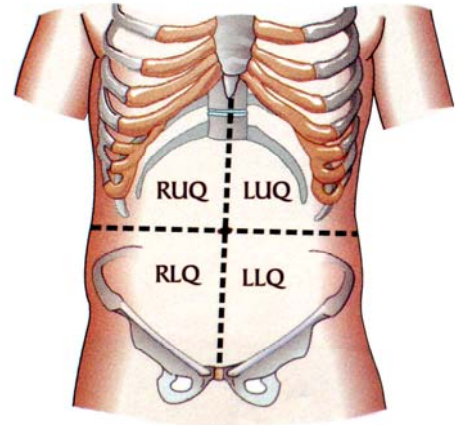
**Mr. Romero:** This is frequently the site and then shifts to the right lower quadrant, where coughing increases it. Therefore, you should search carefully for an area of local tenderness that can be moderate to severe when the doctor pushes there...

**Student:** I remember you explained that the presence of tenderness even in the right flank might indicate appendicitis.

**Mr. Romero:** Right. That's why it's important to have a working knowledge of the anatomy of the appendix.

**Student:** And that it is also important to feel for muscular rigidity looking for guarding, rebound tenderness and referred tenderness.

**Mr. Romero:** That's it. Finally, you should bear in mind that for a good abdominal examination you need (1) good light, (2) a relaxed patient, and (3) full exposure of the abdomen.



- b) Listen again and make word combinations using a word from each box. Some words can be used more than once and may not be present in the conversation at all.

|          |            |
|----------|------------|
| thorough | guarding   |
| rebound  | pain       |
| poorly   | localized  |
| muscle   | history    |
| referred | tenderness |
| colicky  | rigidity   |

- c) Now, in groups complete the notes the students wrote down.

| Pain features | Instructions for the patient | Signs to look for | Basic requirements for PE |
|---------------|------------------------------|-------------------|---------------------------|
|               |                              |                   |                           |

- d) Finally read the conversation and complete the resident's final draft.

Before you begin palpation, ask the patient to (1) \_\_\_\_\_.

In acute appendicitis the pain is usually described as (2) \_\_\_\_\_, that begins near the navel and moves (3) \_\_\_\_\_ where (4) \_\_\_\_\_ makes it worse. Board-like abdomen is usually accompanied by (5) \_\_\_\_\_, (6) \_\_\_\_\_ and (7) \_\_\_\_\_.

- e) In the second part of the talk Mr. Romero presents an account on the main causes of appendicitis. But this time the medical students only copied the beginning of certain words. Read it carefully. Try to do this as fast as you can. Guess the words in **bold** type by completing the blanks. Then, be ready to read out your answers and compare them with a partner.

It is thought that **appendicitis** begins when the opening from the appendix into the cecum becomes blocked. In other words, **obs**\_\_\_\_\_ of the appendiceal **lum**\_\_\_\_\_ usually precipitates appendicitis. The most common causes of luminal obstruction are **fec**\_\_\_\_\_ and lymphoid follicle hyperplasia. Fecaliths form when **cal**\_\_\_\_\_ salts and fecal debris become layered around a nidus of inspissated fecal **mat**\_\_\_\_\_ located within the appendix. Lymphoid hyperplasia is associated with a **var**\_\_\_\_\_ of inflammatory and infectious **dis**\_\_\_\_\_ including Crohn's disease, gastroenteritis, amebiasis, **resp**\_\_\_\_\_ infections, measles, and **mono**\_\_\_\_\_. Obstruction of the **appen**\_\_\_\_\_ lumen has less commonly been associated **wi**\_\_\_\_\_ parasites (e.g., Schistosomes species, Strongyloides species), **for**\_\_\_\_\_ material (e.g., shotgun pellet, **intra**\_\_\_\_\_ device, tongue stud, activated charcoal), tuberculosis, and tumors.<sup>28</sup>

<sup>28</sup> <http://www.harrisonsonline.com/2001>

**Task 3** 

- a) Now, you are given a brief case report and you are required to fill the admission card for the **patient's data record** of your computer

A 13 year old school boy complaining of pain in the lower right part of the anterior abdominal wall was brought to you. On examination he was found to have a T of 38.3 c. He had a furred tongue, and was extremely tender in the R lower quadrant. The abdominal muscles in that area were found to be firm (rigid ) on palpation and became more spastic when increased pressure was applied (guarding).

Surname:              First name:  
Age:                  Sex:                  Marital Status:  
Occupation:  
Present complaint:  
O/E:

- b) Here you have three other cards which succinctly summarize information about three patients that came to your consultation today. Work in small groups and write a report of one of these cases for a case meeting presentation. Be ready for a plenary session.

**Card 1**

**Surname:** Andujar      **First name:** Tommy  
**Age:** 32      **Sex:** M      **Marital Status:** Married  
**Occupation:** software programmer  
**Present complaint:** Excruciating pain accompanied by whitish vomiting and ↓ appetite, 8 hrs duration.  
**O/E:** +++Tenderness on epigastrium with radiation to the back. Dry skin and tongue

**Card 2**

**Surname:** Vazquez      **First name:** Anita  
**Age:** 20      **Sex:** F      **Marital Status:** single  
**Occupation:** Student  
**Present complaint:** Severe cramping abdominal pain and 3 weeks of aminorrhoea.  
**O/E:** +++ tenderness L lower abdominal quadrant. Dark bloody spots on vaginal examination.

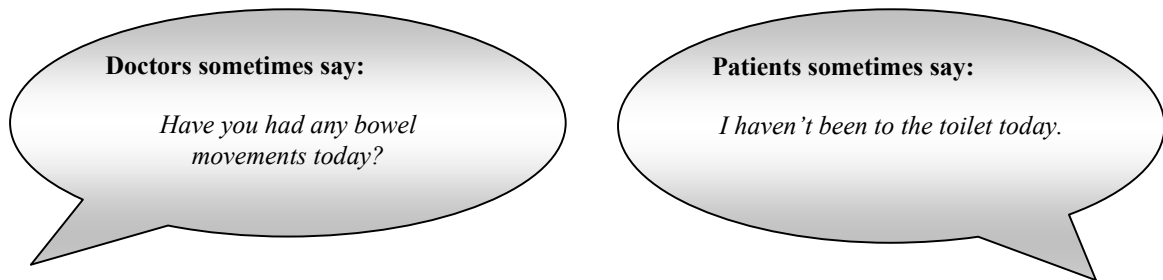
**Card 3**

**Surname:** Cedron      **First name:** I van  
**Age:** 39      **Sex:** M      **Marital Status:** married  
**Occupation:** electric engineer  
**Present complaint:** Severe abdominal pain colicky in nature (24 hrs duration).  
**O/E:** Tachycardia, extreme tenderness on right lower quadrant of the abdomen

**Task 4**

- a) The patient's information in the following doctor-patient interview is mixed up. Work with your partner, read the doctor's part and find the answers.

| <u>Doctor</u>                                                                                                                                                                     | <u>Patient</u>                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • <i>Good morning. I'm Mr. Romero. What brings you to the emergency room?</i>                                                                                                     | <input type="radio"/> <i>It sure does.</i>                                                                                                                                                                          |
| • <i>I understand. Let's see. The pain started yesterday evening, right? Where exactly did it hurt? Can you describe it?</i>                                                      | <input type="radio"/> <i>Really? But...</i>                                                                                                                                                                         |
| • <i>Has it been there all the time?</i>                                                                                                                                          | <input type="radio"/> <i>I'm ready, doctor.</i>                                                                                                                                                                     |
| • <i>Did you have dinner or supper yesterday?</i>                                                                                                                                 | <input type="radio"/> <i>It hurts badly, yes. It's even worse when I cough.</i>                                                                                                                                     |
| • <i>Have your bowels moved today?</i>                                                                                                                                            | <input type="radio"/> <i>It was over here near my belly button but now I think the pain is moving to the right, down here, and this is all very painful. I feel sort of cramps. It was not that bad last night.</i> |
| • <i>Well, Mr. Mackay, now, I'm going to examine your abdomen so I can find out what's causing this pain. Please, lie down and let me know when you are ready.</i>                | <input type="radio"/> <i>I can't really say but I have this gut pain ...it all started yesterday evening and I do not seem to get better. I think I have a fever now.</i>                                           |
| • <i>Thank you. Does it hurt when I push here?</i>                                                                                                                                | <input type="radio"/> <i>It was on and off at the beginning but now it's really killing me.</i>                                                                                                                     |
| • <i>Sorry. Tell me if it hurts now... and here? Can you cough, please?</i>                                                                                                       | <input type="radio"/> <i>No. Yesterday I didn't go to the toilet either.</i>                                                                                                                                        |
| • <i>Well, Mr. Mackay. I'll order some blood tests but I'm afraid you have appendicitis.</i>                                                                                      | <input type="radio"/> <i>No. I didn't feel like. Actually I had no taste for food. I haven't had anything since yesterday afternoon but I'm not hungry at all. I feel as if I'm going to throw up any time.</i>     |
| • <i>There's nothing to worry about. Early surgery is the standard treatment for this condition and you will be up and about in no time. Is there anything you'd like to ask?</i> | <input type="radio"/>                                                                                                                                                                                               |



b) Match the items 1 - 6 with the layman's equivalents in B. Consult **Appendix 1** if necessary.

**A**

1. intermittent
2. anorexia
3. visceral pain
4. colicky
5. umbilicus
6. emesis

**B**

- \_\_\_\_\_ cramping
- \_\_\_\_\_ gut pain
- \_\_\_\_\_ navel (belly button)
- \_\_\_\_\_ on & off
- \_\_\_\_\_ act of throwing up
- \_\_\_\_\_ loss of appetite

c) Now, study the way the patient explained to the doctor all about his pain and discuss with your partner how this pain developed. You may go back to the D-D talk in Task 2 to determine whether the classical presentation of appendicitis matches this case. Then move around the class to find out if other pairs share the same idea. These hints may be of help.

**onset - location - severity - character - accompanying symptoms**

*In this patient the pain started in the .....*

*First, it was a ....., but then*

*..... It was intermittent at the beginning, but it*

*became steady and increasingly severe. The pain was accompanied by .....*

*.....*

**Task 5**

There is no one test that will diagnose appendicitis with certainty. Therefore, the approach to suspected appendicitis may include **a period of observation, tests, or surgery**. Work in groups, discuss about **diagnostic tests** available. Then, read the notes below and decide on the type of procedure being described. Be ready for discussion in plenary.

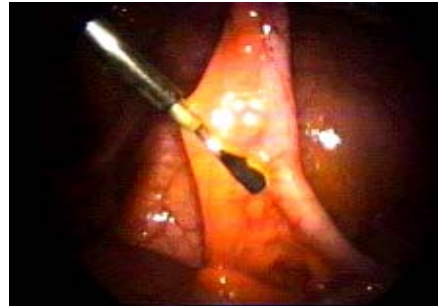
1. The \_\_\_\_\_ usually becomes elevated with infection. In early appendicitis, before infection sets in, it can be normal, but most often there is at least a mild elevation even early.
2. \_\_\_\_\_ is a microscopic examination of the urine that detects red blood cells, white blood cells and bacteria in the urine. An abnormality in this test suggests that there is a kidney or bladder problem while a normal result is more characteristic of appendicitis.
3. \_\_\_\_\_ may detect the fecalith that may be the cause of appendicitis. This is especially true in children.
4. An \_\_\_\_\_ is a painless procedure that uses sound waves to identify organs within the body. During appendicitis, the appendix can be seen in only 50% of patients. It is helpful in women because it can exclude the presence of conditions involving the ovaries, fallopian tubes and uterus that can mimic appendicitis.
5. A \_\_\_\_\_ is a liquid-barium test that can also exclude other intestinal problems that mimic appendicitis, for example Crohn's disease.
6. In patients who are not pregnant, a \_\_\_\_\_ of the area of the appendix is useful in diagnosing appendicitis and peri-appendiceal abscesses as well as in excluding other diseases inside the abdomen and pelvis that can mimic appendicitis.
7. \_\_\_\_\_ is a surgical procedure which allows a direct view of the appendix as well as other abdominal and pelvic organs. If appendicitis is found, the inflamed appendix can be removed at the same time.<sup>29</sup>

<sup>29</sup> Adapted from <http://www.MedicineNet.com> February 9, 2008

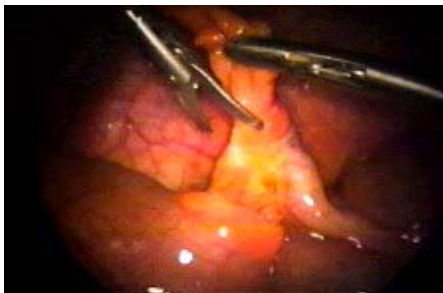
### Task 6

a) Appendectomy is increasingly accomplished laparoscopically as shown in the following sequence of **a normal appendix in a female patient found to have an infection of the reproductive organs**. Look at the pictures carefully and complete using the correct forms of the verbs given in parentheses.

1. *The first step is to free up the appendix down to where it (be attach) \_\_\_\_\_ to the large bowel.*



2. *Next, scissors (be use) \_\_\_\_\_ to divide the mesentery. Alternating application of the bipolar forceps and scissors allow complete mobilization of the appendix down to its base.*  
 3. *Now the base of the appendix is tied off using a pre-tied suture which is now positioned.*

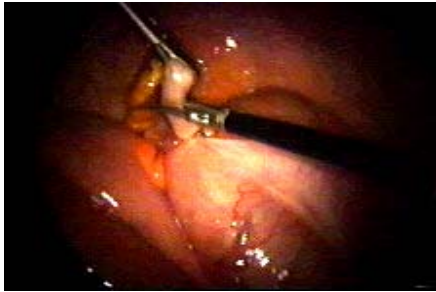


4. *The suture has now been tightened with a fisherman's not.*  
 5. *As shown in this picture, the suture (be cut) \_\_\_\_\_ now \_\_\_\_\_ with the scissors.*



6. *Finally, the appendix is cut free and is ready (be remove) \_\_\_\_\_.*

7. *The operation is now complete, and the area (be inspect) \_\_\_\_\_ a final time to make sure there is no bleeding.*



- b) Go back to what you have just written and notice the way in which the procedures are described. What grammatical feature prevails?

### Have a look

As you have seen formal written language often goes with an impersonal style. A common feature of impersonal style is the **passive voice**, when describing procedures; passive voice is then used to make the descriptions more impersonal.

#### ◆ How to construct passive sentences?

☞ To change an active sentence into passive replace the active verb phrase by the matching passive one by making the object of the active sentence the subject of the passive. e.g.

- The surgeons **removed** the appendix.
- The appendix **was removed** “(by the surgeons)”

☞ The *by*-phrase containing the agent of the passive voice is not usually required (as in the case above) since the agent is unimportant and often irrelevant. Here is a further example. *Scissors **are used** to divide the mesentery.*

☞ In passive sentences we use the correct form of **be (is/are/was/were/has been, etc) + the past participle (remove/removed, insert/inserted, cut/cut, make/made)**

☞ Also some markers are frequently used when a procedure is being described. The most common are: ***first, and, next, now, finally***. e.g.

- **First** a small incision **is made**, **then** a tube with a small light **is inserted** **and** the internal organs **are seen**. **Finally**, a sample for biopsy **is taken**.

**Task 7** 

a) Complete the following sentences using the correct form of the verbs in brackets. Note that the verbs should all be in passive.

1. Appendicitis \_\_\_\_\_ (define) as an inflammation of the appendix.
2. The appendix \_\_\_\_\_ (locate) in the lower right portion of the abdomen.
3. It \_\_\_\_\_ (consider) a medical emergency.
4. Two signs, called peritoneal signs, suggest that the lining of the abdomen \_\_\_\_\_ (inflamm) and surgery may \_\_\_\_\_ (need).
5. If treatment \_\_\_\_\_ (delay) the appendix can burst, causing infection and even death.
6. Traditional open surgery \_\_\_\_\_ (still-use) to remove the appendix.
7. This procedure \_\_\_\_\_ (carry out) under general anesthesia.
8. The abdomen \_\_\_\_\_ (enter) through a small incision centered over Mc Burney's point.
9. If other conditions \_\_\_\_\_ (suspect) in addition to appendicitis they may \_\_\_\_\_ (identify) using laparoscopy.
10. Informed consent should \_\_\_\_\_ (obtain) from all patients.

b) Now, rewrite these sentences. Instead of using "somebody", "they", "people" write a passive sentence. Make sure that the subject of the new sentence "receives the action".

1. How do they diagnose appendicitis?
2. They cancelled the surgery because of the fever.
3. People advised us not to miss the lecture on the causes of appendicitis.
4. They haven't identified the cause of infection yet.
5. Someone should make a decision before the condition worsens.

- c) A journal of cosmetic surgery is requesting contributions from medical students in regards to advantages and disadvantages of the **traditional open surgery** and the **laparoscopic surgery**. In groups discuss your own preferences and then write down your ideas. Imagine you will be required to submit your essays to “the editorial board”. The hints below will be of help.



30

- Post-operative pain (more/less, discomfort)
- Antibiotics use (side effects)
- Incision size (small/big /cosmetic/ scars)
- Anesthesia (general/local/spinal anesthesia)
- Complications (hospital-acquired infections)
- Hospital stay and recovery period

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<sup>30</sup> [http://forte.fh-hagenberg.at/article: Medical Background](http://forte.fh-hagenberg.at/article:Medical%20Background).



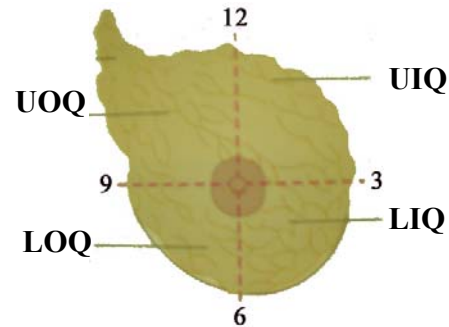
# Breast Cancer



## Unit 8

### Task 1

This is a picture of a right breast which is anatomically divided as shown. Work with your partner and proceed as suggested below.



- Do you know what the abbreviations **UOQ**, **LOQ**, **UIQ** and **LIQ** stand for?
- What do the numbers represent?
- Breast cancer is the most common cause of cancer in women worldwide. Classify the words and expressions in the box below into their corresponding headings in the chart. Use your background knowledge to add further information if you wish and be ready to discuss your choices in plenary. For information on exams and investigations, see **Appendix 4**.

### BREAST CANCER

| Risk factors | Signs & symptoms | Exams & investigations | Treatment |
|--------------|------------------|------------------------|-----------|
|              |                  |                        |           |
|              |                  |                        |           |
|              |                  |                        |           |
|              |                  |                        |           |
|              |                  |                        |           |

Breast-self examination (BSE) – dimpling - a positive family history – oral contraceptives – puckering - early menarche – discharge from the nipple – mammography – mastectomy – lump – chemotherapy – lumpectomy – bone scan - bottle feeding- clinical breast examination (CBE) – smoking - radiotherapy – pain – late or no pregnancies – age – biopsy – fine needle aspiration biopsy (FNAB)- Chest X-ray

**Task 2**   

- a) Mrs. López has been referred to the oncology doctor because of a lump in her right breast. Work with your partner and anticipate the questions the specialist is likely to ask her during the interview. See **Appendix 2** for help.
- b) Then listen to the dialog and compare your predictions.

**Dr. Cepero:** Good afternoon, Mrs. López. Please, have a seat. I see in your medical record that you are married and you are ... 44 years old. Is that right?

**Mrs. López:** That's correct, yes.

**Dr. Cepero:** It seems to me you are in good health. How can I help you?

**Mrs. López:** Well, a few days ago I felt a bulge in my right breast. I went to see my family doctor that same day. He asked me lots of questions and advised me to see you...

**Dr. Cepero:** Well, I'm afraid I'll be asking some more today. I hope it's Ok with you.

**Mrs. López:** Oh, yes. That's fine with me.

**Dr. Cepero:** Glad to hear it. Have you felt any discomfort in your breasts? Have you noticed any change in their shape, size or appearance?

**Mrs. López:** No, doctor. Only this hard swelling.

**Dr. Cepero:** When exactly did you first notice it?

**Mrs. López:** It was last Tuesday. My family doctor also asked me if I had knocked my chest...

**Dr. Cepero:** And did you knock your chest against anything?

**Mrs. López:** No, no. I haven't had any fall recently either. He also asked me about this.

**Dr. Cepero:** Fine, fine. Do you have children?

**Mrs. López:** Yes, two. A boy, who is 17 and a 19 year-old-girl.

**Dr. Cepero:** Did you breastfeed them both?

**Mrs. López:** Absolutely, yes. I breastfed them for about 5 or 6 months.

**Dr. Cepero:** Good. When was your last menstrual period?

**Mrs. López:** It was 20 days ago, doctor, but when my GP asked me if my periods were regular I forgot to tell him that I had missed my periods for 3 months before this last one.

**Dr. Cepero:** It seems you have started to go through the change pretty soon. Are you using anything for contraception?

**Mrs. López:** I was on the pill for some years when I was younger but now my husband uses condoms.

**Dr. Cepero:** Now, could you tell me if anyone in your family has ever had lumps or any breast disease?

**Mrs. López:** None that I know of.

**Dr. Cepero:** OK, Mrs. López. I'm going to examine you now. Please, take off your blouse and bra and lie down on the stretcher. Miss Pelagia, our nurse, is here to help you.

(Doctor examines Mrs. López)

**Dr. Cepero:** Well, yes. I can feel a small lump in your right breast.

**Mrs. López:** Is it serious?

**Dr. Cepero:** I don't think so. The physical examination does not reveal anything to worry about. However, the lump has to be removed and investigated as soon as possible just to make sure. But before, I'll order some tests and investigations. Do you have any questions?

**Mrs. López:** No, not at the moment. Thank you.

**Dr. Cepero:** Ok. We'll talk when we have the results.

c) Now listen to the conversation again and say if these statements are T (true) or F (false).

1. \_\_\_ The patient is a middle-aged woman.
2. \_\_\_ The patient has had pain in her right breast.
3. \_\_\_ She noticed the bulge in her breast two months ago.
4. \_\_\_ Her menstrual periods are regular.
5. \_\_\_ There is no positive history of breast cancer in her family
6. \_\_\_ No abnormalities were detected on physical examination

d) Listen again and identify equivalent words and expressions for:

- |                 |                           |
|-----------------|---------------------------|
| 1. protuberance | 6. menses                 |
| 2. recommended  | 7. menopause              |
| 3. mild pain    | 8. contraceptive          |
| 4. beat         | 9. nodule                 |
| 5. lactate      | 10. taken out, extirpated |

e) Work in pairs and take turns to read the conversation. Negotiate with your partner the roles to play.

- f) Now work in groups. Choose one of the activities suggested below and be ready to discuss your answers in plenary. You may read the conversation and go back to Task 1 for further help.

**Team 1**

Study each of the questions asked by the oncologist and the primary care physician. Why did they ask these questions? What did they want to review? Did they omit any questions?

**Team 2**

What was the doctor looking for on physical examination?

**Team 3**

What tests and investigations is the doctor likely to order?

**Team 4**

What about the patient? What are the chances of malignancy in this case?

**Have a look**

During the interview Mrs. López said, “**My family doctor also asked me if I had knocked my chest...**

What is Mrs. López ‘grammatically’ doing?

She is **reporting a question**.

☞ **Reporting yes/no questions** is a common and very useful grammatical device in the doctor-patient interaction. Patients and doctors indistinctively may use expressions like:

The doctor asked me if... or

I just wanted to know whether...

He inquired if...

☞ When we ask people for information, we sometimes begin our question with, **Do you know...? Could you tell me...?**

☞ If we begin our questions like this some **grammatical changes** may be necessary and the same thing occurs in **reported questions**, i.e.

**Direct:** Did you knock your chest against anything?

**Indirect:** The doctor wanted to know if Mrs. López had knocked her chest against anything.

### Task 3

- a) Go back to the dialog and find a couple of 'hidden' or implied questions that the GP asked Mrs. López. Then, try to reconstruct the original questions. Compare your answers with your partner.
- b) Dr. Cepero begins one of his questions indirectly, i.e. "Could you..."? What's the direct question in this case?

### Task 4

This incomplete brief report was found on Dr. Cepero's desk together with the case notes below. In pairs complete the first one and then proceed to organize the case notes in writing. You may go back to Unit 4, Task 6 a) for further help. Do they both belong to the same patient?



This patient was referred to Dr. Cepero who wanted to know if she \_\_\_\_\_ any pain or \_\_\_\_\_ any changes in her breasts. He was interested to find out when she first \_\_\_\_\_ the hard swelling. There is no history of trauma. Dr. Cepero also asked her if \_\_\_\_\_ any children and whether she \_\_\_\_\_ them both. She said she had and the doctor then wanted to know if she \_\_\_\_\_ any contraceptive method. Finally the doctor inquired about family history and asked her if \_\_\_\_\_. Fortunately there is/was no family history of breast cancer in her family and the doctor proceeded with the physical exam.



#### Case notes

1. 44 yr old / white / F/ high school teacher
2. c/c: node / UOQ / R breast
3. mild alteration / shape / size / breast / mo ago
4. no nipple discharge / menstrual cycles / regular
5. h/o contraceptive pills
6. O/E: hard irregular painless node / nipple symmetry/ visible distortion / swelling
7. axillary lymph node / palpable
8. sister ovarian cancer/ mother lobular neoplasia (both deceased).

**Task 5**  

Work in groups. With your background knowledge and the information you have had so far you can organize the phrases below and obtain a definition of BC.

Breast cancer is a malignant proliferation...

Obtaining a careful history is the initial step...

...for example hyperplasia, cysts and fibro adenomas

and breast cancer risk factors should be obtained.

...of epithelial cells lining the ducts or lobules of the breast.

...in a breast examination.

Regardless of the presenting complaint, baseline information concerning menstrual status...

There are some benign breast disorders...<sup>31</sup>

**Task 6**  

- a) Common ways to screen for breast cancer include a monthly breast self-examination (BSE), a clinical breast examination (CBE) performed by a physician and screening mammography. In CBE positions for inspection and palpation are of key importance for the physician. Work with your partner and match the explanations with the corresponding illustrations shown in the pictures.

The patient may be seated or standing with arms at sides **(A)**

with arms raised over the head, elevating the pectoral fascia and breasts **(B)**

with hands pressed firmly against hips **(C)**

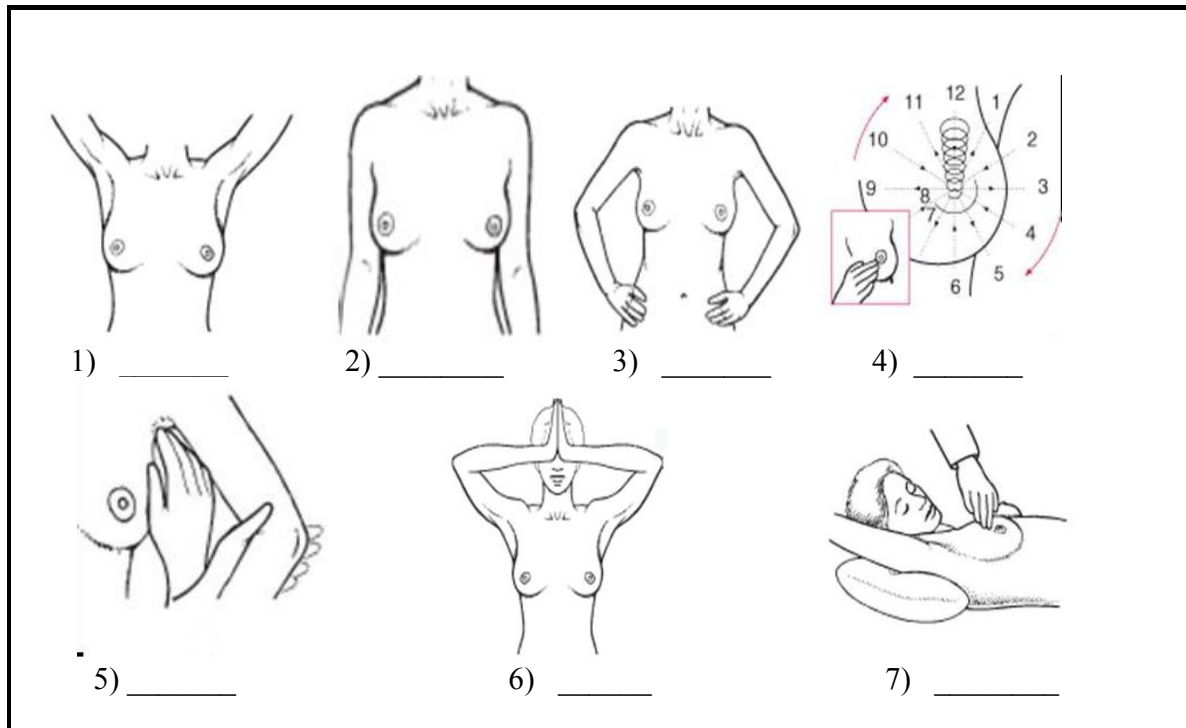
with palms pressed together in front of the forehead, contracting the pectoral muscles. **(D)**

Palpation of axilla; arm supported as shown, relaxing the pectoral muscles. **(E)**

Patient supine with pillow under the shoulder and with the arm raised above the head on the side being examined. **(F)**

Palpation of breast in circular pattern from the nipple outward. **(G)**

<sup>31</sup> Taken from www.com Diseases of the breast 2<sup>nd</sup>. Edition, Jay R. Harris, M.D. et al. 2000. Philadelphia. PA USA



- b) Breast self-examination (BSE) promotes health awareness and enhances early detection of breast tumors. Proceed as in a) to match the instructions with the corresponding illustrations.

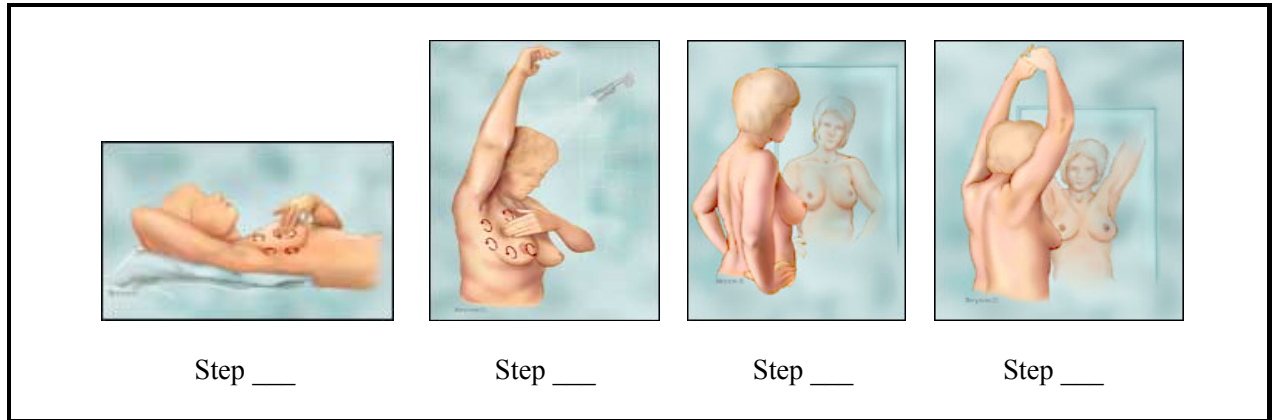
**Step 1:** Begin by looking at your breasts in the mirror with your shoulders straight and your arms on your hips.

**Step 2:** Now, raise your arms and look for the same changes.

**Step 3:** Next, feel your breasts while lying down, using your right hand to feel your left breast and then your left hand to feel your right breast. Use a firm, smooth touch with the first few fingers of your hand, keeping the fingers flat and together.

**Step 4:** Finally, feel your breasts while you are standing or sitting. Many women find that the easiest way to feel their breasts is when their skin is wet and slippery, so they like to do this step in the shower.<sup>32</sup>

<sup>32</sup> Adapted from the Merck manual of diagnosis and therapy. Merck research laboratories. 1992 p.1813



- c) The instructions for BSE have been expanded as you may see below. However, the expanded parts have been removed (Paragraphs A-D). Choose from the paragraphs the one which fits each gap.

**Step 1:** Begin by looking at your breasts in the mirror with your shoulders straight and your arms on your hips.

**Step 2:** Now, raise your arms and look for the same changes.

**Step 3:** Next, feel your breasts while lying down, using your right hand to feel your left breast and then your left hand to feel your right breast. Use a firm, smooth touch with the first few fingers of your hand, keeping the fingers flat and together.

**Step 4:** Finally, feel your breasts while you are standing or sitting. Many women find that the easiest way to feel their breasts is when their skin is wet and slippery, so they like to do this step in the shower.

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | Cover your entire breast, using the same hand movements described in the step before.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>B</b> | While you're at the mirror, gently squeeze each nipple between your finger and thumb and check for nipple discharge (this could be a milky or yellow fluid or blood).                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>C</b> | <p><b><i>Here's what you should look for:</i></b></p> <ul style="list-style-type: none"> <li>☞ breasts that are their usual size, shape, and color.</li> <li>☞ breasts that are evenly shaped without visible distortion or swelling.</li> </ul> <p><b><i>If you see any of the following changes, bring them to your doctor's attention:</i></b></p> <ul style="list-style-type: none"> <li>☞ dimpling, puckering, or bulging of the skin.</li> <li>☞ a nipple that has changed position or an inverted nipple (pushed inward instead of sticking out).</li> <li>☞ redness, soreness, rash, or swelling.</li> </ul> |
| <b>D</b> | Cover the entire breast from top to bottom. Follow a pattern to be sure that you cover the whole breast. You can begin at the nipple, moving in larger and larger circles until you reach the outer edge of the breast. You can also move your fingers up and down vertically, in rows. Be sure to feel all the breast tissue. Begin examining each area with a very soft touch, and then increase pressure so that you can feel the deeper tissue, down to your ribcage. <sup>33</sup>                                                                                                                              |

<sup>33</sup> Adapted from <http://www.medicinenet.com>

**Task 7** 

Physicians use a staging method to classify BC diagnoses. The information below allows them to choose the best treatment options based on the stage and type of cancer. Read it carefully and proceed as suggested.

**Staging of BC**

**Stage 0:** includes ductal and lobular carcinoma in situ (non-invasive cancer)

**Stage I:** when the cancer has spread beyond a milk duct or lobe, but not outside the breast. The tumour size for this stage is equal to or less than 1 inch across (2 cm.)

**Stage II:** like stage I, stage II is considered an early stage of BC. Tumors can range from 1 inch across (2 cm.) to more than 2 inches across (5 cm.) they may or may not have spread to the axillary's lymph nodes.

**Stage III:** this is considered a locally advanced form of BC. It has spread to the axillary lymph nodes, to tissues near the breast (such as the skin or chest wall) or to lymph nodes inside the chest wall. Tumors can range from smaller than 2 inches (5 cm.) to larger than 2 inches.

**Stage IV:** Metastatic cancer, which is a cancer that has spread to other more distant organs of the body. Frequent metastatic sites for BC are the bones, lungs, liver or brain. It is also the classification given to inflammatory BC or BC that has spread to the lymph nodes in the neck near the collarbone.<sup>34</sup>

In which of the stages:

1. a metastasis in the axillary lymph nodes is possible \_\_\_\_
2. the axillary lymph nodes, the tissues near the breast or the lymph nodes inside the chest wall are also affected \_\_\_\_
3. the prognosis is guarded \_\_\_\_
4. the tumor is localized only in the milk ducts and lobes \_\_\_\_
5. distant organs can be affected \_\_\_\_
6. BC has spread to the lymph nodes near the clavicle \_\_\_\_
7. the prognosis is bad \_\_\_\_
8. there is metastasis within the breast \_\_\_\_
9. the prognosis may be good \_\_\_\_

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<sup>34</sup> Adapted from <http://www.cancer.healthcentersonline.com>

### Task 8

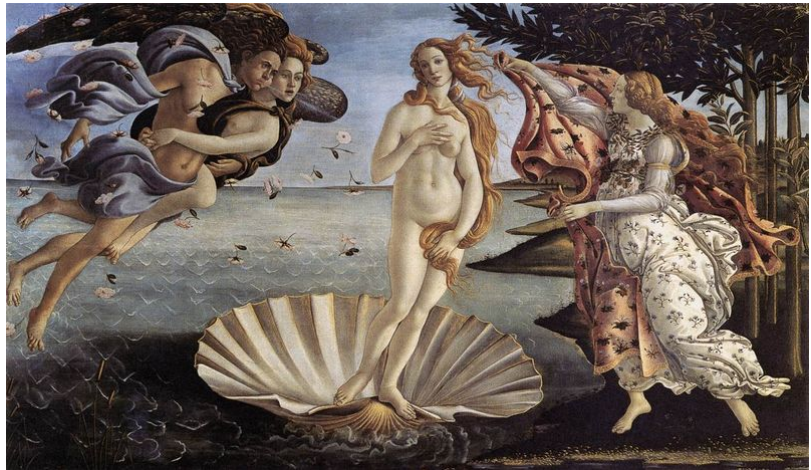
As you may well know **Appendix 5** contains the most common medical abbreviations related to the topics in this book. Below is a list of these abbreviations. Write their corresponding meanings with the help of the appendix.

- |                |                  |
|----------------|------------------|
| 1. L: _____    | 11. GP: _____    |
| 2. BC: _____   | 12. MRI: _____   |
| 3. Ca: _____   | 13. CBE: _____   |
| 4. FNAB: _____ | 14. OR: _____    |
| 5. Bx: _____   | 15. PMH: _____   |
| 6. DDx: _____  | 16. p.r.n: _____ |
| 7. T: _____    | 17. pt: _____    |
| 8. mo: _____   | 18. F: _____     |
| 9. BSE: _____  | 19. Dx: _____    |
| 10. R: _____   | 20. S & S: _____ |

### Task 9

This is the main hallway of Dr. Cepero's woman's **clinic**.

There are different **rooms** where patients can go. Some of you will be patients and others will be doctors, nurses or health care providers. You may choose which room you like best. Your teacher can help you decide.



35

Room 1   
**BSE**  
**Instructions**



Room 2   
**Medical**  
**Consultation**



Room 3   
**Health**  
**Talks**



<sup>35</sup> *Birth of Venus* by Sandro Botticelli, c. 1485 Tempera on canvas 172.5 x 278.5 cm (67 7/8 x 109 5/8 in.) Uffizi, Florence. Taken from: redescolar.ilce.edu.mx, published 20-05-2005



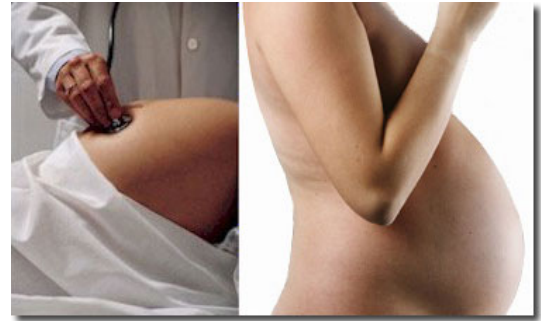
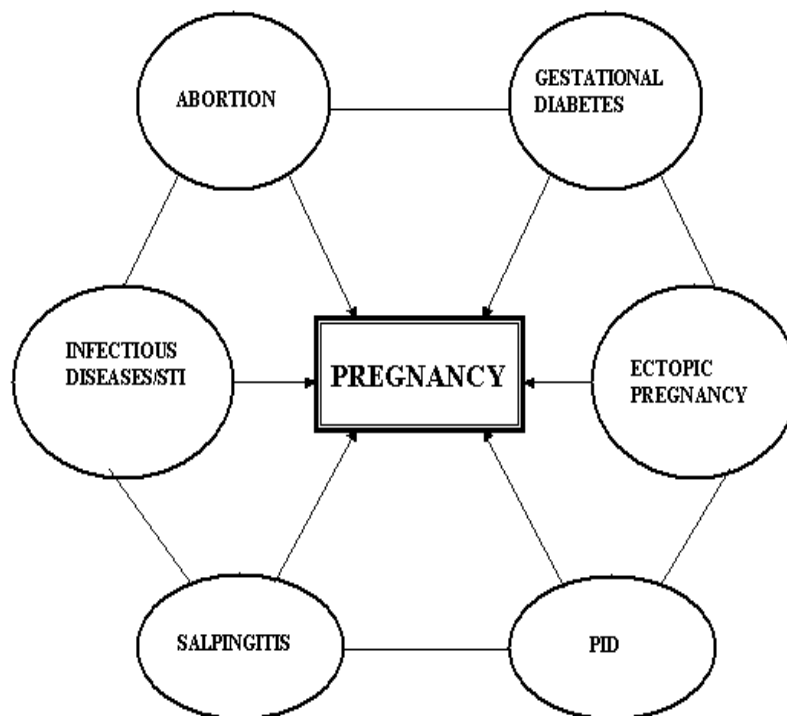
# Obstetrics and Gynecology



## Task 1

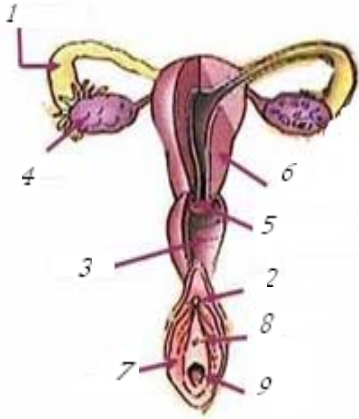
- a) Observe the picture and the diagram and discuss with your partner the two questions below. Then, brainstorm ideas based on your reasoning/observation.

- What is your interpretation of this word map?
- How do these medical conditions relate to the picture?



<sup>36</sup> [http://forte.fh-hagenberg.at/article: Medical Background.](http://forte.fh-hagenberg.at/article/Medical%20Background)

- b) The conditions presented in the word map are all directly connected with the **female reproductive system** and they can badly injure its main structures and organs. Look at the picture and read the information given. Notice the structures/organs numbered in the diagram and be ready to name them. Share your answers with a partner.



The human female reproductive system contains two main parts: the vagina and uterus, which act as the receptacle for the male's sperm, and the ovaries, which produce the female's ova. All of these parts are always internal; the vagina meets the outside at the vulva (external genitalia), which also includes the labia, clitoris and urethra. The vaginal orifice is the narrowest portion of the canal, in the floor of the vestibule posterior to the urethral orifice. The vagina is attached to the uterus through the cervix, while the uterus is attached to the ovaries via the fallopian tubes. At certain intervals, the ovaries release an ovum, which passes through the fallopian tube into the uterus.

- c) The structures and organs of the female reproductive system can also be injured by other pathological conditions. Circle the structure/organ which is affected by any of the following.

- |                        |                 |   |          |   |                 |
|------------------------|-----------------|---|----------|---|-----------------|
| 1. <b>Salpingitis:</b> | vagina          | – | oviducts | – | cervix          |
| 2. <b>Fibroid:</b>     | womb            | – | ovary    | – | fallopian tubes |
| 3. <b>Prolapse:</b>    | fallopian tubes | – | uterus   | – | abdomen         |
| 4. <b>Oophoritis:</b>  | vulva           | – | urethra  | - | ovary           |
| 5. <b>Vaginosis:</b>   | vagina          | – | cervix   | - | endometrium     |

**Task 2**

The following excerpts are all related to **gynecologic problems** and/or **obstetric conditions** which affect women and eventually lead to serious complications in pregnancy.

- a) In groups, read the article assigned by your teacher and take brief notes of the main features related to each condition. Then, report the information you noted down to the rest of the class.

**SPONTANEOUS ABORTION**

Spontaneous abortion is the most common complication of pregnancy and causes significant emotional distress to couples who desire to have children. **Miscarriage** or **spontaneous abortion** is the natural or spontaneous end of a pregnancy at a stage where the embryo or the fetus is incapable of surviving, generally defined in humans at a gestation of prior to 20 weeks. The majority of cases are believed to be due to chromosomal abnormalities or other genetic etiologies. Uncontrolled diabetes, particularly (GD), high blood pressure and certain infectious diseases greatly increase the risk of abortion. Another cause may be progesterone deficiency.

There are different forms and types. Spontaneous abortion can be classified as **threatened** abortion, **inevitable** abortion, **incomplete** abortion, **complete** abortion, **missed** abortion and **recurrent** abortion.

**Threatened** abortion refers to an intrauterine, viable, clinical pregnancy accompanied by an intrauterine source of vaginal bleeding which may be heavy or light, spotting or just brown discharge. There is little or no pain.

The diagnosis of **inevitable** abortion is given in the case of vaginal bleeding through a dilated internal cervical os. Bleeding is so heavy that spontaneous abortion must occur. There is colicky lower abdominal pain.

A **complete** abortion is when all products of conception have been expelled. Typically, these patients complain of vaginal bleeding, pain and cramping which leads to passage of tissues. Then, the bleeding and pain subside.

An **incomplete** abortion is when some but not all the fetal residual tissue has passed through the cervical os. These patients have moderate to heavy bleeding with clots, uterine cramping, uterine tenderness and sometimes low-grade fever.

A **missed** abortion is when the embryo or fetus has died, but a miscarriage has not yet occurred and there is absence of vaginal bleeding. It is also referred to as **delayed** miscarriage.

**Recurrent** abortion, also called recurrent pregnancy loss (RPL), has been traditionally defined as the occurrence of three or more clinically recognized consecutive abortions, with or without a prior live-born pregnancy. A **septic** abortion occurs when the tissue from a missed or incomplete abortion becomes infected. The infection of the womb carries risk of spreading infection (septicemia) and is a grave risk to the life of the woman. Such infections are characterized by fever, chills, uterine tenderness and occasionally peritonitis.<sup>37</sup>

<sup>37</sup> Adapted from Wikipedia, The Free Encyclopedia <http://www.google.com.cu>

## ECTOPIC PREGNANCY

An ectopic pregnancy is one in which the fertilized ovum is implanted in any tissue other than the uterine wall. Most ectopic pregnancies occur in the Fallopian tube (so-called tubal pregnancies), but implantation can also occur in the cervix, ovaries, and abdomen.

Although there are some speculative specific causes or associations, the best known etiologic factor of tubal pregnancy is salpingitis, which is found in about 30 % of the patients. Women with pelvic inflammatory disease (PID) have a high occurrence of ectopic pregnancy. Tubal ligation can predispose to ectopic pregnancy. Untreated gonorrhea can lead to PID which in turn increases the chances of ectopic or tubal pregnancies.

### Symptoms

Early symptoms are either absent or subtle. The early signs are pain, discomfort and vaginal bleeding, usually mild.

The **differential diagnosis** at this point is between miscarriage, ectopic pregnancy, and early normal pregnancy. The presence of a positive pregnancy test virtually rules out pelvic infection as it is rare indeed to find pregnancy with an active Pelvic Inflammatory Disease (PID). The most common misdiagnosis assigned to early ectopic pregnancy is PID.

More severe internal bleeding may cause lower back abdominal or pelvic pain and shoulder pain. There may be cramping or even tenderness on one side of the pelvis. The most common complication is rupture with internal bleeding that leads to shock. Death from rupture is rare. Infertility occurs in 10-15 per cent of women who have had an ectopic pregnancy.<sup>38</sup>

## GESTATIONAL DIABETES

Gestational diabetes (GD) is a form of diabetes that affects pregnant women who have never had diabetes before. There is no known specific cause, but it's believed that the hormones produced during pregnancy reduce a woman's receptivity to insulin resulting in high blood sugar.

Frequently women with gestational diabetes exhibit no symptoms. However, possible symptoms include increased thirst, increased urination, fatigue, nausea and vomiting, bladder and yeast infection, and blurred vision.

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<sup>38</sup> Taken and adapted from Wikipedia, The Free Encyclopedia <http://www.google.com.cu>

The **treatment** for gestational diabetes focuses on keeping blood glucose levels in the normal range and it may include: special diet, exercise, daily blood glucose monitoring and insulin injections. Gestational diabetes may bring important **complications** for the mother and the baby.

**For mother:** hypertension, preeclampsia, infections (candidiasis and urinary tract infections), retinopathy, neuropathy, renal complications and increased risk for developing type 2 diabetes.

**For baby:** Macrosomia, hypoglycemia, 2, low calcium and magnesium, respiratory distress syndrome (RDS), intrauterine growth retardation (IUGR), congenital malformations, birth trauma, increased risk for childhood and adult obesity and increased risk of type 2 diabetes later in life.<sup>39</sup>

## ACUTE SALPINGITIS

Acute salpingitis is an infection and inflammation in the fallopian tubes. It is often used synonymously with Pelvic Inflammatory Disease (PID), although PID lacks an accurate definition and can refer to several diseases of the female upper genital tract, such as endometritis, oophoritis, myometritis, parametritis and infection in the pelvic peritoneum. In contrast, salpingitis only refers to infection and inflammation in the fallopian tubes.

There are two types of salpingitis: Acute salpingitis and chronic salpingitis. Acute salpingitis causes the fallopian tubes to become red and swollen. In contrast, the chronic salpingitis is milder, showing lesser symptoms. It often comes after an attack of acute salpingitis, and lasts longer than the former.

The **symptoms** usually appear after a menstrual period and the most common are:

Abnormal smell and colour of vaginal discharge, pain during ovulation, pain during sexual intercourse, pain coming and going in periods, abdominal pain and lower back pain, fever, nausea, and vomiting.

### Risk factors

Factors that alter the microenvironment in the vagina and cervix, allowing infecting organisms to proliferate and eventually ascend to the fallopian tube; are among others: antibiotic treatment, ovulation, menstruations and sexually transmitted diseases (STD).

### Complications

The more time one has infection, the greatest the risk of infertility. In addition, damaged oviducts increase the risk of ectopic pregnancy. Other complications are infection of the ovaries and uterus, infection of sex partners and an abscess of the ovary.<sup>40</sup>

<sup>39</sup> Taken and adapted from Wikipedia, The Free Encyclopedia <http://www.google.com>

<sup>40</sup> Ibidem

- b) The words in Column **A** are all related to the topic discussed in the previous passages. Can you match them with the corresponding synonym or equivalent meaning in B?

| <b>A</b>       | <b>B</b>                    |
|----------------|-----------------------------|
| 1. womb        | ___ increased thirst        |
| 2. miscarriage | ___ icterus                 |
| 3. RPL         | ___ increased urination     |
| 4. ovum        | ___ recurrent abortion      |
| 5. jaundice    | ___ uterus                  |
| 6. delivery    | ___ childbirth, parturition |
| 7. polydipsia  | ___ abortion                |
| 8. polyuria    | ___ female germ cell or egg |

- c) The text on **abortion** provides detailed information on the classification of spontaneous abortion and describes their main clinical features. Read the text again and fill in the blank spaces for a summary of each type of abortion, some of which have also been whited out.

| CLINICAL TYPES OF ABORTION |       |          |       |        |       |        |
|----------------------------|-------|----------|-------|--------|-------|--------|
| Threatened                 |       | Complete |       | Missed |       | Septic |
| _____                      | _____ | _____    | _____ | _____  | _____ | _____  |
| _____                      | _____ | _____    | _____ | _____  | _____ | _____  |
| _____                      | _____ | _____    | _____ | _____  | _____ | _____  |
| _____                      | _____ | _____    | _____ | _____  | _____ | _____  |
| _____                      | _____ | _____    | _____ | _____  | _____ | _____  |

The following statements are related to the medical problems presented in the previous texts. Read them and identify the gynecologic condition or obstetric event they refer to:

1. This condition may bring important complications for the pregnant woman including high blood pressure and preeclampsia among others. \_\_\_\_\_.
2. Uncontrolled diabetes and hypertension can increase the risk. \_\_\_\_\_.
3. Infection of ovaries and uterus, infection of sex partners and an abscess on the ovary are significant complications of the disease. \_\_\_\_\_.
4. A serious complication of this condition is rupture with internal bleeding that leads to shock. Infertility can also occur in a significant number of women. \_\_\_\_\_.

### Task 3



- a) As you discussed in Task 1 a), **PID** is a serious gynecologic problem which can have a negative effect on the reproductive capability of women and also on the normal course of pregnancy. Before you read the text on this condition, work in pairs, share your background knowledge on the topic and try to complete the table. Then read the text and check if your predictions are true. Then, complete any piece of information you may have missed or you consider worth including.

| Affected organs/structures | Causes | Symptoms | Relevant Physical Findings | Consequences |
|----------------------------|--------|----------|----------------------------|--------------|
|                            |        |          |                            |              |

**PELVIC INFLAMMATORY DISEASE (PID)**

Pelvic inflammatory disease (or disorder) (PID) is a generic term for infection of the female uterus, fallopian tubes, and/or ovaries as it progresses to scar formation with adhesions to nearby tissues and organs. This may lead to tissue necrosis with/without abscess formation. Pus can be released into the peritoneum. PID is often associated with sexually transmitted diseases, as it is a common result of such infections. PID is a vague term and can refer to viral, fungal, parasitic, though most often bacterial infections.

Although a sexually transmitted infection is often the cause, other routes are possible, including lymphatic, postpartum, postabortal (either miscarriage or abortion) or intrauterine device (IUD) related, and hematogenous spread.

There may be no actual symptoms of PID. If there are symptoms then fever, cervical motion tenderness, lower abdominal pain, new or different discharge, painful intercourse, or irregular menstrual bleeding may be noted. The fever is more frequent in gonorrhea-associated PID. The discharge is usually described as yellowish and homogeneous and the pain is most often described as dull, continuous, low abdominal or bilateral pelvic in location and gradual in onset.

General examination should not be ignored despite the fact that gynecologic examination receives more attention. Neck, axillae, and groins should be palpated for adenopathies. Listening for bowel sounds is also important. Absence of BS suggests paralytic ileum that can be associated with severe PID and pelvic peritonitis, whereas hyperactive BS may suggest intestinal obstruction. During the speculum examination, the appearance of the epithelial surfaces and genital secretions should be noted. Cervical motion tenderness and adnexal tenderness on bimanual pelvic examination are the cornerstones of classic criteria for the diagnosis of PID.

Studies on consequences of PID show a profound impact on the health and reproductive capability of women. PID can cause scarring inside the reproductive organs, which can later cause serious complications, including chronic pelvic pain, infertility (difficulty becoming pregnant), ectopic pregnancy (the leading cause of pregnancy-related deaths in adult females), and other dangerous complications of pregnancy.<sup>41</sup>

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<sup>41</sup> Adapted from Wikipedia, The Free Encyclopedia. <http://www.google.com.cu>  
Pelvic Inflammatory Disease by Gary S. Berger and Lars V. Westrom.

b) Read the text again and complete the following ideas. Then check your answers with a partner and be ready for discussion in plenary.

1. Pelvic inflammatory disease is defined as \_\_\_\_\_ which may result in \_\_\_\_\_
2. These infections usually result from \_\_\_\_\_
3. Causative agents are \_\_\_\_\_ although bacteria account for most of the infections.
4. A woman may experience mild symptoms or no symptoms at all. Those who have symptoms most commonly present with \_\_\_\_\_
5. Typical secretions are described as \_\_\_\_\_ whereas pain pattern \_\_\_\_\_
6. Neck, axillae, and groins may reveal \_\_\_\_\_
7. Bowel sounds may be absent and this may imply \_\_\_\_\_
8. The key features for the diagnostic criteria are based on the presence or absence of \_\_\_\_\_
9. Patient's outcome from untreated PID may be \_\_\_\_\_ which can later cause \_\_\_\_\_.

c) Form the questions that produce these answers. Begin the questions with the question words you like. What...? / What...like? / What...kind? Where...? How...? You may also practice forming "yes" or "no" questions. (e.g. Pus can be released into the peritoneum. Can pus be released into the peritoneum?)

1. PID may lead to tissue necrosis with/or without abscess formation.
2. PID is a common result of sexually transmitted diseases.
3. A sexually transmitted infection is often the cause.
4. There may be no actual symptoms of PID.
5. The discharge is usually described as yellowish and homogeneous.
6. The pain is most often described as dull, continuous, low abdominal or bilateral pelvic in location and gradual in onset.
7. Listening for bowel sounds is also important.
8. Absence of BS suggests paralytic ileum.
9. PID can cause scarring inside the reproductive organs

**Task 4**  

Hypertension, as you well know, may also pose certain risks for pregnancy. You will now hear an account of a case report about a pregnant uncontrolled hypertensive woman. Listen carefully as do as suggested:

a) Listen and get information to complete the chart below:

| Age of pt | # of pregnancies | Past History | 1 <sup>st</sup> and 2 <sup>nd</sup> BP measurement | Gestational age O/A |
|-----------|------------------|--------------|----------------------------------------------------|---------------------|
|           |                  |              |                                                    |                     |

b) Listen again and finish these two sentences:

1. After she was admitted to hospital she went into \_\_\_\_\_
2. Shortly thereafter she developed \_\_\_\_\_

c) The patient has been taking several medications. Now, listen the whole text again, and number (1-3) the order in which the following drugs were taken by the patient:

|       |                     |
|-------|---------------------|
| _____ | hydralazine         |
| _____ | hydrochlorothiazide |
| _____ | alphamethyldopa     |

d) In pairs, discuss the answers for the following questions:

1. How do you account for the development of pulmonary edema in this patient?
2. What important physical sign should have been recorded?

## Task 5

Look at these symbols and medical abbreviations. In pairs, study them for a while and get ready to do the writing practice suggested below.

### SYMBOLS

|      |                                          |
|------|------------------------------------------|
| &    | and                                      |
| ̄    | with                                     |
| ✓    | normal                                   |
| +    | positive                                 |
| ++++ | severe (ly), significant (ly), high (ly) |
| ↓    | decreased, below, depressed, diminished  |
| ↑    | elevated, increased, enlarged, improved  |
| 1/24 | one hour                                 |
| 1/7  | one day                                  |
| 1/52 | one week                                 |
| 1/12 | one month                                |
| 0    | ...no/not... e.g. There isn't...is no... |
| ↶    | before, previous,                        |
| ↷    | later, after, next                       |

### ABBREVIATIONS

|        |                                 |
|--------|---------------------------------|
| Abd    | abdomen, abdominal              |
| BS     | bowel sounds / breath sounds    |
| Cx     | cervix                          |
| D & V  | diarrhea and vomiting           |
| Dx     | diagnosis                       |
| DDx    | differential diagnosis          |
| Ex     | examination                     |
| F      | female                          |
| FHT    | fetal heart tones               |
| FTP    | full term pregnancy             |
| GDM    | gestational diabetes            |
| Gyn    | gynecology                      |
| Ix     | investigations                  |
| IUD    | intrauterine device             |
| IUGR   | intrauterine growth retardation |
| h/o    | history of                      |
| LMP    | last menstrual period           |
| NP     | not palpable                    |
| O/A    | on admission                    |
| O/E    | on examination                  |
| Ob/Gyn | obstetrics and gynecology       |
| pt     | patient                         |
| PMB    | post menopausal bleeding        |
| reg    | regular                         |
| RPL    | recurrent pregnancy loss        |
| TV     | trichomonas vaginalis           |
| TPR    | temperature, pulse, respiration |
| WNL    | within normal limits            |
| y/o    | year(s) old                     |

- a) Read these case notes carefully. Find the meaning of the inserted symbols and abbreviations and expand the sentences to write the full version of the case report:

**Paragraph 1**

1. 50 y/o nulliparous pt / gyn outpatient clinic c/o heavy / prolonged / irregular & infrequent periods / 6/12
2. first abnormal period / lasted 14/7 & followed / 3/12 amenorrhea & / second heavy bleed / lasting 4/7
3. 1/12 heavy vaginal bleeding  $\bar{c}$  passage / clots
4. 0 dysmenorrhea / intermenstrual bleeding
5. denies episodes / hot flushes / hormone therapy
6. h/o pulmonary tuberculosis 19 yrs earlier / epilepsy

**Paragraph 2**

7. O/E rather obese & moderately hypertensive / BP 160/100 mmHg
8. TPR WNL & 0 abnormality / breast / abd
9. Ex vulva & vagina / profuse watery / yellow-brown vaginal discharge / no sign / vaginitis
10. Cx nulliparous & healthy

**Paragraph 3**

11. uterus / bulky & irregular, but mobile
12. ovaries NP & 0 abnormal masses
13. 0 evidence / malignancy / cervical smear / many leukocytes / present
14. high vaginal swab culture / 0 bacterial pathogen / candida / TV
15. Dx metropathia hemorrhagica

- b) Go over the case notes again and find the words that match the following definitions:

1. Substance that is excreted from an organ or part: \_\_\_\_\_
2. Difficult and painful menstruation: \_\_\_\_\_
3. Never having born children: \_\_\_\_\_
4. A specimen found in the vagina or urethra of women, causing vaginitis: \_\_\_\_\_
5. Being large in mass and volume: \_\_\_\_\_
6. Coagulum: \_\_\_\_\_

**Task 6**

- d) The choice of verb tense is a special difficulty in case report writing. The following text is part of a clinical case. You will have problems in understanding it completely unless you put in the correct form of the verbs in parentheses. Work individually and then check your answers with a partner.

Mrs. Brown is a 22-year-old waitress who first \_\_\_\_\_ (attend) the hospital complaining of heavy vaginal bleeding and intermittent lower abdominal pain for 3 days. Her LMP \_\_\_\_\_ (be) normal and \_\_\_\_\_ (occur) 8 weeks earlier. Her menstrual cycle \_\_\_\_\_ (be) normally regular with periods occurring every 28 days and lasting 5 days. She \_\_\_\_\_ (have) regular intercourse over the preceding 4 months but \_\_\_\_\_ (not-take) contraceptive precautions. Two weeks before coming to hospital she \_\_\_\_\_ (notice) a brown discharge which \_\_\_\_\_ (last) 3 days. A pregnancy test \_\_\_\_\_ (perform) at this time by her GP \_\_\_\_\_ (be) positive and she \_\_\_\_\_ (request) referral for a therapeutic abortion. A week later she \_\_\_\_\_ (experience) heavy vaginal bleeding for 2 days associated with lower abdominal cramps and the passage of clots. She therefore \_\_\_\_\_ (assume) that she \_\_\_\_\_ (have) a miscarriage.

- e) This is the second part of the same clinical case, but now the sentences are scrambled. You will have to arrange them for a better understanding of some other basic features of the patient's history.
1. and pain recurred - On the morning of admission - heavy bleeding – and she vomited three times.
  2. no other - and micturition - There were - bowel symptoms - was normal
  3. she was - rolling around the bed - On examination - in pain
  4. Her - and BP was 120/70 mmHg – Temperature - was 37.7 °C, - pulse rate 100/min
  5. abdomen - on inspection - There was - no abnormality - of the
  6. Palpation - revealed - tenderness - but no rebound - moderate suprapubic tenderness - or guarding
  7. were - bowel - sounds - normal - The
  8. slight bleeding through the cervix - Speculum examination - which was open - and appeared to - revealed - products of contraception - contain

- f) These final statements will then lead you to discuss diagnostic impressions. Be ready to present and 'defend' your viewpoints in plenary session. First, underline the right word and then complete the sentence.

The most likely (**diagnose-diagnosis-diagnoses-diagnostic**) is \_\_\_\_\_, but some (**diagnose-diagnosis-diagnoses-diagnostic**) procedures are required to establish the organism involved and its antibiotic sensitivities.

- g) Senior doctors ask medical students several questions during the education- in-service training practice. Take roles for a doctor-doctor exchange. Use the case notes in a), b) and c). Some of the answers are easily found in the case report; some others will call for a brief case discussion.

Write down Doctor-Doctor questions to get to know:

-  If there is any case to discuss.
-  If there is anything relevant about this patient's sexual history.
-  Significant physical findings.
-  Laboratory studies or diagnostic procedures to perform on the patient.
-  What you expect the lab tests to show.
-  Treatment plan.
-  Diagnostic impression.
-  Other conditions to be considered in the differential diagnosis.

### Have a look

Look at the box below and study the example statements provided in it. Notice the underlined expressions. They are useful phrases to **give opinions** about something.

The rising incidence of abortion, in my opinion, has become a serious concern for health authorities.

In addition, I believe there is a great spectrum of conflicting beliefs about abortion.

I think doctors should prevent women from experiencing permanent infertility as a result of recurrent abortions.

Also, it would be good to constantly promote more information about the biological, psychological and social implications of abortion.

## Task 7

### “Abortion: an unsolved dilemma”

- a) There is a spectrum of conflicting beliefs and opinions on the topic of abortion. What do you think of it? In groups, discuss these two controversial situations. Then, be ready to discuss your answers in plenary. Use the useful phrases to give opinions in the have a look session.

If a woman finds herself pregnant, and does not want to be, what is the best solution for her and the potential newborn that she is carrying?

To take no action, have the baby and raise it herself.

To take no action, give birth, and give the baby up for adoption.

To have an abortion and terminate the pregnancy.

If a woman finds herself pregnant, discusses her options with her physician and other people involved, and decides to have her abortion, should the state/her family override her decision? In which situations should abortion be performed/ recommended?

- b) Read the case of this Jordanian university student. Be ready to comment on the facts and state opinions. Refer to the psychological and social implications of this obstetric event. Could there be any other implication you find worth including? Is there any of these implications present in the case?

Forced to have sex with a stranger, Doris became pregnant. When the pregnancy was discovered, she refused to have an abortion. Her father, found an abortionist who would perform the abortion without her consent. She alone has had to pay the price.

“I am a victim of rape, one of “the hard cases” for abortion. I was raped by a stranger when I was 15 years old. It was not the first time, nor would it be the last. However, this time I got pregnant. I was told that an abortion would solve my problem, when it was never really the problem in the first place. I was told, “Your parents know what’s best”, when they obviously were only concerned about their own reputations. I was told, “You make the right decision”, when I was never given a choice. More importantly, where was my baby’s choice? ”<sup>42</sup>

<sup>42</sup> Adapted from Wikipedia, The Free Encyclopedia. <http://www.google.com.cu>

**Task 8**

- a) In pairs, read and study these **case notes** about Susan Taylor, a patient who has recently attended a gynecologic clinic complaining of vaginal discharge and itching.



Surname: Taylor First Name: Susan Age: 55 y/o Sex: F Marital Status: Married

# of pregnancies: 2 FTP    2 living children    weight: + + + obese    LMP: 5 years ago



Present complaint: onset of symptoms: 7 / 7

HPI: frothy yellowish vaginal discharge associated    pruritus & burning / urination / episodes / dyspareunia / last week / lower abdominal pain

PMH: 0 miscarriage / 0 premature births / 0 post-menopausal bleeding (PMB)

Family history: HTN & diabetes

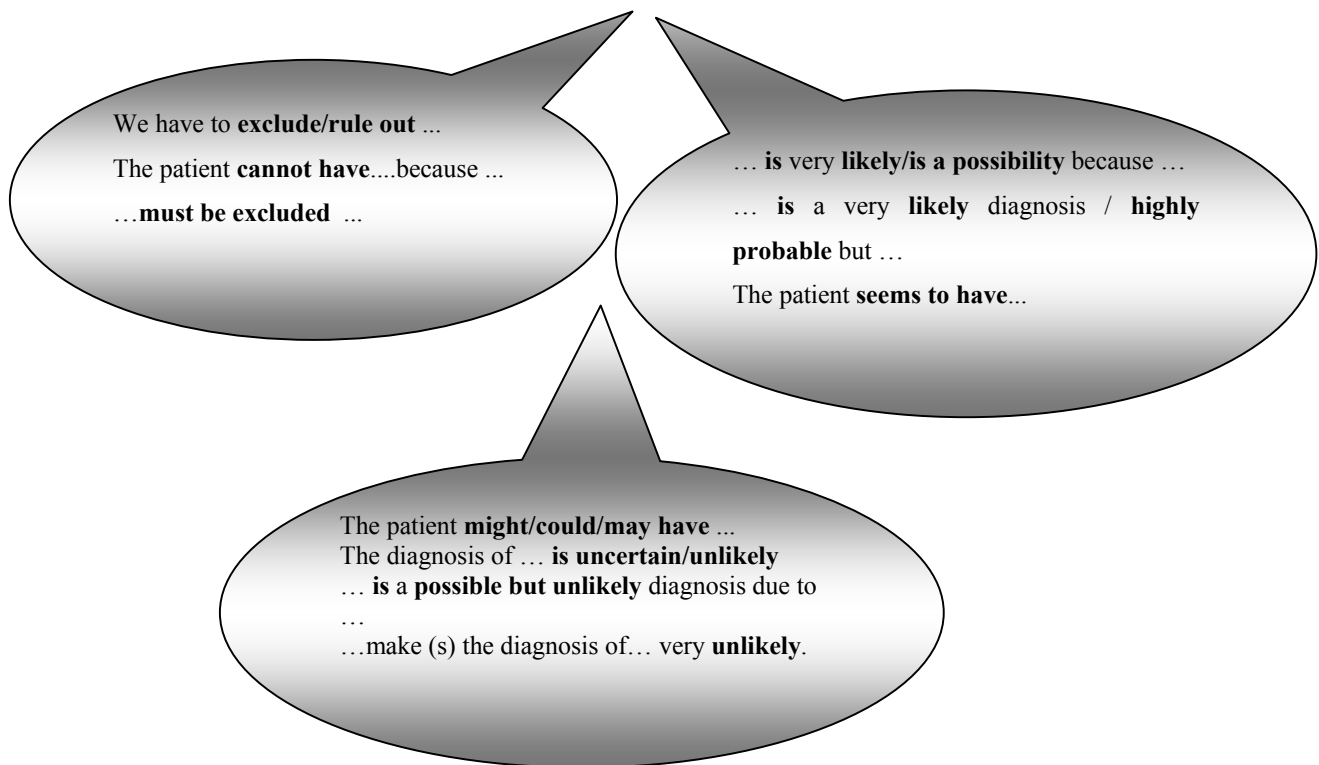
Significant negatives:

vaginal bleeding, polydipsia, polyuria and polyphagia

- b) Discuss with your partner the following diagnoses for this patient (DDx). Refer to the auto shapes in the next page for help.

1. Ectopic pregnancy
2. Fibroid
3. PID
4. Infectious disease (STI)

☞ These expressions are commonly used when **discussing a diagnosis**. They may be of help for your discussion:



- c) After your discussion, re-order the diagnoses listed in exercise b) from more to less likely. Exclude anyone which is definitely not possible.

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

- d) Which investigations would you send this patient for? Write them in the box below.

|                                            |
|--------------------------------------------|
| <u>Investigations:</u><br><br><br><br><br> |
|--------------------------------------------|

e) The results of some of the investigations performed to this patient will be dictated by your teacher now. Work in pairs and decide how they affect / support your most likely diagnoses?

f) Write your definite diagnosis here:

|                   |
|-------------------|
| <u>Diagnosis:</u> |
|-------------------|

g) What is the treatment of choice for this condition? Write the medication/s here:

|                      |
|----------------------|
| <u>Medication/s:</u> |
|----------------------|

h) Now, write a full report of this case. Use the case notes in a). Include investigation results, definite diagnosis and treatment choice.

*This is a ..... whose name is* \_\_\_\_\_

|  |
|--|
|  |
|  |
|  |
|  |
|  |

**Task 9**

Sexually transmitted diseases (STD's) are a medical problem for which incidence rates remain high in most of the world, despite diagnostic and therapeutic advances. Read the text carefully and proceed as suggested:

Sexually transmitted diseases have been well-known for hundreds of years — the English language has short words for two of the most common: the "pox" (syphilis) and "the clap" (gonorrhea).

Prior to the invention of modern medicines, sexually transmitted diseases were generally incurable, and treatment was limited to treating the symptoms of the disease. The first voluntary hospital for venereal diseases was founded in 1746 at London Lock Hospital.

The first effective treatment for a sexually transmitted disease was *Salvarsan*, a treatment for syphilis. With the discovery of antibiotics, a large number of sexually transmitted diseases became easily curable, and this, combined with effective public health campaigns against STDs, led to a public perception during the 1960s and 1970s that they have ceased to be a serious medical threat.

In the 1980s, first genital herpes and then AIDS emerged into the public consciousness as sexually transmitted diseases that could not be cured by modern medicine. AIDS in particular has a long asymptomatic period — during which time HIV (the human immunodeficiency virus, which causes AIDS) can replicate and the disease can be transmitted to others — followed by a symptomatic period, which leads rapidly to death unless treated.

Until the 1990s, such afflictions were commonly known as venereal diseases: Veneris is the Latin genitive (possessive) form of the name Venus, the Roman goddess of love. More recently, public health officials introduced newer terms such as sexually transmitted disease in efforts to improve the clarity of their warnings to the public. Moreover, clinicians are increasingly using the term sexually transmitted infection and sometimes distinguish it from the sexually transmitted disease.<sup>43</sup>

a) Write T before the statements that are true, according to the information that is stated or implied in the reading. Write F before those that are false. Write I (*impossible to know*) before the statements that are not proven, disproven, or implied by the reading.

1. \_\_\_\_ "Pox" and "clap" were formerly used to identify STD's.
2. \_\_\_\_ Healing has always been considered a matter of symptoms management.
3. \_\_\_\_ *Salvarsan* was combined with first generation antibiotics for the treatment of syphilis.
4. \_\_\_\_ Health prevention and promotion is now the cornerstone in the approach to STI's & STD's.
5. \_\_\_\_ Modern medicine has become the answer to all STD's.

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<sup>43</sup> Adapted from Wikipedia, the free encyclopedia.

- b) As you may well know, you do not need to look up every new word in a dictionary because you can often guess the meanings from the context. Sometimes, however, a word has more than one meaning or you may want to use the dictionary for other purposes: to know how to spell a word, how to pronounce it, its special uses, or even its history. Read the following dictionary entries, paying close attention to the different meanings a word can have. Then write the appropriate word on the line and the number of the corresponding entry between parentheses.

1. In ancient times it was thought that the price for sexual indulgence was the risk of acquiring a \_\_\_\_\_ ( ) disease.
2. \_\_\_\_\_ ( ) is identified with the Greek Aphrodite.
3. The word venom ( ) comes from *venereal* and had a positive connotation in old times.
4. She can only be compared to \_\_\_\_\_. ( )
5. The term \_\_\_\_\_ ( ) was originally related with the goddess \_\_\_\_\_ ( ) in Sanskrit, the classical old Indic literary language.
6. \_\_\_\_\_ ( ) is the second in distance from the sun.
7. The word *poison* coming from Old French *pocion* is an equivalent for \_\_\_\_\_ ( ).

**ve-nereal** (və nīr' ē əl) *adj* [ME *venerealle* < *venereus* < *venus*, love: see *Venus*] **1** having to do with sexual love or intercourse, serving to arouse sexual desire: aphrodisiac **2** transmitted only or chiefly by sexual intercourse with an infected individual <sup>1</sup>

**Venus** (vē'nəs) *n.* [ME < L, Lit. love] **1** Rom. Myth. the goddess of love and beauty **2** a very beautiful woman **3** the brightest six-largest planet in the solar system.

**venom** (vē'nəm) **1** Old L [fr. *venereal*] a love potion, sorcery **2** poison of any kind.

- c) The following paragraph provides a clear distinction between STD's and STI's. Read it carefully; summarize it, and using your own words write the main features of each.

Infection simply means that a germ – virus, bacteria, or parasite – that can cause disease or sickness is present inside a person's body. An infected person does not necessarily have any symptoms or signs that the virus or bacteria is actually hurting their body (they do not necessarily feel sick). A disease means that the infection is actually causing the infected person to feel sick, or to notice something is wrong. For this reason, the term STI – which refers to infection with any germ that can cause an STD, even if the infected person has no symptoms – is a much broader term than STD<sup>44</sup>

You may begin,

*The difference between STI's and STD's lies in the fact that the former...* \_\_\_\_\_

\_\_\_\_\_

- d) Finally, prepare a brief talk on the topic of **STIs/ STDs**. You may wish to use the following guidelines to organize your ideas:

- What is your estimation of the prevalence of HIV / AIDS / STIs in your health area?
- People at high risk to get infected (age and sex distribution).
- What symptoms/situations arouse the patient's suspicion of having a positive diagnosis?
- How is confidentiality of personal information handled?
- How do HIV-infected patients receive counseling? What are the aims of counseling?
- How do STIs affect a pregnant woman and her baby?
- How about health promotion? Refer to public health programs to prevent, control and reduce morbidity and mortality from HIV / AIDS and other STIs.

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<sup>44</sup> Adapted from Wikipedia, The Free Encyclopedia. <http://www.google.com.cu>



## Task 1



*Generally coma, from the Greek word "koma," is understood to mean a deep sleep, a state of extreme unresponsiveness, in which an individual exhibits no voluntary movement or behaviour.*



- a) In the understanding of this entity, most **authors** agree on one specific **sign** which is conveyed through a diversity of terms. Study all of these definitions including the one above and in pairs decide which you think this sign is. Underline the words used to express it.
- The state in which the patient has a clinical phase of complete unresponsiveness to all external stimuli.
  - The state of profound unconsciousness.
  - The state much like sleep, in which individuals are completely unarousable and are unresponsive to external stimulation and to their own inner needs.
  - An extreme altered state of consciousness in which the person is not relating to ordinary reality.
- b) Coma lies on a spectrum that goes from one end to another. In between, however, there are some other states, which unlike coma, still allow the individual to respond to stimuli in a greater or lesser degree. Study the following vocabulary items and circle the ones that best describe this range of associated conditions.

|           |   |           |   |            |   |          |   |
|-----------|---|-----------|---|------------|---|----------|---|
| confusion | - | stimuli   | - | drowsiness | - | movement | - |
| stupor    | - | awareness | - | reflex     | - | lethargy |   |

- c) In order to understand the loss of function suffered by a comatose individual, it is necessary to understand first the important characteristics of the unconscious state. Work in pairs and tick the signs usually present in a comatose patient.



45

- + difficult normal breathing \_\_\_\_
- + sleeping appearance with deep progress \_\_\_\_
- + rebound tenderness \_\_\_\_
- + seizures \_\_\_\_
- + dyspnea \_\_\_\_
- + poor response to painful stimulus \_\_\_\_
- + progressive respiratory depression \_\_\_\_
- + progressive deterioration of environmental awareness \_\_\_\_

## Task 2



Coma signals a potentially life-threatening event affecting the two hemispheres, the brainstem or both. The usual sequence of history, physical examination, and laboratory evaluation does not apply. The texts below clearly illustrate what is to be done in this respect. Read the one assigned by your teacher and do as suggested.

### I. The comatose patient

In the presence of a comatose patient, you must:

☞ First assess the ABCs (airway, breathing and circulation)

Establish the patient's level of consciousness

Examine the patient neurologically. Look for focal or asymmetric findings, and determine whether impaired consciousness arises from a metabolic or a structural cause.

Interview relatives, friends, or witnesses to establish the speed of onset and duration of unconsciousness, any warning symptoms, precipitating factors, or previous episodes, and the prior appearance and behavior of the patient. Any history of past medical and psychiatric illness is also useful.

<sup>45</sup> The Babinski response is a test used to assess upper motor neuron dysfunction.

☞ As you proceed to the examination, remember two cardinal **DON'Ts**:

1. Don't dilate the pupils, the single most important clue to the underlying cause of coma (structural vs. metabolic),
2. Don't flex the neck if there is any question of trauma to the head of neck. Immobilize the cervical spine and get an x-ray first to rule out fractures of the cervical vertebrae that could compress and damage the spinal cord.<sup>46</sup>

## II. Level of consciousness (Arousal) Techniques and patient response

Level of consciousness primarily reflects the patient's capacity for arousal, or wakefulness. It is determined by the level of activity that the patient can be aroused to perform.

Five clinical levels of consciousness are described in the table below, together with the techniques that may be used to elicit their characteristics. When you examine patients describe and record exactly what you see and hear. Summary terms such as lethargy, obtundation, stupor, or coma may have different meanings for other examiners.

| Level       | Technique                                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Alertness   | Speak to the patient in a normal tone of voice. An alert patient opens the eyes looks at you, and responds fully and appropriately to stimuli. |
| Lethargy    | Speak to the patient in a loud voice. Call the patient's name or ask "How are you?"                                                            |
| Obtundation | Shake the patient gently as if awakening a sleeper.                                                                                            |
| Stupor      | Apply a painful stimulus. Pinch a tendon, rub the sternum, or roll a pencil across a nail bed. (No stronger stimuli needed!)                   |
| Coma        | Apply painful stimuli <sup>47</sup>                                                                                                            |

<sup>46</sup> Bates' Guide to Physical Examination and History Taking p. 594. 8th Edition. Lippincott Williams & Wilkins. 2003

<sup>47</sup> Bates' Guide to Physical Examination and History Taking p.595. 8th Edition. Lippincott Williams & Wilkins. 2003

### III. Neurologic examination

Neurologic examination basically includes the following:

- ✓ Respirations: Observe the rate, rhythm and pattern of respirations.
- ✓ Pupils: Observe the size and equality of the pupils and test their reaction to light. Remember that the light reaction often remains intact in metabolic coma.
- ✓ Ocular movement: Observe the position of the eyes and eyelids at rest.
- ✓ Oculocephalic reflex (doll's eye movements): This reflex helps to assess brainstem function.
- ✓ Oculovestibular reflex (with caloric stimulation). If the oculocephalic reflex is absent and you seek further assessment of brainstem function, test the oculovestibular reflex.
- ✓ Posture and muscle tone: Observe the patient's posture. If there is no spontaneous movement you may need to apply a painful stimulus.<sup>48</sup>

- a) Now, get ready to report to your colleagues your ideas about the text. The following activities may serve as an aide for your summaries. You may decide to work out only the one you are required to present as a class report.

- I. Write **do's and don'ts** you should keep in mind in the presence of comatose patients.

| Do's | Don'ts |
|------|--------|
|      |        |

<sup>48</sup> Ibid p. 596-7

## II.

1. What is understood by levels of consciousness?
2. What are the levels of consciousness they talk about? What about the instructions/techniques for each?

Complete this chart:

| Levels      | Techniques                                      |
|-------------|-------------------------------------------------|
|             | Speak to the patient in a normal tone of voice. |
|             |                                                 |
| Obtundation |                                                 |
| Stupor      |                                                 |
|             | Apply painful stimuli.                          |



III. What is essential in a neurologic examination? Complete the paragraph below.

First, observe the \_\_\_\_\_, rhythm and pattern of \_\_\_\_\_. Secondly, observe the size and equality of the \_\_\_\_\_ and \_\_\_\_\_ their reaction to \_\_\_\_\_. It is necessary to check \_\_\_\_\_ movement. Therefore observe the \_\_\_\_\_ of the \_\_\_\_\_ and eyelids \_\_\_\_\_. To assess brainstem function you should check \_\_\_\_\_ reflex also known as doll's \_\_\_\_\_. If the oculoccephalic reflex is \_\_\_\_\_ test the \_\_\_\_\_ reflex. Finally, observe the patient's \_\_\_\_\_ and \_\_\_\_\_.

**Task 3**  

- a) This is a patient who has just been admitted to the ICU in a comatose state. The consultant is talking to her husband and a co-worker. Listen to their conversation and write true (T) or false (F). Be ready to support your answers.
1. \_\_\_ Donna had a car accident.
  2. \_\_\_ Ms. Flatt could not speak to Donna after the misfortunate incident.
  3. \_\_\_ The head injury is not too severe.
  4. \_\_\_ Donna had a contusion and is in mechanical ventilation.
  5. \_\_\_ The neurosurgeon decided to operate on her.

Consultant: Ms. Flatt, I understand you were with Donna when she was hit by a cyclist. Can you tell me what really happened?

Ms. Flatt: We were waiting at the bus stop when that young man on his bike spun off the road and knocked Donna down. She fell to the ground and hit her head. I helped her to get to her feet and asked her how she felt. She said she was drowsy; but a few minutes later she said she had nausea and a bit of a headache. I decided it was time to call Mr. Jackson and he asked me to get a taxi and bring her here.

Consultant: Did she throw up?

Ms. Flatt: She didn't. But doctor, when she lapsed into unconsciousness in the taxi, I was scared to death.

Mr. Jackson: How is she now?

Consultant: She is still unconscious. According to our evaluation with the Glasgow Coma Scale, which is very useful in classifying the severity of cases like Donna's, her head injury is a moderate one. Management was started right away. We had to intubate her to ensure ventilation. There is no bleeding elsewhere, and cervical spine injury has been ruled out.

Mr. Jackson: But what is causing her condition?

Consultant: The contusion must have produced a hemorrhage which turned into a hematoma. Anyway, we are waiting for the CT scanning.

Mr. Jackson: What's next, doctor?

Consultant: Right now, she is under an intensive- care neurologic monitoring. As soon as we get the CT scan results, we'll call the neurosurgeon and we'll evaluate whether she has to be operated on or not. If that is the case, we'll need your consent to proceed.

Mr. Jackson: Sure, doc. I'll be right here.

Some words have only one meaning. You can find the meaning in a dictionary entry, which sometimes includes an example. Most words, however, have more than one meaning. Often the same word can be more than one part of speech, and each part of speech can have different meanings.

b) Read these dictionary entries and answer the questions about them.

**fall 1** [fəl] **n** 1 the act of falling by the force of gravity.  
**2 a** a falling out dropping < the fall of leaves > **b** the season when leaves fall from trees: autumn

**fall 2 vb** 1 **a** to descend freely by the force of gravity  
**b** to hang freely < her hair falls over her shoulders > **2** to become lower in degree or level < his temperature falls 2° > **3** to pass into a new state or condition < fall asleep, fall in love > **synonyms** descend, drop, lower, go down **antonyms** rise, climb

1. What part of speech is **fall 1**? \_\_\_\_\_
2. What is the dictionary definition of the word in **2**? \_\_\_\_\_
3. What part of speech is the word **fall** when it means to pass into a new state or condition? \_\_\_\_\_
4. How many meanings are included in these examples for the word **fall** as a verb? \_\_\_\_\_
5. What word (s) is (are) related to it? \_\_\_\_\_
6. Write an antonym \_\_\_\_\_
7. Write the dictionary definition of the word fall in this sentence: "*Donna fell to the ground and hit her head*". \_\_\_\_\_

- c) The words and or expressions become, move swiftly off a road, exclude, and immediately have equivalents or synonymous terms in the dialog you have just read. Could you help find each of them?
- d) Now take turns to read the conversation. Negotiate with your partner the roles to play while reading.

- e) One of the patients in the same ICU has just come out of an alcoholic comatose state. Read the following exchange of questions between the attending physician and the patient's husband and match the question beginnings in A with their endings in B.

| A                         | B                                          |
|---------------------------|--------------------------------------------|
| 1. Do you know            | ___ phenytoin?                             |
| 2. Why does my wife feel  | ___ brain-stem auditory evoked potentials? |
| 3. Were you present when  | ___ so weak?                               |
| 4. Has she ever taken     | ___ learn about that drug?                 |
| 5. How did you            | ___ diagnosed as an alcoholic?             |
| 6. Why are you evaluating | ___ the drug interactions?                 |
| 7. When was she first     | ___ she hit her head?                      |

- f) The answers below were all given by some next of kin<sup>49</sup> of comatose patients admitted in an ICU. What were the exact questions the doctors asked them?

1. In a road accident
2. Just insulin
3. Because some other people with similar symptoms take that medication
4. He is on fluoxetine
5. Through an EEG
6. In May 2008

<sup>49</sup> A person's nearest relative or relatives. Sometimes, the nearest blood relative of a patient.

**Have a look**

In the dialogue studied in this unit, the consultant said,

“According to our evaluation with the Glasgow Coma Scale, **which** is very useful in classifying the severity of cases like Donna’s, her head injury is a moderate one.”

☞ A *clause* is a part of a sentence. But a non-defining *relative clause* only tells us something extra about the person or thing the speaker means.

. With the phrase “which is very useful in classifying the severity of cases like Donna’s”, the doctor gave extra information about the scale he was talking about.

☞ Non-defining relative clauses are placed between commas and are very often introduced by the relative pronouns **who** (*for persons*) and **which** (*for things*).

**Task 4**

Doctors usually have to give extra information about a case. The following sentences were all said in different situations.

a) Select **who** or **which**. Then tell a partner why you chose the pronoun in each sentence.

1. He was admitted at the Royal Medical Institute, (who- which) is the best hospital in the country.
2. Joan, (who- which) has recently become a neurosurgeon, is now working as a general practitioner in South Africa.
3. Some people in a coma shift to a persistent vegetative state, in (who- which) breathing and eliminating foods continue without the patient's awareness.
4. Thirty-one prolonged coma patients, (who- which) continued in a comatose state for at least 2 months, were transferred to a different ward.
5. The absence of the perceptual awareness (who- which) includes coma, brain death, locked-in syndrome and minimally responsive state may be the most important clinical manifestations.

- b) All the sentences below have to do with coma case reports. Use the hints given below to write sentences containing relative clauses which would give extra information about the person or thing meant by the speaker. Some changes will have to be made to keep the original sentences as used in the case reports. Follow the example given. Sometimes the clause goes in the middle of the sentence, sometimes at the end.

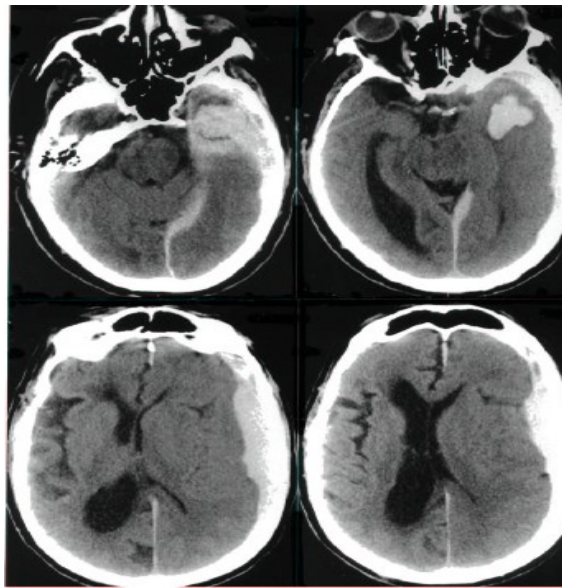
e.g. Diazepam - widely used medication – prescribe with care.

Diazepam, which is a widely used medication, should be prescribed with care.

1. Mrs. Scott – 60 – year - old housewife - apparently in good health - tripped over an object and hit her head.
  2. A 42 – year - old man - collapsed in front of the local cinema - acetone smell.
  3. The skull x-ray - an ordinary radiography - may help find what causes your headaches.
  4. Some clinical manifestations - typical of cases with coma – be easily identified by experienced doctors.
  5. My family doctor - on call - attended all the patients involved in the car accident.
- c) Make one sentence from two. Use the sentence in brackets to make a relative clause.
1. This is the test. (It is required for a definite diagnosis)
  2. Phenobarbital was added to the treatment. (It temporarily relieved her of mental tension and anxiety.)
  3. Hypoxia is a metabolic cause of coma. (It can result in massive diffuse brain damage.)
  4. Coma is a medical emergency. (It calls for maintaining the patient's respiration and circulation.)

**Task 5**

Look at this picture of a **magnetic resonance imaging** (MRI). It shows an image of a common cause of coma, **trauma**; a brain injury which may result in different outcomes. A huge and varied number of conditions, however, can result in coma. A good way of categorizing these conditions is shown in the chart below. Listen to your teacher and fill in the chart by writing down the conditions you will hear, under the corresponding headings. Then, compare your answers with a partner. Feel free to add others.



| vascular | cerebral infections | metabolic/ endocrine causes |
|----------|---------------------|-----------------------------|
|          |                     |                             |
|          |                     |                             |
|          |                     |                             |
|          |                     |                             |
|          |                     |                             |
|          |                     |                             |

**Task 6**

Professor Vega, a highly honored specialist in the field of Neurology, is holding a seminar on coma. Listen to him and proceed as suggested.

a) Answer these questions.

- How many students take part in the group debate?
- What topics are being discussed?

b) Fill in the missing information.

Coma is the result of something that interferes with the **fun**\_\_\_\_\_ of the **cer**\_\_\_\_\_ cortex and/or the functioning of the **str**\_\_\_\_\_ which make up the reticular activating **sys**\_\_\_\_\_. (RAS). This is not an anatomical area of the **bra**\_\_\_\_\_, but rather a network of structures including the brainstem, the **med**\_\_\_\_\_, the **tha**\_\_\_\_\_, and **ner** \_\_\_\_\_ pathways.

c) Complete the following ideas:

*The cornerstone of diagnosis is* \_\_\_\_\_

*The Glasgow Coma Scale is* \_\_\_\_\_

Below is a chart of the GLASGOW COMA SCALE<sup>50</sup> you may wish to consult for further information.

| <u><b>Eye opening</b></u> | <u><b>Verbal activity</b></u> | <u><b>Motor activity</b></u> |
|---------------------------|-------------------------------|------------------------------|
|                           |                               | 6. Obeys command             |
|                           | 5. Oriented                   | 5. Localizes pain            |
| 4. Spontaneous            | 4. Confused                   | 4. Withdraws to pain         |
| 3. To command             | 3. Inappropriate              | 3. Flexion to pain           |
| 2. To pain                | 2. Incomprehensible           | 2. Extension to pain         |
| 1. None                   | 1. None                       | 1. None                      |

<sup>50</sup> Tarascon Pocket Pharmacopoeia. Compliments of Forest Pharmaceuticals, Inc. Classic Shirt-Pocket Edition; 2006. p.94

- d) This is the second part of the seminar debate. Read it carefully and in groups summarize each point. Then complete the chart with the requested information.

**Professor Vega:** What are the goals of treatment?

**Ariel:** Attention must first be directed to maintaining the patient's respiration and circulation, possibly using intubation and ventilation, administration of intravenous fluids or blood as needed, and other supportive care. If head trauma has not been excluded, the neck should be stabilized in the event of a possible fracture.

**Professor Vega:** It is extremely important for a physician to determine quickly the cause of a coma, so that potentially reversible conditions are treated immediately.

**Ariel:** Right. I remember you explained that an infection may be treated with antibiotics; a brain tumor may be removed; and brain swelling from an injury can be reduced with certain medications.

**Professor Vega:** Outcome from a coma is therefore quite variable and depends a great deal on the cause and duration of the coma. Could you elaborate on this point, please?

**Gretel:** Yes. Some conditions that cause coma can be completely reversed, restoring the individual to his or her original level of functioning. However, if areas of the brain have been sufficiently damaged due to the severity or duration of the condition which led to the coma, the individual may recover from the coma with permanent disabilities, or may even never regain consciousness.

**Casares:** That's true. Leaving out those people whose coma followed drug poisoning; only about 15% of patients who remain in a coma for more than just a few hours make a good recovery.

**Professor Vega:** Congratulations! It is important to remark that as long as there is breath there is some form of consciousness and reason to hope for communication and growth. Do you agree? Now let's turn to the next issue. What are the....? (voice fades out)

| Goals of treatment | Immediate measures | Prognosis |
|--------------------|--------------------|-----------|
|                    |                    |           |

- ☞ Go back over the conversation and notice professor Vega's last remark. Comment on his words and state whether you agree or disagree with that.



# Introduction to the language of research

This is a special unit intended to furnish you with essential terminology of scientific research and useful hints for academic writing. It will also provide you with some basic features of the language of oral presentations. You may consult the unit as a reference tool for out-of-class activities or when you are engaged in writing scientific reports.

## Task 1

The following words are all connected to the term **research**. Study them and in pairs insert them into one of the categories presented in the chart below. You may add other words to each category.

|                      |                       |
|----------------------|-----------------------|
| introduction         | bibliographic review  |
| round table          | abstract              |
| panel discussion     | discussion            |
| material and methods | qualitative research  |
| results              | chairperson           |
| presenter            | oral presentations    |
| poster               | board member          |
| case study           | quantitative research |

| Research types & approaches | Types of presentations | Roles of the participants | Paper structure |
|-----------------------------|------------------------|---------------------------|-----------------|
|                             |                        |                           |                 |
|                             |                        |                           |                 |
|                             |                        |                           |                 |
|                             |                        |                           |                 |
|                             |                        |                           |                 |

**Task 2**

- a) The notes below concisely summarize **paper organization criteria as required for manuscripts submitted to biomedical journals**.

-  How do they match with the major components of *paper structure* in the chart above?
-  What questions do they basically answer in a research?

1. Findings usually with figures and tables.
2. Comments on main implications of every finding, comparing, concluding and recommending.
3. Purpose and rationale for the study or observation.
4. Material and patients and then the procedure.

- b) These jigsaw bits were taken from the article *Effectiveness of paramedic practitioners in attending 999 calls from elderly people in the community: cluster randomised controlled trial* but they are in the wrong sequence. Work in groups and arrange them in the correct order. That is, *Introduction, Materials & Method, Results & Discussion*. Then be ready to explain the reasons for your answers.

**A**

This randomised controlled trial evaluated the impact on processes and outcomes of paramedics with extended skills managing patients with acute minor conditions. The service conveyed considerable benefits for patients and the NHS in terms of reduced overall attendances at an emergency department and hospital, shorter episode times, and higher levels of satisfaction among patients. The new service also seems to be safe in that we identified no differences in mortality or health outcomes after 28 days. More than a quarter (29.6%, n=459) of patients in the intervention group did not receive the paramedic practitioner service. These patients therefore received the "normal service" but were still included in the "intervention" group as the results were analysed on a pragmatic intention to treat basis, reflecting the outcomes that could be expected were the intervention to be introduced more widely, and standard for the reporting of the results of health services research. This had the effect of considerably weakening the impact of the intervention.

**B**

The UK Department of Health's strategy has been to encourage the increased use of non-medical staff to carry out assessments and treatments traditionally carried out by doctors. The introduction of new models of care, including further assessment, triage, and treatment skills for paramedics, has been recommended to help manage ever increasing demands for health care. Current evidence concerning safety, effectiveness, and costs to support these changes in practice, however, is lacking.

Seven experienced paramedics were selected through open competition and completed the training course to enable them to provide community based clinical assessment for patients aged over 60 who contacted the emergency ambulance service with minor acute conditions.

We conducted a cluster randomised controlled trial to evaluate the effectiveness and safety of this new service.

**C**

Patients were recruited from 1 September 2003 to 26 September 2004. Patients aged 60 and above were eligible for inclusion when the call to the ambulance service originated from a Sheffield postcode between 8 am and 8 pm, with a presenting complaint that fell within the scope of practice of the paramedic practitioners. We used cluster randomisation to reduce the risk of contamination (practice in the control group being influenced by the presence of the paramedic practitioner in the community) and to allow service level, rather than individual patient level, evaluation of the intervention. Weeks were randomised before the start of the study (to allow for rostering of the paramedic practitioners) to the paramedic practitioner service being active (intervention) or inactive (control), when the standard 999 service was available

**D**

During the trial, the paramedic practitioners identified 96% (3996/4175) of all eligible calls at the time of the incident (figure). There were no significant differences in terms of sex and presenting complaint between those identified by the paramedic practitioner and those identified retrospectively by the research team. Those identified by the paramedic practitioner, however, were a little older than those who were not identified.

Of the 2087 patients identified during the intervention weeks and 1909 during the control weeks, 978 patients did not consent to participate, resulting in the inclusion of 3018 patients into the trial. The figure shows details of why patients did not take part. There was a small difference in recruitment rates between intervention (74%) and control (77%) weeks, but no significant differences between the baseline demographics of those who were recruited and those who were not<sup>51</sup>

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<sup>51</sup> Adapted from BMJ 2007; 335:919

☞ **Introductions** are known to be troublesome, and nearly all academic writers admit to having more difficulty with getting started than they have with its continuation. Do you agree with that assertion? What does an introduction do? Discuss your answers with a partner. Then read carefully and proceed as suggested below.

**Introductions** are further divided into three main stages:

**Orientation towards the paper:** to indicate the appropriate context in which to understand the content of the paper. There are many ways in which the writer can choose to provide a context or point of departure for the paper, but these two general categories are worth noting:

**General background information.**

Usually consists of facts of various types or basic known information about an issue or a concept to be discussed. There is often a statement highlighting the **importance of the subject area** under discussion. Sometimes definitions and explanations of key terms or concepts are included. e.g.

- There has been much interest recently in the concept of...and its relevance for...
- ...has been the focus of much attention in the literature for...

**Existing literature.**

In the second the writer refers to **existing scholarship in the area** under discussion, research findings, scientists and theorists opinions, etc. In this part of the paper the authors have to make clear that they are familiar with all relevant scholarship. Here the focus may narrow to citations of specific studies directly related to the present topic. e.g.

- A number of recent studies have provided evidence that...
- There is now considerable body of research which suggests...

**Justification of the paper:** to persuade the reader that what you have to say is worth saying. That might be called “the marketing function of a paper”. You need to persuade your reader that what you have to say is worth saying; in other words, you have to explain the role of your work, sometimes by pointing out faults or gaps in previous works, without rejecting it altogether. Two typical strategies are to indicate a gap in the covering of previous scholarship or to point to a question or problem which remains unanswered or still has to be solved. e.g.

- The limitation of all this interpretation is that...
- But the question remains whether...
- ...yet several questions remain unanswered: (1) What...? (2) What? and more importantly,...?

**Focus on the paper:** (typically the last part of an introduction) to let the reader know what to expect. Here **aims and purposes** of the paper are defined.

- The object of this paper is to look critically at...
- The aim of this paper is to demonstrate that...
- The purpose of this article is to ...

Sometimes this stage includes statements which indicate the limits of the investigation and /or outline the way the paper is organized. e.g.

- It is not the purpose of this study to..., but rather to...
- Since...is beyond the scope of this study.

Statements outlining the way the paper is organized and the methodology or approach used are sometimes combined with aims. e.g.

- To illustrate this, the authors of the present paper shall look at...
- Consequently, in this paper, findings will be reviewed and synthesize in order to...

- c) These two excerpts belong to the **introduction** section of major research summaries. Work in pairs and decide which of the features in the panel are present in each of them.

**A**

The main problem with preterm labour is our lack of progress in the successful management of this condition. We need to reassess our approach to this problem because preterm labour is not a disease, but an event, which may result from multiple independent pathways. This problem has also been affected significantly by medical advances such as infertility treatments and changes in neonatal survival at the limit of viability. The specific challenges that we face in managing preterm labour include: problems with definition; aetiology, including genetic and infection components; diagnostic problems, such as true versus false labour and role of cervical length and fetal fibronectin; and specific interventions according to the antepartum, intrapartum and postpartum challenges. In order to address the main issue, and make future progress in the management of preterm labour, we should consider the implementation of a 'Postpartum Preterm Labour Diagnostic Workup Protocol'.<sup>52</sup>

**B**

Stroke is the second leading cause of death in the world and the leading cause of serious, long term disability in adults; about half of those who survive are dependent on others for assistance with personal activities of daily living six months after the stroke.

Occupational therapy is an essential element in the rehabilitation of patients after stroke. It entails "use of purposeful activity or interventions designed to achieve functional outcomes which promote health, prevent injury or disability, and which develop, improve, sustain or restore the highest possible level of independence."

A systematic review of therapy based rehabilitation services delivered to stroke patients living at home within one year of stroke onset found that those who received rehabilitation based on therapy were more independent in personal activities of daily living and more likely to maintain that ability during the study period. This review, however, covered a heterogeneous group of interventions (physiotherapy, occupational therapy, or multidisciplinary staff working with patients primarily to improve task orientated behaviour) and concluded that the "different groups of interventions might differ in their effects."<sup>53</sup>

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<sup>52</sup> Taken from Problems and Challenges in the Management of Preterm Labour. McNamara HM BrJ Obstet Gynaecol. 2003; 110 (Suppl 20):79-85

<sup>53</sup> Adapted from BMJ 2007; 335:922 (3 November), doi:10.1136/bmj.39343.466863.55 (published 27 September 2007).

☞ The next section of the IMRAD structure is **methods**. It usually describes the selection of the observational or experimental subjects (patients or laboratory animals), identifies variables and procedures and evaluates their limitations. Reports present information on all major study elements such as: study population, interventions, outcome and the rationale for statistical analysis.

- d) The following paragraph describes the study design and the participants of a research report section. Work in pairs and use the words or phrases to complete the text below. Each missing word is signaled by a consecutive number.

enrolled - approved - carried out - study protocol - medication  
received - exclusion - trial - informed consent

This prospective, double blind, placebo-controlled, multi center study was (1) \_\_\_\_\_ between August, 1997 and June, 1998, in four centers in the USA infants were recruited from August, 1997 until Dec 12, 1997, and all infants (2) \_\_\_\_\_ their second dose of vaccine by Feb 12, 1998, before the rotavirus season (as assessed by surveillance in each community) The (3) \_\_\_\_\_ and informed consent were (4) \_\_\_\_\_ by the institutional review board at each site. A parent guardian for each child gave (5) \_\_\_\_\_ before the child was (6) \_\_\_\_\_ in the study. Reasons for (7) \_\_\_\_\_ were an immunosuppressed or pregnant individual in the same household and births at less than 36 weeks of gestation, participation in any other clinical (8) \_\_\_\_\_ or no telephone in the household. Vaccination was delayed if the infant had a fever (temperature  $\geq 38.1^{\circ}\text{C}$ ), had had gastrointestinal signs within the previous 3 days, or was receiving (9) \_\_\_\_\_ that commonly causes gastrointestinal signs.

☞ The **results** section, usually with tables and figures, will largely depend on the nature of the study, and the results to be highlighted. Each main finding should be in a separate paragraph with a brief objective evaluation or comment (usually statistical significance; sometimes comparison with another result, or additional explanatory information). Typical patterns are chronological or by variable.

- e) The following table presents the **results** of a preliminary study. Analyze the information it provides and work with a partner to complete the statements below.

**Table 1. Cases of AIDS in Aurora**

|           | men       | women     |
|-----------|-----------|-----------|
| 1995-2000 | 316 (96%) | 14 (4%)   |
| 2000-2005 | 311 (73%) | 114 (27%) |

**1. The data can be simply stated:**

Between 1995-2000, 316 men and 14 women had AIDS.

Between 1995-2000, 316 men had AIDS \_\_\_\_\_ with 14 women.

316 men and 14 women had AIDS, accounting \_\_\_\_\_ 96% and 4% \_\_\_\_\_

**2. Or attention can be drawn to the similar numbers for men (316 and 311)**

The number of men with AIDS was similar (or almost the same) in 1995-2000 and 2000-2005.

The number of men with AIDS in 1995-2000 was almost the same \_\_\_\_\_ 2000-2005.

We found \_\_\_\_\_ many men with AIDS \_\_\_\_\_ 2000-2005 \_\_\_\_\_ 1995-2000.

**3. Or attention can be drawn to different numbers for women (14 and 114)**

The number of AIDS cases in women \_\_\_\_\_ from 14 in 1995 \_\_\_\_\_ 114 in 2000-2005.

The number of women with AIDS increased \_\_\_\_\_ from 14 in 1995- 2000 to 2000-2005.

**4. Attention can also be drawn to the comparison of figures for both men and women**

In 1995-2000, 316 men had AIDS; \_\_\_\_\_ only 14 women were affected.

The number of men \_\_\_\_\_ AIDS was far \_\_\_\_\_ than the number of women.

☞ A typical **discussion** section, on the other hand, contains most of the following information, but the sequence varies:

1. Stating the main research outcome. (Related to the aim of the study at the end of the introduction). The most significant finding usually comes first.
2. Findings are compared with findings of other studies (sometimes contrast, but more often indicating that they are in accordance).
3. Interpreting and/or explaining the most significant findings and making appropriate generalizations from the results of the investigation.
4. Stating limitations of the study, perhaps raising questions for further studies.
5. Pointing the way forward: making recommendations for application or further research.

- f) Now, work with a partner and using the information for the IMRAD structure presented so far, the typical sequence provided above and the data in e) try writing a brief **discussion** text stating the main implications of this study. You may start:

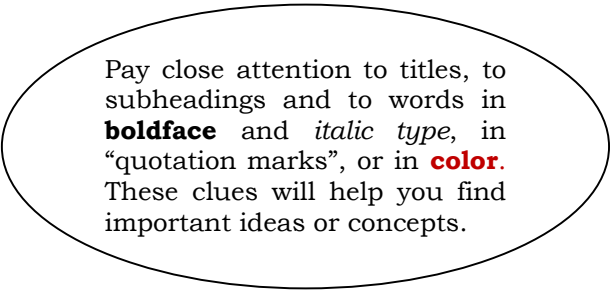
*Although the study was small, the results suggest that AIDS...*

☞ This chart will help you recognize and approach the IMRAD structure in terms of typical linguistic features.

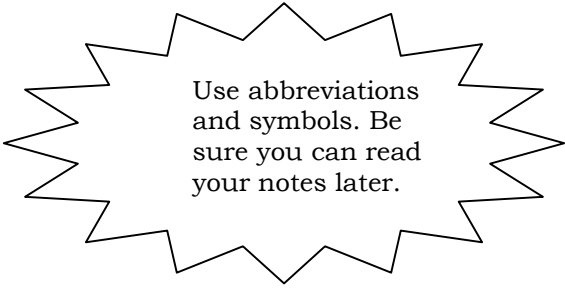
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Introduction | Typical sequence of tenses (1) establishing the importance of the field: <b>Present or present perfect</b> , (2) summarizing previous research: <b>past</b> , (3) indicating a problem or gap in knowledge: <b>present perfect</b> , (4) introducing the present study: <b>present or past</b>                                                                                                                                                                                                                     |
| Methods      | Verbs in the procedure are predominantly <b>passive</b> , presumably because the focus is on the action not the subject                                                                                                                                                                                                                                                                                                                                                                                            |
| Results      | Predominant use of <b>be</b> and <b>have</b> in short and simple sentences. Focus not on the verb but on what was found. The <b>past tense</b> is used to report findings. e.g. <i>Ibuprofen was the most widely prescribed medication</i> . When referring to tables and figures the <b>present tense</b> is used. e.g. <i>table II shows/ gives...</i> Though the <b>past tense</b> is frequent with a <i>bracket reference</i> . e.g. <i>Ibuprofen was the most frequently prescribed medication (table II)</i> |
| Discussion   | Typical linguistic features are contrastive signals ( <b>although, however</b> , etc); expressions of cause and effect ( <i>due to, result from</i> , etc.); tentative language ( <b>would</b> ); and expressions of probability rather than certainty. Recommendations are made using <b>should, ought to, must</b> . Here the present tense is dominant.                                                                                                                                                         |

**Task 3**

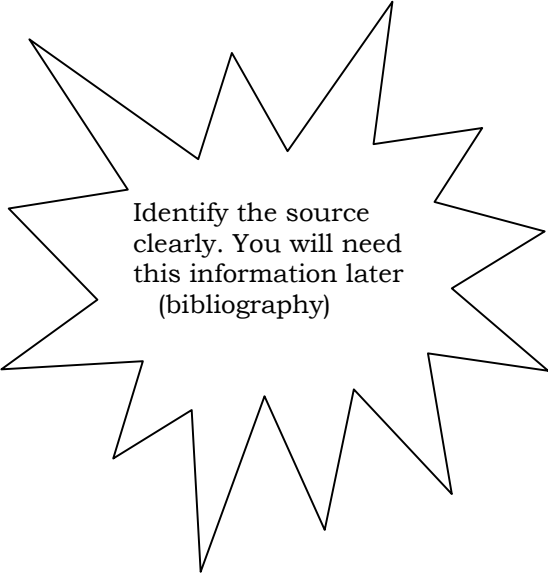
☞ Now, let's turn to **bibliographic reviews** as a process of critical evaluation of retrospective and current views of a given topic. Here, taking notes is a major step. Before you take notes, skim the selection that is, run your eyes over the text, reading a few sentences here and there and recognizing certain words and expressions as clues to the functions and ideas of what follows. It is not necessary to read the text in detail. The strategies below can be useful not only for note-taking but also for organizing your material and writing your first draft.



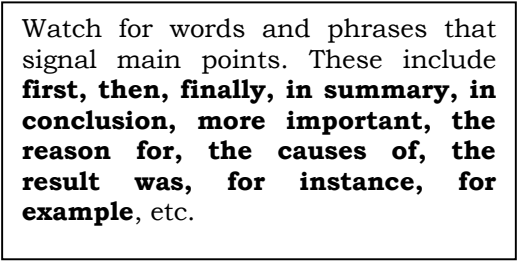
Pay close attention to titles, to subheadings and to words in **boldface** and *italic type*, in "quotation marks", or in **color**. These clues will help you find important ideas or concepts.



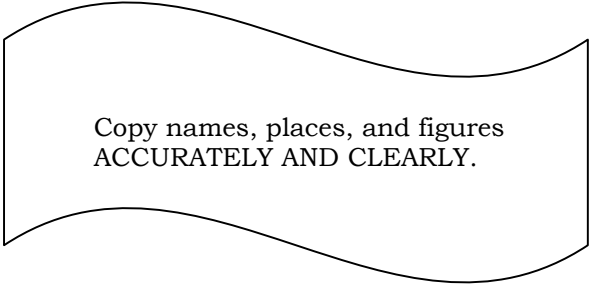
Use abbreviations and symbols. Be sure you can read your notes later.



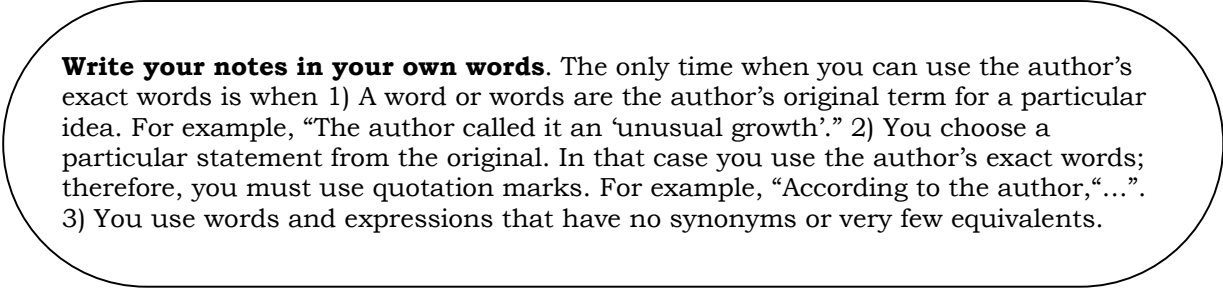
Identify the source clearly. You will need this information later (bibliography)



Watch for words and phrases that signal main points. These include **first, then, finally, in summary, in conclusion, more important, the reason for, the causes of, the result was, for instance, for example**, etc.



Copy names, places, and figures **ACCURATELY AND CLEARLY**.



**Write your notes in your own words.** The only time when you can use the author's exact words is when 1) A word or words are the author's original term for a particular idea. For example, "The author called it an 'unusual growth'." 2) You choose a particular statement from the original. In that case you use the author's exact words; therefore, you must use quotation marks. For example, "According to the author, "...". 3) You use words and expressions that have no synonyms or very few equivalents.

☞ The activities suggested below all look at the way language works when you take notes, organize your material and start writing your first drafts. This text will help us use some of the strategies and techniques required in the process of bibliographic review. Read the text and proceed as suggested.

**The exercise stress test**

The exercise stress test, which is described in detail in Chapter 10, serves to alert the physician to the possible presence of heart function abnormalities that may be triggered or worsened by exertion. During the test, a person exercises to 85 percent of his or her maximum ability (or until symptoms of heart disease or other problems result, at which point the test is immediately stopped). Meanwhile, blood pressure, heart rhythm, and, in some cases, oxygen consumption are continuously recorded. It should be noted, however, that exercise stress tests have a false positive rate (a result indicating disease when none is present) of anywhere from 15 to 40 percent; this rate is even higher in young women with no symptoms of heart disease. The results may also be less reliable in trained athletes. The stress test is especially important for determining the safe level of exercise during heart attack recovery and may be performed at intervals during cardiac rehabilitation to monitor progress. Anyone over 40 who has symptoms or a family history of coronary heart disease, or more than two risk factors for it—including being male (See Chapter 3.) needs to be tested before starting a program of activity.<sup>54</sup>

- a) The following can be abbreviated when you take down notes. Work with a partner and write the corresponding abbreviations and symbols.

Chapter: \_\_\_\_\_  
Percent: \_\_\_\_\_  
Blood pressure: \_\_\_\_\_  
Female: \_\_\_\_\_  
Family history: \_\_\_\_\_  
Coronary heart disease: \_\_\_\_\_  
Male: \_\_\_\_\_

- b) If you need more detailed information on exercise stress test and risks for CHD. Where can you find it in this same book?

<sup>54</sup> Adapted from The Heart Book: Yale University School of Medicine 1992

- c) To guess the meaning of a new word from the context, you might find it helpful to know its “part of speech”. That is, is the word a noun, a verb, an adjective? ) The words *exercise*, *test* and *result* all belong in the text and have been used with more than one function. Go back over the reading passage and determine their functions.
- d) This chart contains some other words commonly used in medical writings. They also belong in the text and may as well have different grammatical functions. Work with a partner and complete the chart accordingly. Notice that in the majority of cases you will need to make changes (add suffixes, create new words, etc)

| Nouns       | Verbs    | Noun modifiers | Adverbs |
|-------------|----------|----------------|---------|
| ability     |          |                | -       |
|             | describe |                | -       |
| detail      |          |                | -       |
| presence    |          |                | -       |
|             | trigger  | -              | -       |
|             | record   | -              | -       |
| abnormality | -        |                |         |
|             | -        | higher         |         |
| -           | -        | safe           |         |
| recovery    |          |                | -       |
| progress    |          |                |         |

- e) Distinguishing **facts** (F) –true according to what is stated or implied- from **opinion** (O) – statements that are views and beliefs derived from what is stated- contribute to the objectivity of your writing. Read the text again and write **F** or **O** depending on the nature of the statements.
- \_\_\_ If the results of the exercise stress test are abnormal, further testing may be recommended.
  - \_\_\_ Some signs are constantly recorded during the test performance.
  - \_\_\_ Results indicating disease may appear during the test.
  - \_\_\_ The decision to perform a stress test should be made in consultation with a team of doctors.
  - \_\_\_ All athletes must take the stress test.
  - \_\_\_ All heart function abnormalities can be detected during the stress test.

- f) Now you have a complete understanding of the text so you are in a better position to write a summary on the information you consider to be significant and worth including in it. Discuss your choices with a partner.

**Remember that a successful summary should be:**

- Neutral: you should not express your own opinion of the text
- Balanced: it should contain roughly equal coverage of all sections of the text
- Condensed: it should be shorter and less detailed than the original
- Clear: use simple language
- In your own words

You may start with a sentence containing two elements: the **source** and the **main idea**. Here are some sample first sentences:

In “\_\_\_\_\_” article... \_\_\_\_\_ (main idea)

According to \_\_\_\_\_ in his article “\_\_\_\_\_” \_\_\_\_\_ (main idea)

\_\_\_\_\_ in his book “\_\_\_\_\_” states that \_\_\_\_\_ (main idea)

\_\_\_\_\_ claims that

\_\_\_\_\_ argues that

\_\_\_\_\_ maintains that

☞ Academic writing makes use of linguistic devices that help you present arguments, assertions, cause-effect relationship, reasons, conclusions, etc. These are some of the most common signals. Notice that they may overlap.

**Giving reasons (cause & effect):** because, because of, so therefore, for this reason, as since, due to, owing to, given the (fact that), as is shown/ implied/ suggested.

**Concluding:** therefore, then, consequently, as a result, this leads/points to/ suggests/indicates/implies/proves that, from this we can conclude, finally.

**Expressing counterarguments:** It is true that...but, certainly...however, opponents/critics of this position..., it may be objected that..., a possible objection is..., another argument against X is...

**Refusing:** but, however, on the other hand, nevertheless.

**Linking ideas:** additionally/in addition to, also, furthermore, moreover, first of all.

**Defining:** A definition or explanation usually follows the expressions, *that is* or *in other words*.

**Moderating opinions;** that is stating opinions with an adverb of frequency. However there is a lot more than *never, always, all, or none*

Instead of *never*, use *rarely, almost never, hardly ever, or usually...not*.

Instead of *always* use frequently, usually, almost always, or often

Instead of *all*, use *almost all, almost every, most, or many*

Instead of *no or none*, use *very few, hardly any, almost no, or almost none*.

#### Task 4

- a) Writing is preceded by long hours of reading. Because a good reading requires an active mind, fluent readers make use of “predictions” about the material they are reading. Read the text below and try to guess the meanings of the words in **bold** by completing the blanks. The reference to the paragraphs may be of help.

#### THE PATIENT-PHYSICIAN RELATIONSHIP

1

The combination of medical knowledge, intuition, and judgment defines the *art of medicine*. It is as necessary to the practice of medicine as is a sound scientific base. No greater opportunity, responsibility, or obligation can fall to the lot of a human being than to become a physician. In the care of the suffering he needs technical skill, scientific knowledge, and human understanding.

2

Medical workups and records often fail to include essential information about the patient's origins, schooling, job, home and family, hopes and fears. Without this knowledge, it is difficult for the physician to gain rapport with the patient or to develop insight into the illness. The ideal physician-patient relationship is based on thorough knowledge of the patient, on mutual trust, and on the ability to communicate with one another.

3

Tact, sympathy and understanding are expected of the physician, for the patient is no mere collection of symptoms, signs, disordered functions, damaged organs, and disturbed emotions. He is human, fearful, and hopeful, seeking relief, help and reassurance. To the physician, as to the anthropologist, nothing human is strange or repulsive. The misanthrope may become a smart diagnostician of organic disease, but he can scarcely hope to succeed as a physician. The true physician has a Shakespearean breadth of interest in the wise and the foolish, the proud and the humble, the stoic hero and the whining rogue. He cares for people.

## 4

Many trends in contemporary society tend to make medical care impersonal. Some of these include (1) vigorous efforts to reduce the escalating costs of health care; (2) the increasing reliance on technologic advances and computerization for many aspects of diagnosis and treatment; (3) the increased geographic mobility of both patients and physicians; (4) the need for more than a single physician to be involved in the care of most patients who are seriously ill; and (5) an increasing tendency on the part of patients to express their disappointments with the health care system by legal means (i.e., by malpractice litigation). Given these changes in the medical care system, maintaining the humane aspects of medical care and the empathetic qualities of the physician is a major challenge. It is now more important than ever that the physician consider each patient to be a unique individual deserving of humane treatment, regardless of personal or financial circumstances.

## 5

Moreover, the accumulation of laboratory data does not relieve the physician from the responsibility of careful observation and study of the patient. Because diagnostic tests often do not provide important new information even when their results are accurate, several questions should be considered in deciding when to order diagnostic tests. First, how likely is the disease in question? Second, what would be the clinical consequences if the diagnosis were missed or if the patient were mistakenly treated for a disease that is not present? The physician should consider the probabilities, the risks, the likelihood and costs of obtaining new information.

## 6

Finally, it may be convenient to emphasize that physicians need to approach patients not as 'cases' or 'diseases' but as individuals whose problems all too often transcend the complaints that bring them to the doctor. The famous statement of Dr. Francis Peabody is even more relevant today than when delivered more than a half century ago:

"One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient."<sup>55</sup>

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<sup>55</sup> Adapted from Harrison's 14<sup>th</sup> Edition CD

1. **Sound** scientific base is to have a **sol**\_\_\_\_\_ base. (Par 1)
2. ...it is difficult for the physician to **gain** rapport with the patient; that is to **obt**\_\_\_\_\_ *rapport*... (Par 2)
3. The ideal physician-patient relationship is based on **thorough** or **comp**\_\_\_\_\_ knowledge of the patient, on mutual **trust**; i.e. **conf**\_\_\_\_\_. (Par 2)
4. ...**regardless** of personal or financial circumstances or what is the same not **cons**\_\_\_\_\_ them. (Par 4)
5. Because diagnostic tests often do not provide important new information even when their results are **accurate**, that is **ex**\_\_\_\_\_ or **prec**\_\_\_\_\_. (Par 5)
6. ...how **likely** is the disease in question? I mean is it **prob**\_\_\_\_\_? (Par 5)
7. ...what would be the clinical consequences if the diagnosis were **missed**...? Not even misdiagnosed, simply **not diag**\_\_\_\_\_. (Par 5)

b) Now using the strategies for note-taking and organizing your material together with the linguistic devices discussed above reread the article and proceed as suggested below.

1. Why are italics used in Paragraph 3?
2. What expression is used in Paragraph 4 to express cause and effect? What is the cause here? What about the effect?
3. Is there any explanation in Paragraph 4? Which?
4. What is the function of moreover in Paragraph 5? Explain.
5. What words and phrases signal main points in Paragraph 5?
6. What is the function of *because* in that same paragraph?
7. Why are double quotations used in Paragraph 6?
8. What word is telling us that we have come to the end?

c) Work in groups and write a summary. Make use of the hints for writing you have learned so far.

**Task 5**

☛ The spotlight now moves to a particular form or variety of paper presentation, which has become a widely accepted and meaningful part of many meetings, because many people have come to believe that some types of materials can be presented more effectively in graphic outlines, than in the confines of a traditional 10 minutes oral presentation. **The poster**

- a) The word *poster* generally means *a bill or placard usually decorative or pictorial, for posting in a public place*. In the field of medical research, however, it gets a very special implication. Work in groups and discuss your preferences, then try to reach a general agreement on the advantages of this type of scientific presentation. Be ready to report your answers to the rest of the class.
- b) The words in the box below are all connected with the language to describe the organization of a poster. Work in pairs and use them to complete the summary provided in the text.

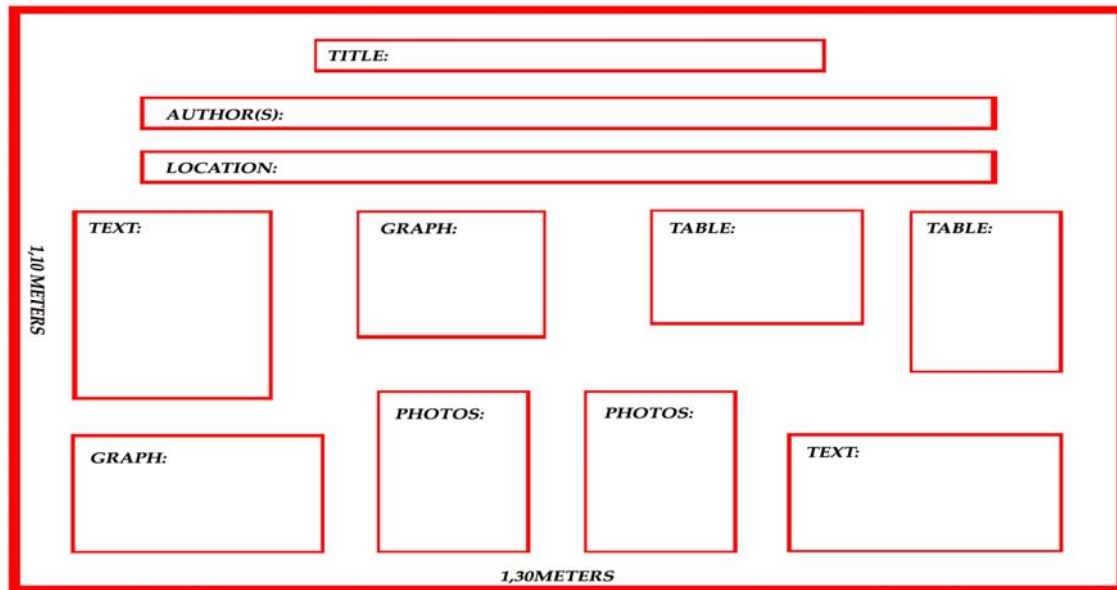
purpose - visible - section - introduction - results - brief - available - evaluation - conclusion - discussion - describe - methods - designed

The (1) \_\_\_\_\_ should present the problem succinctly; the poster may fail unless it has a clear statement of (2) \_\_\_\_\_ right at the beginning. Sometimes (3) \_\_\_\_\_ are included within the introduction. If you set this (4) \_\_\_\_\_ aside it will be very (5) \_\_\_\_\_ perhaps just a sentence or two will suffice to (6) \_\_\_\_\_ the type of methodology used. The (7) \_\_\_\_\_ which is often the shortest part of a written paper is usually the major part of a well (8) \_\_\_\_\_ poster. Most of the (9) \_\_\_\_\_ space should be used to illustrate results. The (10) \_\_\_\_\_ should be brief and some do not even use this heading, instead the heading (11) \_\_\_\_\_ appears in a very (12) \_\_\_\_\_ part in the form of numbered short sentences. Discussion is usually left for interested participants and for the (13) \_\_\_\_\_ committee.

- c) What is the format the organization of a poster usually follows?

☞ The following text is meant to be read and analyzed thoroughly. It provides useful guidelines on how to produce a poster

- The **size** of a poster is usually defined by the organizers of the meeting, most commonly 80 cm wide and one meter high or one meter wide and 120 cm high. There is a tendency, however, to present wider posters (150 cm wide) × (110 high to ease visualization and reading)
- The **title** should be short and attention grabbing. It should be readable out to a distance of at least four feet. Poster titles, using a font size of 60 point (30 mm high) will stand out and be easy to read. (bold and black typeface).
- The name of the **authors** and their location should be somewhat smaller.
- The minimum **type size** should be no less than 18 point, (4 or 5 mm high) and the **style** should be bold or semi-bold in simple, clean looking type (usually Arial). Studies show that a text written in all capital letters is hard to follow.
- Number your poster to agree with the program of the meeting
- Design the poster to cover the entire tack board surface.
- The number of words should not exceed 500.
- Lots of white space throughout the poster is essential. Tightly packed space tires the eye and the mind.
- Citations should be kept to a minimum.
- Posters should contain highlights so that passers by can easily discern whether it is something of interest to them.
- Preferred colors are black, blue and green.
- Make clear what is meant to be looked at first, second, etc. Generally from left to right, from top to bottom.

**Sample Layout for a medical poster****Task 6**

This final section is normally the last part of an academic text to be written. **The Abstract.**

An abstract is a type of summary of a paper or a presentation which you may be required to submit or to send in advance. After the title, it is the second most read part of a paper. Abstracts should be short, intelligible, informative, and interesting. And what's more important; it should stand alone.

**What should an abstract contain?**

**Why what was done was done?**

**What was done?**

**What was found?**

**What was concluded?**

**Useful hints for writing the abstract**

- Write the abstract as one paragraph
- Use the techniques of continuity to make the paragraph flow
- Use signals to indicate the parts of the abstract. Signal **what you found** by “**We found that...**” or something similar; **the answer** by “**We conclude that...**” or “**Thus...**” or something similar; **implications** by “**We suggest that...**”
- The **question** and **what was done** can usually be written in one sentence. “**To determine X, we...**” If not you may write “**We asked whether...To answer this question...**”
- Use appropriate verb tenses. **Present tense** for the **question** and the **answer**. **Past tense** to state **what was done** and **what was found**.
- Write short sentences. Avoid noun clusters.
- Use simple words. Avoid jargon. Avoid abbreviations
- The permissible length varies but **200** words is a good average target.
- An unstructured abstract contains a maximum of **150** words while **250** are suggested for fully structured formats.

**The abstract should contain short answers to the IMRAD questions.**

- a) The abstract below corresponds to the article presented in jigsaw bits in task 2b). Read it and with your partner answer the questions that an abstract should contain.

Paramedic practitioners have been trained with extended skills to assess, treat, and discharge older patients with minor acute conditions in the community. To evaluate the benefits of paramedic practitioners assessing and treating older people in the community after minor injury or illness we conducted a cluster randomised controlled trial involving 56 clusters. Weeks were randomised to the paramedic practitioner service being active (intervention) or inactive (control) when the standard 999 service was available. The participants were 3018 patients aged over 60 who called the emergency services. Patients in the intervention group were less likely to attend an emergency department or require hospital admission within 28 days. They were more likely to report being highly satisfied with their healthcare episode. There was no significant difference in 28 day mortality. We conclude that paramedics with extended skills can provide a clinically effective alternative to standard ambulance transfer and treatment in an emergency department for elderly patients with acute minor conditions.

☞ Presenting a paper at an academic meeting is a small but significant part of a doctor's work. Below are useful hints that will help you prepare and deliver your academic talks.

- Prepare it well in advance
- Identify the main points.
- Make the prose conversational
- Practice delivering the talk over and over again.
- Don't read all the time.
- Prepare cards for the salient points to use as prompts.
- Do not overcrowd your OHTs, or slides, or posters with too much information.
- Time yourself.
- Get your colleagues to give you constructive and critical feedback.
- Face the audience instead of looking at your OHTs, or slides, or notes all the time.
- Make eye contact with a variety of different people in the audience.

### ANATOMY OF A PRESENTATION

#### Greetings

- Good morning. Thank you, Mr. Chairman.../Mr.\_\_\_\_/Mrs.\_\_\_\_
- I'd like first of all to thank the organizers of this...

#### Opening remarks

- The title of my presentation is...
- I'd like to talk about...
- My topic today is...
- Today I'm going to tell you about...

#### The plan

- I have divided my talk into four...
- The first point I'm going to make concerns...
- My first point concerns...
- The first part of my talk is...
- My second point concerns...
- My third point is about...
- In the fourth part I deal with...
- Finally, I'd like to talk a little about...

**Opening the main section**

- Let me begin (start) by suggesting...
- (...) by drawing your attention to...
- I'd like to start (begin) by...
- Moving to a new point
- Let me now turn to...
- Moving on to the question of...
- If we now look at...
- Let's now look at the question of...
- Can we now turn to...?

**Elaborating a point**

- I'd like to look at this in a bit more detail.
- Let me elaborate on this point.
- Let's look at this problem in a bit more detail.

**Postponing**

- I'll be returning to this point later.
- I'll be coming back to...
- As I'll show later...
- Later I'll come back to...

**Referring back**

- Getting back to the question of...
- As I said earlier...
- As I mentioned earlier
- As we saw earlier...
- As you will remember...

**Highlighting**

- The interesting/ significant/ important thing about...is...
- The thing to remember is...
- What you have to remember is...

**Indicators**

- Ok..., right..., right then..., good..., now..., well..., well now...

**Summarizing**

- The main points that I have made are...
- In conclusion I'd like to say...
- Just before concluding I'd like to say...
- To sum up

***Glossary of research terms***

**Abstract:** Brief version or summary of an article, talk, thesis research paper, etc; it should give an outline of the main issues and conclusions.

**Action research:** Method of professional self-development which involves the systematic collection and analysis of data related to practice.

**Analysis:** (1) process by which research data are examined and conclusions drawn from them; (2) report on this process.

**Bibliography:** List of books, articles and other sources; list of references. (Note: a list of references includes only books, articles, etc, which are referred to in the text; a bibliography may include other sources which are relevant, but not directly referred to.)

**Case study:** An in-depth study of one particular student, teacher, class, school, etc.

**Control group:** In an *experiment*, the group which is not given any special treatment. See *experimental group*.

**Criterion:** Standard by which something or someone can be evaluated or judged.

**Data:** Observations or information (e.g. facts, measurements) which can be used for research or which are available as the results of research. See also *raw data*.

**Database:** An organized collection of *data* from which information can be quickly extracted.

**Data collection:** The process of gathering *data*.

**Discussant:** Someone who takes part in a discussion.

**Empirical data:** Factual information which is acquired through experience or observation (e.g. by doing carefully controlled experiments.)

**Empirical research:** Method of investigation in which factual information is acquired through experience or observation, usually by performing an *experiment*.

**Evaluation:** Process of assessing the worth or value of something.

**Experiment:** Investigation conducted under controlled circumstances, usually involving subjecting someone or something to some kind of treatment and measuring the results.

**Experimental group:** In an *experiment* the group which is subjected to some kind of special

treatment. See also *control group*.

**Findings:** What has been discovered as the result of research.

**Hypothesis:** Suggested explanation which may be later supported or disproved through (experimental) evidence.

**Inquiry:** Systematic investigation. Also spelled *enquiry*.

**Interview:** Conversation or meeting intended to gather certain information.

**Interview schedule:** List of questions prepared by someone who is conducting an *interview*.

**Journals:** Shared account of a person's actions, thoughts and feelings written by the person himself or herself, usually on a daily basis.

**Literature search:** The process of reading through academic books, journal articles, etc., to find information relevant to one's research topic.

**Matching group:** In an *experiment*, a group which is as far as possible identical to another group in one or more specified aspects. Groups may be matched for sex, age, qualifications, etc.

**Observation:** Process of watching or listening to professional action either while it is happening, or from a recorded sequence.

**Pilot:** Trial research done on a small scale in order to anticipate problems.

**Plagiarism:** Act of using someone else's ideas or writings without acknowledgement and passing them off as your own.

**Population:** A group of people that you want to find out about by doing your research. This is often larger than the number of people that you can actually investigate (the *sample*). See also *sample* and *target population*.

**Protocol:** Written record of everything that has been said or done when taking part in a research process.

**Qualitative research:** Type of investigation in which there is a substantial subjective element.

**Quantitative research:** Type of investigation which is intended to be objective, using only, or mostly, data that can be accurately measured or counted.

**Questionnaire:** Form on which there is a set of questions to be answered by a number of people

so that information about those people which is of interest to the researcher can be discovered. Questionnaires are usually answered in writing, but may also be used in an *interview*.

**Random sample:** Selection of people from a given population, chosen by chance.

**Rationale:** (1) the set of ideas which explain why a piece of research has been undertaken and why it has been done in a certain way, (2) part of a thesis, dissertation, etc., in which these underpinning ideas are explained.

**Raw data:** Factual information which has been collected but not yet organized or analyzed.

**Research:** Form of investigation in which *data* is collected and analyzed.

**Respondent:** Someone who replied to a research enquiry (e.g. by filling in a *questionnaire*.)

**Sample:** Group of people who are investigated because they are considered to be representative of a larger group (*population*) from which they are drawn. See also *population*, *random sample*; *stratified sample*.

**Significant:** With reference to research findings not caused simply by chance. Significance is usually expressed by means of a significance level, so for example, comparison of two scores may be "significant at the .05 level" (expressed as  $p < .05$ ).

**Stratified sampling:** Procedure that ensures that the group that is taken is representative of a larger group (population) because it reflects the composition of the larger group in certain specified ways. For example, it may have the same percentage of males and females as the target *population*.

**Survey:** Method of getting information on certain selected topic from a number of people (usually a large number and often chosen at random).

**Target population:** A specific group of people that you want to find out about, although you may be actually able to investigate only a small number (*sample*) of them.

**Variable:** Element in a research study that can vary or change (e.g. test scores, amount of time spent studying, etc). Sometimes a researcher will modify one variable to produce an effect on another variable. For example, a researcher might want to show that an increase in the amount of time studying a language caused an improvement in test scores for that language. The variable causing the change (study time) is called the *independent variable*; the variable that is affected by the change (test score) is called the *dependent variable*.

**Working title:** Title used for a research study, article, etc. until such time as an exact title is found, which may not be until a substantial amount of work has been done in the study, etc.

***Appendix 1******General Medical Terminology*****A. Most common names of specialties and subspecialties and specialists**

|                                |                              |
|--------------------------------|------------------------------|
| allergology                    | allergologist                |
| allopathic medicine            | allopathic physician         |
| anaesthetics                   | anaesthetist                 |
| andrology                      | andrologist                  |
| anaesthesiology                | anaesthesiologist            |
| angiology                      | angiologist                  |
| aviation medicine              | aviation medicine physician  |
| bacteriology                   | bacteriologist               |
| biochemistry                   | biochemist                   |
| cardiology                     | cardiologist                 |
| dentistry                      | dentist                      |
| dermatology                    | dermatologist                |
| dietetics                      | dietician                    |
| disaster medicine              | disaster physician           |
| embryology                     | embryologist                 |
| emergency medicine             | emergency physician          |
| endocrinology                  | endocrinologist              |
| epidemiology                   | epidemiologist               |
| gastroenterology               | gastroenterologist           |
| general comprehensive medicine | general practitioner         |
| general surgery                | general surgeon              |
| genetics                       | genetician                   |
| geriatrics                     | geriatrician                 |
| gerontology                    | gerontologist                |
| gynecology                     | gynecologist                 |
| haematology                    | haematologist                |
| hepatology                     | hepatologist                 |
| histology                      | histologist                  |
| immunology                     | immunologist                 |
| infectious disease             | infectious disease physician |
| intensive care medicine        | intensivist                  |
| internal medicine              | clinician                    |
| microbiology                   | microbiologist               |
| nephrology                     | nephrologist                 |
| neurology                      | neurologist                  |
| neurophysiology                | neurophysiologist            |
| neurosurgery                   | neurosurgeon                 |
| nuclear medicine               | nuclear medicine physician   |

|                                   |                                         |
|-----------------------------------|-----------------------------------------|
| obstetrics                        | obstetrician                            |
| oncology                          | oncologist                              |
| ophthalmology                     | ophthalmologist/eye doctor/ eye surgeon |
| oral and maxillofacial surgery    | oral and maxillofacial surgeon (oms)    |
| orthopedics                       | orthopedician                           |
| osteopathic medicine              | osteopathic physician                   |
| otorhinolaryngology <sup>56</sup> | otorhinolaryngologist                   |
| paleopathology                    | paleopathologist                        |
| parasitology                      | parasitologist                          |
| pathology                         | pathologist                             |
| pediatrics                        | pediatrician                            |
| pharmacology                      | pharmacologist                          |
| pharmacy                          | pharmacist                              |
| physics                           | physician                               |
| physiology                        | physiologist                            |
| pneumology                        | pneumologist                            |
| podiatry                          | podiatrist                              |
| proctology                        | proctologist                            |
| psychiatry                        | psychiatrist                            |
| psychology                        | psychologist                            |
| pulmonology                       | pulmonologist                           |
| radiology                         | radiologist                             |
| rehabilitation medicine           | rehabilitation physician                |
| rheumatology                      | rheumatologist                          |
| surgery                           | surgeon                                 |
| sports medicine                   | sports medicine physician               |
| transfusion medicine              | transfusion physician                   |
| urology                           | urologist                               |
| virology                          | virologist                              |

<sup>56</sup> ENT specialist; also (otology = for the study of diseases of the ear and otolaryngology = for the study of diseases of the ear and larynx).

**B. Layman's and medical language*****GLOSSARY OF MEDICAL DISORDERS AND SYMPTOMS***

This glossary lists some common symptoms and diseases. The words in the left column are the words a patient might use. The words in the right column are medical words. Where a word in one “language” has no common equivalent in the other, a short definition is provided. It should be noted that the medical words are very precise, whereas the lay words may not be. American and British spellings are shown.<sup>57</sup>

| LAYMAN'S LANGUAGE        | MEDICAL TERMINOLOGY          |
|--------------------------|------------------------------|
| ache                     | dull pain                    |
| afterbirth               | placenta                     |
| birthmark                | naevus (nevus)               |
| black motions            | melaena (melena)             |
| blackout                 | syncope                      |
| bleeding                 | haemorrhage (hemorrhage)     |
| blindness                | loss of vision               |
| blood in the urine       | haematuria (hematuria)       |
| blurring (of vision)     | loss of visual acuity        |
| bowel                    | intestine/gut                |
| breathlessness           | dyspnoea (dyspnea)           |
| bruise                   | contusion/ecchymosis         |
| burning on passing water | dysuria                      |
| buzzing in the ear       | tinnitus                     |
| change, the              | menopause, the               |
| chicken pox              | varicella                    |
| constipation             | hard infrequent stool        |
| cough                    | tussis                       |
| croup                    | acute laryngotracheitis      |
| deafness                 | loss of hearing              |
| difficulty in swallowing | dysphagia                    |
| discomfort               | mild pain                    |
| dizziness                | vertigo                      |
| double vision            | diplopia                     |
| drowsiness               | hypnaesthesia (hypnesthesia) |
| earache                  | otalgia                      |
| exhaustion               | extreme tiredness            |
| faint                    | syncope                      |
| fever                    | pyrexia                      |

<sup>57</sup> Maher, John Christopher. International Medical Communication in English. The University of Michigan Press. 1995.

|                    |                                        |
|--------------------|----------------------------------------|
| fit                | seizure/convulsion                     |
| flatulence         | excessive gas in the gut               |
| german measles     | rubella                                |
| graze              | abrasion                               |
| heartburn          | pyrosis                                |
| hiccup (hiccough)  | singultus                              |
| hoarseness         | dysphonia                              |
| indigestion        | dyspepsia                              |
| itching            | pruritus                               |
| jaundice           | icterus                                |
| loose motions      | diarrhoea (diarrhea)                   |
| loss of appetite   | anorexia                               |
| loss of memory     | amnesia                                |
| loss of vision     | blindness                              |
| lump               | mass/tumour                            |
| measles            | morbilli/rubeola                       |
| miscarriage        | spontaneous abortion                   |
| missed period      | amenorrhoea/amenorrhea                 |
| mole               | pigmented naevus (nevus)               |
| morning sickness   | hyperemesis gravidarum                 |
| motions            | faeces (feces)                         |
| mumps              | epidemic parotitis                     |
| numbness           | area of local anaesthesia (anesthesia) |
| painful            | tender                                 |
| palpitations       | arrhythmia, awareness of               |
| period             | menstruation                           |
| period pain        | dysmenorrhoea (dysmenorrhea)           |
| perspiration       | sweating                               |
| phlegm             | sputum                                 |
| piles              | haemorrhoids (hemorrhoids)             |
| pill, the          | oral contraceptive                     |
| pins & needles     | paraesthesiae (paresthesiae)           |
| rash               | skin eruption                          |
| retching           | attempt to vomit                       |
| ringing in the ear | tinnitus                               |
| shingles           | herpes zoster                          |
| sickness           | nausea                                 |
| sleeplessness      | insomnia                               |
| snoring            | stertor                                |
| sore (adj.)        | tender/painful                         |
| spots              | skin eruption                          |
| squint             | strabismus                             |
| stool              | faeces (feces)                         |
| sweating           | perspiration                           |

|                          |                              |
|--------------------------|------------------------------|
| swelling                 | tumor/oedema (edema)         |
| tenderness               | painfulness to touch         |
| tightness (of the chest) | pain of angina pectoris      |
| tingling                 | paraesthesiae (paresthesiae) |
| trembling                | tremor                       |
| wart                     | verruca                      |
| waterworks               | urinary tract                |
| weakness                 | debility/asthenia            |
| whooping cough           | pertussis                    |
| wind                     | flatulence                   |

### C. Major roots, prefixes and suffixes from which medical lexis is formed

| Root                   | Prefix                     | Suffix                      |
|------------------------|----------------------------|-----------------------------|
| bacter- = bacteria     | a/an- = without            | oscopy = examination        |
| bronch- = bronchus     | ante- = before             | itis = inflammation         |
| cardi- = heart         | anti- = against            | logy = study of             |
| cyst- = bladder        | bio- = life                | ectomy = excision of        |
| derm- = skin           | dia- = through             | al = adjectival             |
| entero- = small gut    | dys- = difficult           | aemia = (in the) blood      |
| gast- = stomach        | ex- = out of               | ac = adjectival             |
| gloss- = tongue        | extra- = outside           | ic = adjectival             |
| glyc- = sugar          | hypo- = below/insufficient | gram = mechanical recording |
| haemat- = blood        | hyper- = above             | ostomy = temporary or       |
| hepat- = liver         | non- = not                 | permanent                   |
| laryng- = larynx       | post- = behind/after       | otomy = opening to          |
| nephr- = kidney        | sub- = below               |                             |
| oesophag- = oesophagus | super- = above             |                             |
| osteo- = bone          | supra- = above             |                             |
| splen- = spleen        | trans- = through/across    |                             |
| tox- = poison          |                            |                             |
| thorac- = chest-wall   |                            |                             |
| trache- = wind-pipe    |                            |                             |

**Appendix 2****Getting information****A. Doctor - Patient questioning. History taking****Chief complaint**

What brings you to the clinic today?

What is your number one complaint?

What seems to be the trouble?

What is the main problem you wanted to see me about?

**History of the Presenting Illness**onset of the problem

When did it begin?

How long have you had it?

When did you first notice it?

Symptoms

Have you had ...

...loss of appetite/chest pain/palpitations or shortness of breath/ headache/ cloudy or confused vision/ ringing in the ears/ nose bleeding?

Have you been troubled with ...

...shortness of breath?

...headaches?

...sore throat?

Have you noticed ...

...that your vision is any worse lately?

...burning on urination?

...pressure or tightness in your chest?

...abdominal pain?

...nausea and vomiting?

...wheezing when you breathe?

Have you ....

...coughed up blood?

Are you having any/Tell me if you

...swelling of your ankles?

have ever experienced ...

...trouble with your vision?

...difficulty urinating?

...trouble walking?

...fainting/dizzy spells?

...pins and needle sensation?

|                                                            |                                                                                                                                                      |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Are you (or have you been) ...                             | ...short of breath?                                                                                                                                  |
| Does walking or climbing stairs ...                        | ...make you short of breath?                                                                                                                         |
| Have you been ...                                          | ...awakened from sleep with breathlessness or cough?                                                                                                 |
| Are you conscious of ...                                   | ...your heartbeat?                                                                                                                                   |
| Do you ...                                                 | ...elevate your head with a pillow in order to breathe easier at night/develop numbness around the lips and in the fingers when you breathe rapidly? |
| Do you notice yourself ...                                 | ...breathing rapidly at times?                                                                                                                       |
| <b><u>Medications</u></b>                                  |                                                                                                                                                      |
| Do you take/are you taking any ...                         | prescription medicines/ contraceptives?                                                                                                              |
| What is the dose and frequency?                            |                                                                                                                                                      |
| Have you taken any medication for this problem?            |                                                                                                                                                      |
| <b><u>Previous History</u></b>                             |                                                                                                                                                      |
| Have you ever ...                                          | ...had this problem before?                                                                                                                          |
|                                                            | ...been treated for something like this?                                                                                                             |
|                                                            | ... been hospitalized?                                                                                                                               |
|                                                            | ...had high blood pressure?                                                                                                                          |
|                                                            | ...had a heart trouble?                                                                                                                              |
|                                                            | ...had rheumatic or scarlet fever as a child?                                                                                                        |
|                                                            | ...had joint pain for which you were placed at bed rest?                                                                                             |
|                                                            | ...had a heart murmur?                                                                                                                               |
|                                                            | ...had angina pectoris or a heart attack?                                                                                                            |
|                                                            | ...undergone any procedures, X-rays, CAT scans, MRIs or other special testing?                                                                       |
| Have you fainted or nearly fainted?                        |                                                                                                                                                      |
| Has your face or ears flushed?                             |                                                                                                                                                      |
| Were you ever operated on, even as a child?                |                                                                                                                                                      |
| Did you ever have measles, mumps or chickenpox as a child? |                                                                                                                                                      |
| Have you experienced any adverse reactions to medications? |                                                                                                                                                      |

What year did this occur? Were there any complications?

Are you allergic to any medication?

**Family History**

Has anyone in your family ever suffered from diabetes, heart diseases?

Has any of your blood relatives had a heart attack/ ... high blood pressure/... diabetes/ ... high cholesterol in blood/ ... any other chronic disease?

Is there any history of hypertension in your family?

Has anyone in your family been sick recently?

**Social History**

Do you live alone?

Are you married?

How old did you say you were?

Are you having a difficult situation at home or work?

Do you practice sports or ever get any kind of physical activity?

Have you always been this heavy?

Any problems at work?

What sort of work do you do?

Have you always done the same thing?

If retired, what do you do to stay busy?

**Habits**

Do you smoke or drink?

How long have you been drinking?

How much do you usually drink?

Have you ever smoked cigarettes? How many packs / cigarettes per day and for how many years?

If you quit, when did this occur?

Do you drink alcohol? How much per day and what type of drink?

How much alcohol do you consume over a week or month?

Do you drink coffee / tea?; How many cups a day do you drink?

Do you usually eat fatty or salty food?

### A.1. History Taking: Pain

More specific questions may be needed in some cases. A few examples are given below.

|                      |                                                                                                                                                                                                                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Site</b>          | Where is it?<br>Where exactly is your pain?<br>Can you please, show me where the pain is?                                                                                                                                                                                                               |
| <b>Time of onset</b> | When did the pain begin?<br>When did you first notice this?<br>What were you doing when you had the pain?<br>How long ago did it start?                                                                                                                                                                 |
| <b>Type of onset</b> | Did it start suddenly or come on gradually?                                                                                                                                                                                                                                                             |
| <b>Duration</b>      | How long has this been going on?<br>How long does the pain last?<br>How long have you had it?                                                                                                                                                                                                           |
| <b>Radiation</b>     | Does the pain move?<br>Does the pain go anywhere else?<br>Does it stay in one place or does it move?<br>Where does it go/move?                                                                                                                                                                          |
| <b>Frequency</b>     | How often do you get the pain?<br>How often do you have it?                                                                                                                                                                                                                                             |
| <b>Character</b>     | What's the pain like?<br>Can you describe your pain?<br>What kind of pain is it?<br>Is the pain on and off?<br>Is it a nagging pain?<br>Is it stabbing/ piercing/ knife-like/oppressive/burning/<br>throbbing/ cramping/?<br>Is it localized? /diffuse?<br>Does it come and go?<br>Is it dull or sharp? |
| <b>Severity</b>      | How bad is the pain?<br>Is the pain mild/ bad/ severe/ terrible /awful/ agonizing/<br>excruciating?<br>When you get the pain, do you have to stop what you are<br>doing?                                                                                                                                |
| <b>Progress</b>      | Has the pain changed in any way?<br>Is it getting better or worse?                                                                                                                                                                                                                                      |

|                              |                                                                                                                                                                   |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Times of occurrence</b>   | When do you get the pain?<br>Do you get it at any special times?<br>Does it come on before or after meals?                                                        |
| <b>Precipitating factors</b> | Have you noticed anything that brings it on?<br>What brings it on?<br>Does it come on... before or after meals? /when you walk uphill? /when you eat fatty foods? |
| <b>Aggravating factors</b>   | What makes it worse? Is there anything that makes the pain worse?                                                                                                 |
| <b>Relieving factors</b>     | Does... lying down/sitting up/ drinking milk... relieve it?<br>Is there anything that makes the pain better?                                                      |
| <b>Accompanying symptoms</b> | Any other aches and pains?<br>Do you also (vomit)?<br>Are there any other problems?                                                                               |

## A.2. More general questions

### Yes / No Questions

#### a) With **Be** forms

- Is the discomfort persistent?
- Are you sure about that?
- Were you present when the accident happened?

#### b) With auxiliaries

- Do you feel drowsy?
- Did she throw up?
- Have you taken the pills?

#### c) With modal verbs

- Should we talk about that?
- Can you tell me what really happened?
- Could I ask you a couple of questions?

### Wh- Questions (How...? questions are included in this category)

- What is your main concern?
- Why is that?
- How is she now?

### Indirect Questions

- Can you tell me why you think so?
- Do you know how to take this medication?
- Could I ask you when the pain started?

**B. Review of Systems****EXAMINING THE CHILD. QUESTIONING THE PARENT**

- Does he sleep at the normal time?
- Is he active, like other children?
- Does he have a good appetite? / Does he eat at the usual times?
- When did his first tooth appear?
- Does he pass wind as normal?
- Does he ever get diarrhea?
- Does he have any rashes?
- Does he ever bring up his food?
- Has he ever had a fever?
- Does he cough a lot?
- Are you breastfeeding?
- How often do you feed him?
- Do you give him liquids?

**OTORHINOLARYNGOLOGY EXAMINATION**

- Do you ever have nose bleeds?
- Is there any bad smell from your nose?
- Does your nose run a lot?
- How long has your voice been hoarse?
- Do you have a sore throat?
- Do you have bad breath?
- Do you often have a fever?
- Do you feel any pain inside your ears?
- Is there any discharge from your ears?
- Are you having any difficulty with your hearing?
- Does it hurt when you swallow?

**RESPIRATORY EXAMINATION**

- Do you cough a lot?
- Do you ever get short of breath?
- What brings on your cough?

Do you ever bring something up? / Is it thick or light?  
What color is the stuff you bring up?  
Do you have any chest pains after exercise?  
Any pains in your chest when you cough?  
Do you wheeze?  
How is your appetite?  
Do you sweat at night?  
Do you cough when you smell certain foods or other smells?

### **CARDIOVASCULAR EXAMINATION**

Do your legs swell?  
Do you get tired easily?  
Do you get out of breath easily?  
Do you have palpitations?  
Do you get any pains in the chest?  
Do you cough much?  
What brings on your cough?  
Do you feel giddy?  
How about sore throats?  
Do you get headaches?  
Are you nervous or anxious about anything?

### **OBSTETRIC AND GYNECOLOGICAL EXAMINATION**

When was your last period? / Was it heavy? / Was it painful?  
How long did it last?  
When did your periods start?  
Are your periods regular?  
How many children have you had? / How old is your last child?  
Have you had any miscarriages?  
Do you have any vaginal discharge?  
How long have you had this discharge?  
What's the color of this discharge?  
Does it have a bad smell?  
Do you feel any pain while passing urine?

Is sexual intercourse painful?

Do you feel any vaginal pain or discomfort?

### **OPHTHALMOLOGICAL EXAMINATION**

Do your eyes get tired easily?

Do your eyes get red easily?

Do you ever see double (distorted) images in front of your eyes?

Do you ever see unusual shapes before your eyes?

Do you have headaches when you are reading?

Do your eyes itch?

Do your eyes water?

Do they water when you are reading?

Do you find that you are losing your eyelashes?

Are you long/short-sighted?/ How long have you had this problem?

Do you have any discharge from your eyes?

Do the lashes come away in this discharge, especially in the morning?

Do your eyeballs feel painful?

Have you had any diseases in the family...like diabetes or high blood pressure?

### **NEUROLOGICAL EXAMINATION**

Do you get headaches?

Do you ever have dizzy spells?

Have you ever fainted?

Have you ever blacked out?

Do you see spots in front of your eyes?

Have you ever had a head injury?

Are you a heavy drinker?

### **GENITOURINARY EXAMINATION**

Have you noticed blood in your urine?

Does it burn when you urinate?

Does it strain when you urinate?

Do you ever wet the bed?

How many times do you go during the night?

Do you often get diarrhea, constipation?

I'd like a sample of your urine.

Does your urine dribble?

### **MUSCULOSKELETAL EXAMINATION**

Does it hurt when I bend your knee?

Do you have any difficulty moving your arms or legs?

Have you had any falls?

Do you feel any weakness in your limbs?

Can you tell me exactly how you turned your foot?

Can you bend over and touch your toes?

Can I just have you walk to the door and back?

Does the knee feel tender here?

Do your muscles feel stiff in the morning?

Have you noticed any twitching of your muscles?

### **PSYCHIATRIC INTERVIEW**

How do you get on with other people?

Do you find you can trust people?

Do you sometimes feel picked upon?

Do you think people like you generally?

Are you self-conscious?

Do you ever find that your thoughts stop dead and leave your mind a complete blank?

Do you ever feel completely possessed by another person?

Do you ever feel controlled from outside like a puppet or robot?

Is your mood stable, or does it change greatly from day to day?

Would you describe yourself as a happy and content person?

Do people think of you as a happy-go-lucky person, the life-and-soul of the party, or perhaps rather gloomy and unhappy?

Do you have many friends?

Would you describe yourself as shy?

Do you ever get into a furious rage?

Have you ever hurt anyone?

Do you often lose your temper?

- Do you always follow a set routine?
- Do you prefer things to be neat and tidy?
- Do you ever tend to check things more than once or twice?
- Are you sometimes overly emotional?
- Do you like to be the center of attention?
- Do you tend to rely on other people a great deal?
- Have you usually got lots of energy?
- Do you find it difficult to cope with the demands of everyday life?
- Have you ever been in trouble with the police?
- Do you dislike being told what to do?
- Do you sometimes feel like hurting people?

### C. Doctor - Doctor Interaction

#### Questions

You say you have a new case? / Do you have any cases you would like to present / discuss? / Is there any new case you would like to discuss?

#### Answer clues

- Yes, a 52 year old white female unmarried school teacher who was apparently in good health until about ... days ago when she began to complain of ...
- A housewife of 36 was brought to the ED due to/ because of... over a period of ...
- A woman lawyer presented with ... of ... months' duration.
- This patient is a 62 year old second hand dealer who was referred with a history of ... which had started ...<sup>58</sup>

Tell me what you know about the case

- On direct questioning I found / s/he reported ... / admitted having ... / said s/he had had ... / On further questioning ... was found.

<sup>58</sup> Notice that opening statements typically include: **Identifying data** (age) year old ... (race: white / black / colored) ... (sex: female / male) ... marital status: married / unmarried / single / widow / widower / divorced) ... (nationality) ... (occupation) if all, followed by **chief complaint**.

- As a child he had had ...and for the last ... years s/he had been on (previous treatment)
- The only history of note is a ...
- There is no history of ...
- She had had / had never had ...before.
- Over the past three days ...s/he has had ...
- The only previous illness was ...
- About ... years ago, s/he... was treated for ...
- Her / His father is / was a ...
- An aunt suffers from ... but there is no family history of ...
- Both his / her parents are ...
- Other family members were also diagnosed as having ...
- S/he has never taken any physical exercise.
- S/he admits to drinking about ... bottles of ... weekly. S/he smokes ... cigarettes daily.

Was there any precipitating factor in the ... a/an ... for example?

Well, s/he had a very bad cold about ...

What did you find on the physical? / Were there any significant physical findings?

- Yes, to start with Mr. / Mrs. is / was quite ... (obese)
- At the time of admission, s/he was / looked / seemed to be very (pale / clammy / anxious / relaxed...)
- BP was ... mmHg. ...
- Pulse was ... bpm.
- Temperature was ... degrees.
- RR was ... breaths per minute.
- On examination, ... is ... tall and weighs ...

- (Review of systems)  
e.g. Neurologic exam reveals...  
His abdomen was soft and ... Examination of the chest showed evidence of .../ There were ( no abnormal signs of...) / There was no evidence of ...
- The remainder of the exam is unremarkable.

How about lab reports? / Have any of the lab studies come back? / What laboratory studies or diagnostic procedures would you perform on this patient? / What lab studies did you send this patient for? / What were the results of the lab tests you performed?

- Routine laboratory studies confirmed normal ... and ... function and a ... of ... mg/dl. There were no abnormalities on .... (ECG) demonstrates .... His / her chest X-ray reveals... (ESR) was elevated at ... (Endoscopy) showed ... / Well, (blood) should be tested for a possible... (Helicobacter Pylori) I expect to find...

In case lab results are still pending. What do / would you expect the ... to show?

- The ... may reveal ...

What is your treatment plan for this patient? / What kind of medication do you use to treat...? / What antibiotic is helpful in this condition?

- I'm going to treat him / her initially with..., then, I would start him / her on ... The drug was changed to...

What if it doesn't work?

- Well, I would add a second drug like...

What do you think he / she has / had? / What's your impression about this case?

- Well, I believe s/he has / had ... / It sounds like s/he / has .../ It could be .../ The history of ... points to .../

The history of this patient provides

evidence of ... / strongly suggests .../  
A likely / provisional / tentative / working  
diagnosis is ...

What conditions would you think of/ consider in ruling out a /an ...? What conditions would you consider in a differential diagnosis?

▪ I feel that the most likely diagnosis is...The other possibility is... / Other possibilities are...

I would also consider... /

A variety of illnesses may mimic .../

The most common conditions are ...

What complications will you be looking for during the recovery period?

▪ I will look for ... / s/he may develop...

What about prognosis?

▪ Prognosis largely depends on factors like (stage at which the disease is detected, age, patient's compliance, possible complications s/he may develop.../  
Prognosis may be: good/ guarded / poor...

**Appendix 3****Drugs and Medications****A. Drug classes**

|                              |                                                                                                                                    |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Antiparasitics</b>        | mebendazole/metronidazole/pyrantelpamoate/levamisole/<br>piperazine/tinidazole/praziquantel/quinacrine/thiabendazol/<br>albendazol |
| <b>Antiarrhythmics</b>       | Amiodarone                                                                                                                         |
| <b>Antifungal</b>            | clobetazole/miconazole/terconazole/ketoconazole/<br>clotrimazole/nystatin/amphotericin b/tolnaftate                                |
| <b>Beta blockers</b>         | atenolol/propranolol/metoprolol                                                                                                    |
| <b>Antiemetics</b>           | chlorpromazine/metoclopramide/cyclizine/triflupromazine/<br>ondansetron/dimenhydrinate                                             |
| <b>Anticoagulants</b>        | heparin/warfarin                                                                                                                   |
| <b>Antiulcerous</b>          | H <sub>2</sub> blockers- cimetidine/ranitidine/famotidine<br>proton pump inhibitors- ome/lanzo/pantoprazol                         |
| <b>Antacids</b>              | aluminium hydroxide/magnesium hydroxide/<br>magnesium trisilicate/sodium bicarbonate                                               |
| <b>ACE inhibitors</b>        | captopril/ramipril/lisinopril/enalapril                                                                                            |
| <b>Vasodilators</b>          | hydralazine/nifedipine/verapamil                                                                                                   |
| <b>Iron supplements</b>      | interferon dextran/ferrous sulphate/ferrous gluconate/<br>ferrous fumarate                                                         |
| <b>Antihypertensives</b>     | methyldopa/reserpine/chlorothiazide/atenolol/enalapril/<br>captopril/nifedipine/hydrochlorothiazide/hydralazine/<br>propranolol    |
| <b>Nasal decongestants</b>   | naphazoline/phenylephrine/oximetazoline/ephedrine                                                                                  |
| <b>Antidepressants</b>       | imipramine/amitriptylline                                                                                                          |
| <b>Antianxiety drugs</b>     | diazepam /chlorodiazepoxide                                                                                                        |
| <b>Antidiarrheal</b>         | furodone/kaolin/loperamide                                                                                                         |
| <b>Water-soluble vitamin</b> | vitamin C, B <sub>1</sub> , 2, 6, 12                                                                                               |

|                             |                                                                                          |
|-----------------------------|------------------------------------------------------------------------------------------|
| <b>Fat-soluble vitamins</b> | A,D,E,K                                                                                  |
| <b>Diuretics</b>            | hydrochlorothiazide/spironolactone/furosemide/mannitol                                   |
| <b>Digitalis</b>            | digoxin/digitoxin                                                                        |
| <b>Opiates</b>              | morphine/codeine/meperidine/papaverine/noscapine                                         |
| <b>Bronchodilators</b>      | aminophylline/epinephrine/theophylline/albuterol/<br>salbutamol/isoproterenol/salmeterol |
| <b>Antispasmodics</b>       | Papaverine                                                                               |
| <b>Antiparkinsonian</b>     | amantadin/levodopa                                                                       |
| <b>Nitrates</b>             | nitroglycerin/isosorbide                                                                 |
| <b>Antimalarial</b>         | fansidar/chloroquine/primaquine /quinine                                                 |
| <b>Minerals</b>             | calcium,/phosphorus/magnesium/iron/zinc.iodine                                           |
| <b>Hormones</b>             | estrogen/testosterone                                                                    |
| <b>Anticonvulsants</b>      | carbamazepine/fenytoin/phenobarbital                                                     |
| <b>Thrombolytics</b>        | streptokinase/urokinase                                                                  |

## B. Values and measurements

|                         |                               |                 |                                       |
|-------------------------|-------------------------------|-----------------|---------------------------------------|
| bw                      | body weight                   | ml              | milliliter                            |
| cc                      | cubic centimeters             | mm              | millimeter                            |
| cells / mm <sup>3</sup> | cells per cubic millimeter    | mm <sup>3</sup> | cubic millimeter                      |
| cm                      | centimeter                    | mmol/l          | millimoles per litre                  |
| cm <sup>3</sup>         | cubic centimeter              | mol             | moles                                 |
| g                       | grams                         | ng              | nanograms                             |
| g/dl                    | grams per deciliter           | ng/ l           | nanograms per liter                   |
| IU                      | international units           | µg              | micrograms                            |
| IU/l                    | International Units per litre | µg/ l           | micrograms per liter                  |
| Kg                      | kilograms                     | µmol            | micromoles                            |
| l                       | liter                         | µmol/ l         | micromoles per liter                  |
| m                       | meter                         | 20-30 mg/l      | twenty to thirty milligrams per litre |
| mEq                     | milliequivalent               | 10-20 µmol/l    | ten to twenty micromoles per litre    |
| mg                      | milligrams                    | < 10 µg/l       | less than ten micrograms per litre    |
| mg/m <sup>2</sup>       | milligrams per squared meter  | v               | volume                                |

**B. 1. Numbers & figures**

|                  |                                                                  |
|------------------|------------------------------------------------------------------|
| 2,258            | = two thousand, two hundred and fifty eight                      |
| 2,027            | = two thousand and twenty seven                                  |
| 2.7              | = two point seven                                                |
| 2.37             | = two point three seven                                          |
| 27.27            | = twenty seven point two seven                                   |
| 0.12             | = oh point one two; zero point one two                           |
| $\frac{1}{2}$    | = a half                                                         |
| $\frac{1}{3}$    | = a third                                                        |
| $\frac{1}{4}$    | = a quarter                                                      |
| $\frac{3}{4}$    | = three quarters                                                 |
| $1\frac{1}{2}$   | = one and a half                                                 |
| $\frac{2}{3}$    | = two thirds                                                     |
| $16^2$           | = sixteen squared                                                |
| $11^3$           | = eleven cubed                                                   |
| $10^9$           | = ten to the ninth; ten to the power of nine                     |
| $\sqrt{64}$      | = the square root of 64                                          |
| 15~20            | = fifteen to twenty                                              |
| 10:1             | = ten to one                                                     |
| <0.05            | = less than oh point oh seven                                    |
| > 3              | = greater than three; more than three                            |
| =                | = equals; is equal to                                            |
| +                | = plus                                                           |
| -                | = minus                                                          |
| x                | = multiplied by                                                  |
| ÷                | = divided by                                                     |
| $60 \div 5 = 12$ | = sixty divided by five equals twelve; five into sixty is twelve |
| $4.5 - 8.6$      | = four point five to eight point six                             |
| $4.5 \times 10$  | = four point five times ten                                      |
| 3.2 %            | = three point two percent                                        |

**C. Routes of administration and corresponding abbreviations** <sup>59</sup>

|                             |                                                                            |                                                                                             |
|-----------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>External or Topical</b>  | Involves the skin and the mucous except the mucous of the digestive tract. | By the nostrils, the urethra, the vagina, the eye conjunctiva, the ears and the oropharynx. |
| <b>Internal or Systemic</b> | Enteral                                                                    | By mouth - (orally), - sublingual, - rectal                                                 |
|                             | Parenteral                                                                 | Intradermal, subcutaneous, intramuscular, intravenous, intra-arterial and intrathecal       |
|                             | Inhalatory                                                                 | Inhaled anaesthetics/steroids, sprays for asthma                                            |
| <b>Percutaneous</b>         | Through the skin                                                           | They act in other parts of the body through the unbroken skin                               |

Some abbreviations for this classification are:

|               |       |
|---------------|-------|
| Oral          | - P.O |
| Intramuscular | - IM  |
| Intravenous   | - IV  |
| Rectal        | - PR  |
| Subcutaneous  | - SC  |

<sup>59</sup> Moron – Levi. *Farmacología General. Edición Cubana. Capítulo III: Vías de Administración de los Medicamentos y sus Formas Farmacéuticas*; 2002. p. 22

**Frequency and dosage**

**every 24 hours (od/ q 24 h)**

every day / once a day / 24 hourly / once daily

**every 12 hours (b.i.d / q 12 h)**

twice a day / two times a day/ twice daily/ 12 hourly

**every eight hours (t.i.d./ q 8 h)**

three times a day / three times daily / 8 hourly

**every four hours (q.i.d. / q 4 h)**

four times a day/ four times daily/ 6 hourly

**Dose Division**

as a single dose

in 2 divided doses

in divided doses

in 4 divided doses

**Day Periods**

at bed time / before bed time / at lunch time / at dinner time

before meals/ after meals / at breakfast time/ before breakfast/ between meals

at 4 o'clock / at 6 a.m. / at 4 p.m.

## Appendix 4 *language hints for investigations and diagnostic procedures*

|                 |                            |              |
|-----------------|----------------------------|--------------|
| Barium enema    |                            | confirm...   |
| Abdominal X-ray | can/cannot/<br>may/may not | detect...    |
| Ct Scan         |                            | rule out ... |

- Barium enema **can exclude** other intestinal problems that mimic appendicitis.
- An abdominal X-ray **may detect** the fecalith.
- A CT scan **can rule out** the presence of a mass lesion.

The purpose of this test is

**to determine** the red blood cell mass (hematocrit)  
**to measure** the concentration of total calcium in the blood.  
 (calcium)  
**to obtain** valuable information on the condition of the heart,  
 lung, gastrointestinal tract, and thyroid gland. (Chest X-ray)  
**to detect** any disorder of glucose metabolism, mainly diabetes.  
 (Fasting Blood Sugar)  
**to diagnose** and monitor treatment of acute pancreatitis and  
 (amylase)  
**to differentiate** pancreatitis from an acute surgical abdominal  
 emergency. (lipase)  
**to discover** cancers that escape detection by all other means.  
 (Mammography)

|      |                   |    |      |                                |      |             |
|------|-------------------|----|------|--------------------------------|------|-------------|
|      | urinalysis        |    |      | microscopic examination        |      | detects...  |
| A/An | ultrasound        | is | a/an | painless procedure             | that | uses...     |
|      | electrocardiogram |    |      | simple, non-invasive procedure |      | measures... |

- A urinalysis is a microscopic examination that detects red blood cells, white blood cells, and bacteria in the urine.
- An ultrasound is a painless procedure that uses sound waves to identify organs within the body.
- An electrocardiogram is a simple, non-invasive procedure that measures electrical activity all around the heart.

|                        |             |        |                                         |
|------------------------|-------------|--------|-----------------------------------------|
|                        |             |        |                                         |
| An abnormal urinalysis | may suggest | (that) | (there is)* a kidney or bladder problem |
|                        | suggest/s   |        |                                         |
|                        | points to   |        |                                         |

\* the words in parentheses can be omitted

| Lab tests & diagnostic procedures            | Formulaic language                    |                                                 |                                                                                                                              | Examples                                                                                      |
|----------------------------------------------|---------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Obstetric Ultrasound</b>                  | is ...are/<br>may be /<br>should be / | used...<br>indicated...<br>performed...<br>done | to detect /<br>to confirm/<br>to<br>determine/<br>to ascertain/<br>to localize/<br>to follow/<br>to evaluate/<br>to identify | Obstetric ultrasound <b>is used to confirm</b> pregnancy.                                     |
|                                              |                                       |                                                 |                                                                                                                              | ... <b>is performed to determine</b> fetal age.                                               |
|                                              |                                       |                                                 |                                                                                                                              | ... <b>is indicated to ascertain</b> whether fetal development is normal.                     |
|                                              |                                       |                                                 |                                                                                                                              |                                                                                               |
| <b>Hemoglobin</b>                            |                                       |                                                 |                                                                                                                              | Hemoglobin is <b>performed to follow</b> the response to treatment for anaemia.               |
|                                              |                                       |                                                 |                                                                                                                              | ...is <b>indicated to evaluate</b> polycythemia                                               |
| <b>Blood, breath and stomach tissue test</b> |                                       |                                                 |                                                                                                                              | Blood breath and stomach tissue test <b>is performed to detect</b> the presence of H. Pylori. |
| <b>Endoscopy</b>                             |                                       |                                                 |                                                                                                                              | Endoscopy <b>is performed to visualize</b>                                                    |

|                                                            |  |  |  |                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Culture techniques</b></p> <p><b>Chest X-ray</b></p> |  |  |  | <p>the entire upper GI tract.</p> <p>Culture techniques <b>are used to detect and identify</b> infectious processes.</p> <p>Chest X-ray should be done after the insertion of chest tubes and subclavian catheters to determine the position of these devices and possible pneumothorax.</p> |
|------------------------------------------------------------|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Other useful expressions

An elevated white blood cell count alone **cannot be used** as a sign of appendicitis.

A **CT scan is useful in the diagnosis** of appendicitis and periappendiceal abscesses.

**Laparoscopy allows a direct view** of the appendix as well as other abdominal and pelvic organs.

**Chest radiography is very important in the diagnosis of** cancer, tuberculosis, and other lung diseases.

**Bilirubin is an aid in** the diagnosis of hepatitis and liver dysfunction/ is helpful in monitoring the course of treatment.

**Pap Smear (Papanicolau Smear) is used principally for the** diagnosis of precancerous and cancerous conditions of the genital tract.

**Appendix 5****Medical abbreviations & symbols**

|                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| <i>a.c.</i>             | <i>before meals</i>                                                  |
| <i>ACE(I)</i>           | <i>Angiotensin-Converting Enzyme(Inhibitor)</i>                      |
| <i>a.m.</i>             | <i>morning</i>                                                       |
| <i>AMI</i>              | <i>acute myocardial infarction</i>                                   |
| <i>AB</i>               | <i>apex beat</i>                                                     |
| <i>abdoms (M)(t)(o)</i> | <i>abdomen without masses, tenderness, organomegaly (US)</i>         |
| <i>ABG</i>              | <i>arterial blood gas</i>                                            |
| <i>Abd/abdo/abdom.</i>  | <i>abdomen</i>                                                       |
| <i>AF</i>               | <i>atrial fibrillation</i>                                           |
| <i>AMA</i>              | <i>American Medical Association</i>                                  |
| <i>AMI</i>              | <i>acute myocardial infarction</i>                                   |
| <i>AP</i>               | <i>antero-posterior</i>                                              |
| <i>APH</i>              | <i>antepartum haemorrhage</i>                                        |
| <i>ARB</i>              | <i>aldosterone receptor blocker, angiotensin receptor blocker(s)</i> |
| <i>ARM</i>              | <i>artificial rupture of membranes</i>                               |
| <i>AS</i>               | <i>alimentary system</i>                                             |
| <i>ASAP</i>             | <i>as soon as possible</i>                                           |
| <i>b.d./b.i.d</i>       | <i>twice a day</i>                                                   |
| <i>BB</i>               | <i>bed bath; blanket bath</i>                                        |
| <i>BC</i>               | <i>breast cancer</i>                                                 |
| <i>BF</i>               | <i>breast fed</i>                                                    |
| <i>BID</i>              | <i>brought in dead</i>                                               |
| <i>BM</i>               | <i>bowel movement; breath sounds; bone marrow</i>                    |
| <i>BMA</i>              | <i>British Medical Association</i>                                   |
| <i>BNO</i>              | <i>bowels not open</i>                                               |
| <i>BO</i>               | <i>bowels open</i>                                                   |
| <i>BP</i>               | <i>blood pressure</i>                                                |
| <i>BS</i>               | <i>breath sounds</i>                                                 |
| <i>BSE</i>              | <i>breast self examination</i>                                       |
| <i>BUN</i>              | <i>blood urea nitrogen (US)</i>                                      |

|                  |                                                                     |
|------------------|---------------------------------------------------------------------|
| <i>BWt</i>       | <i>birth weight</i>                                                 |
| <i>BW</i>        | <i>body weight</i>                                                  |
| <i>Bx</i>        | <i>biopsy</i>                                                       |
| <i>̄</i>         | <i>with</i>                                                         |
| <i>CA</i>        | <i>cancer, carcinoma</i>                                            |
| <i>CABG</i>      | <i>coronary artery bypass graft</i>                                 |
| <i>CAD</i>       | <i>coronary artery disease</i>                                      |
| <i>CAT</i>       | <i>coaxial or computerized axial tomography</i>                     |
| <i>CBC</i>       | <i>complete blood count (US)</i>                                    |
| <i>CBE</i>       | <i>clinical breast examination</i>                                  |
| <i>CC</i>        | <i>chief complaint</i>                                              |
| <i>CCF</i>       | <i>congestive cardiac failure (UK)</i>                              |
| <i>CCU</i>       | <i>cardiac care unit, clean catch urine</i>                         |
| <i>CHF</i>       | <i>chronic heart failure; congestive heart failure (US)</i>         |
| <i>CNS</i>       | <i>central nervous system</i>                                       |
| <i>CO</i>        | <i>casualty officer (UK)</i>                                        |
| <i>c/o</i>       | <i>complaining of</i>                                               |
| <i>COPD</i>      | <i>chronic obstructive pulmonary disease</i>                        |
| <i>C-section</i> | <i>cesarean section (US)</i>                                        |
| <i>CSF</i>       | <i>cerebrospinal fluid</i>                                          |
| <i>CT</i>        | <i>cerebral tumor; coronary thrombosis, computerized tomography</i> |
| <i>CV</i>        | <i>cardiovascular</i>                                               |
| <i>CVA</i>       | <i>cardiovascular accident; cerebrovascular accident</i>            |
| <i>CVD</i>       | <i>cardiovascular disease, cerebrovascular disease</i>              |
| <i>CVP</i>       | <i>central venous pressure</i>                                      |
| <i>CVS</i>       | <i>cardiovascular system; cerebrovascular system</i>                |
| <i>Cx</i>        | <i>cervix</i>                                                       |
| <i>D</i>         | <i>divorced</i>                                                     |
| <i>D &amp; C</i> | <i>dilatation and curettage</i>                                     |
| <i>D &amp; V</i> | <i>diarrhoea and vomiting</i>                                       |
| <i>DD</i>        | <i>dangerous drugs</i>                                              |
| <i>DDx</i>       | <i>differential diagnosis</i>                                       |

|                     |                                       |
|---------------------|---------------------------------------|
| <i>decub.</i>       | <i>lying down</i>                     |
| <i>dl</i>           | <i>decilitre</i>                      |
| <i>DU</i>           | <i>duodenal ulcer</i>                 |
| $\Delta$ /Dx        | <i>diagnosis</i>                      |
| <i>ECG/EKG (US)</i> | <i>electrocardiogram</i>              |
| <i>EEG</i>          | <i>electroencephalogram</i>           |
| <i>ENT</i>          | <i>ear, nose and throat</i>           |
| <i>ESR</i>          | <i>erythrocyte sedimentation rate</i> |
| <i>EUA</i>          | <i>examination under anesthesia</i>   |
| <i>Ex</i>           | <i>examination</i>                    |
| <i>F</i>            | <i>female</i>                         |
| <i>FB</i>           | <i>foreign body</i>                   |
| <i>FBC</i>          | <i>full blood count (UK)</i>          |
| <i>FBS</i>          | <i>fasting blood sugar</i>            |
| <i>FH</i>           | <i>family history, foetal heart</i>   |
| <i>FTND</i>         | <i>full term normal delivery</i>      |
| <i>FTP</i>          | <i>full term pregnancy</i>            |
| <i>g</i>            | <i>gram</i>                           |
| <i>GA</i>           | <i>general anaesthetic</i>            |
| <i>GB</i>           | <i>gall bladder</i>                   |
| <i>GC</i>           | <i>general condition</i>              |
| <i>GI</i>           | <i>gastrointestinal</i>               |
| <i>GIS</i>          | <i>gastro-intestinal system</i>       |
| <i>GP</i>           | <i>General Practitioner (UK)</i>      |
| <i>GTT</i>          | <i>glucose tolerance test</i>         |
| <i>GU</i>           | <i>gastric ulcer, genito-urinary</i>  |
| <i>GUS</i>          | <i>genito-urinary system</i>          |
| <i>HA</i>           | <i>heart attack</i>                   |
| <i>Hb/Hgb</i>       | <i>haemoglobin</i>                    |
| <i>HBP</i>          | <i>high blood pressure</i>            |
| <i>Hct</i>          | <i>haematocrit</i>                    |
| <i>HIV</i>          | <i>human immunodeficiency virus</i>   |

|                   |                                                                 |
|-------------------|-----------------------------------------------------------------|
| <i>HPI</i>        | <i>history of present illness</i>                               |
| <i>HR</i>         | <i>heart rate</i>                                               |
| <i>HTN</i>        | <i>hypertension</i>                                             |
| <i>HS</i>         | <i>heart sounds, at bed time</i>                                |
| <i>ID</i>         | <i>infectious disease, identification</i>                       |
| <i>IM</i>         | <i>intramuscular</i>                                            |
| <i>IG</i>         | <i>Immunoglobulin</i>                                           |
| <i>IgG</i>        | <i>Immunoglobulin G</i>                                         |
| <i>IgM</i>        | <i>immunoglobulin M</i>                                         |
| <i>IU</i>         | <i>international unit</i>                                       |
| <i>IUD</i>        | <i>intrauterine device</i>                                      |
| <i>IUGR</i>       | <i>intrauterine growth retardation</i>                          |
| <i>IV</i>         | <i>intravenous</i>                                              |
| <i>JVD</i>        | <i>jugular venous distention (UK)</i>                           |
| <i>JVP</i>        | <i>jugular venous pressure (UK)</i>                             |
| <i>L</i>          | <i>left</i>                                                     |
| <i>LA</i>         | <i>left atrium; local anaesthetic</i>                           |
| <i>LDH</i>        | <i>lactic dehydrogenase</i>                                     |
| <i>LDL</i>        | <i>low-density lipoprotein (cholesterol)</i>                    |
| <i>LFTS</i>       | <i>liver function tests</i>                                     |
| <i>LIF</i>        | <i>left iliac fossa</i>                                         |
| <i>LKS</i>        | <i>liver, kidney and spleen</i>                                 |
| <i>LP</i>         | <i>lumbar puncture</i>                                          |
| <i>LRT</i>        | <i>lower respiratory tract</i>                                  |
| <i>LUQ</i>        | <i>left upper quadrant</i>                                      |
| <i>LV</i>         | <i>left ventricle; lumbar vertebra</i>                          |
| <i>M</i>          | <i>male</i>                                                     |
| <i>M/F; M/W/S</i> | <i>male / female; married / widow(er) / single</i>              |
| <i>mg</i>         | <i>milligram</i>                                                |
| <i>MI</i>         | <i>mitral incompetence insufficiency; myocardial infarction</i> |
| <i>ml</i>         | <i>milliliter</i>                                               |
| <i>mo</i>         | <i>month</i>                                                    |

|                       |                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------|
| <i>MRI</i>            | <i>magnetic resonance imaging</i>                                                                 |
| <i>MS</i>             | <i>mitral stenosis; multiple sclerosis; musculo skeletal</i>                                      |
| <i>MSU</i>            | <i>mid-stream urinalysis Sp. <b>cituria</b></i>                                                   |
| <i>NA</i>             | <i>not applicable</i>                                                                             |
| <i>NAD</i>            | <i>no abnormality detected, no active disease</i>                                                 |
| <i>NBI</i>            | <i>no bone injury</i>                                                                             |
| <i>ND</i>             | <i>normal delivery</i>                                                                            |
| <i>nocte</i>          | <i>at night</i>                                                                                   |
| <i>NP</i>             | <i>not palpable</i>                                                                               |
| <i>NPO</i>            | <i>nothing by mouth</i>                                                                           |
| <i>NPU</i>            | <i>not passed urine</i>                                                                           |
| <i>NS</i>             | <i>nervous system</i>                                                                             |
| <i>NSA</i>            | <i>no significant abnormality</i>                                                                 |
| <i>NYD</i>            | <i>not yet diagnosed</i>                                                                          |
| <i>O/E</i>            | <i>on examination</i>                                                                             |
| <i>OA</i>             | <i>on admission; osteo-arthritis</i>                                                              |
| <i>OR</i>             | <i>operating room (US)</i>                                                                        |
| <i>OT</i>             | <i>operating theatre (UK)</i>                                                                     |
| <i>OPD</i>            | <i>obstructive pulmonary disease, other personality disorders,<br/>outpatient department (UK)</i> |
| <i>P</i>              | <i>pulse; protein</i>                                                                             |
| <i>PA</i>             | <i>posteroanterior</i>                                                                            |
| <i>p.c.</i>           | <i>after food</i>                                                                                 |
| <i>PCP</i>            | <i>pneumocystis carinii pneumonia</i>                                                             |
| <i>p.m.</i>           | <i>afternoon</i>                                                                                  |
| <i>p.o.</i>           | <i>by mouth</i>                                                                                   |
| <i>pO<sub>2</sub></i> | <i>oxygen pressure</i>                                                                            |
| <i>p.r.</i>           | <i>per rectum</i>                                                                                 |
| <i>p.r.n.</i>         | <i>as required</i>                                                                                |
| <i>pt</i>             | <i>patient</i>                                                                                    |
| <i>p.v.</i>           | <i>per vagina</i>                                                                                 |
| <i>PERLA</i>          | <i>pupils equal and reactive to light and accommodation</i>                                       |

|                      |                                                                   |
|----------------------|-------------------------------------------------------------------|
| <i>PID</i>           | <i>prolapsed intervertebral disc; pelvic inflammatory disease</i> |
| <i>PMB</i>           | <i>postmenopausal bleeding</i>                                    |
| <i>PMH</i>           | <i>previous medical history</i>                                   |
| <i>PMI</i>           | <i>point of maximum impulse</i>                                   |
| <i>PN</i>            | <i>postnatal</i>                                                  |
| <i>PND</i>           | <i>postnatal depression; paroxysmal nocturnal dyspnoea</i>        |
| <i>PPH</i>           | <i>postpartum haemorrhage</i>                                     |
| <i>PH</i>            | <i>past history, patient's history</i>                            |
| <i>PROM</i>          | <i>premature rupture of membranes</i>                             |
| <i>PU</i>            | <i>passed urine; peptic ulcer</i>                                 |
| <i>PUD</i>           | <i>peptic ulcer disease</i>                                       |
| <i>q</i>             | <i>every</i>                                                      |
| <i>qh</i>            | <i>every hour</i>                                                 |
| <i>q.d.s./q.i.d.</i> | <i>four times a day</i>                                           |
| <i>qd</i>            | <i>every day</i>                                                  |
| <i>q4h, q6h...</i>   | <i>every 4 hours, every 6 hours...</i>                            |
| <i>R</i>             | <i>right; respiration; red</i>                                    |
| <i>RBC</i>           | <i>red blood cell count; red blood corpuscles</i>                 |
| <i>RBS</i>           | <i>random blood sugar Sp. <b>glicemia</b></i>                     |
| <i>ref.</i>          | <i>refer</i>                                                      |
| <i>reg.</i>          | <i>regular</i>                                                    |
| <i>RGN</i>           | <i>Registered General Nurse</i>                                   |
| <i>RI</i>            | <i>respiratory infection</i>                                      |
| <i>RIF</i>           | <i>right iliac fossa</i>                                          |
| <i>RLQ</i>           | <i>right lower quadrant</i>                                       |
| <i>RR</i>            | <i>respiratory rate</i>                                           |
| <i>RS</i>            | <i>respiratory system</i>                                         |
| <i>RTA</i>           | <i>road traffic accident</i>                                      |
| <i>RTC</i>           | <i>return to clinic</i>                                           |
| <i>RTI</i>           | <i>respiratory tract infection</i>                                |
| <i>RUQ</i>           | <i>right upper quadrant</i>                                       |
| <i>Rx</i>            | <i>treatment, take (used in prescriptions)</i>                    |

|                      |                                                                 |
|----------------------|-----------------------------------------------------------------|
| <i>S</i>             | <i>single; sugar</i>                                            |
| <i>s.c.</i>          | <i>subcutaneous</i>                                             |
| <i>s.l.</i>          | <i>sublingual</i>                                               |
| <i>SAH</i>           | <i>subarachnoidal haemorrhage</i>                               |
| <i>SARS</i>          | <i>severe acute respiratory syndrome</i>                        |
| <i>SB</i>            | <i>still-born</i>                                               |
| <i>SHO</i>           | <i>Senior House Officer (UK)</i>                                |
| <i>sig.</i>          | <i>write/label (in prescriptions)</i>                           |
| <i>SM</i>            | <i>systolic murmur</i>                                          |
| <i>SOB</i>           | <i>short of breath</i>                                          |
| <i>SOBOE</i>         | <i>short of breath on exertion</i>                              |
| <i>SOP</i>           | <i>surgical out-patients</i>                                    |
| <i>S &amp; S</i>     | <i>signs &amp; symptoms</i>                                     |
| <i>T</i>             | <i>temperature</i>                                              |
| <i>T &amp; A</i>     | <i>tonsils and adenoids</i>                                     |
| <i>t.d.s./t.i.d.</i> | <i>three times a day</i>                                        |
| <i>tabs</i>          | <i>tablets</i>                                                  |
| <i>TB</i>            | <i>tuberculosis</i>                                             |
| <i>TOP</i>           | <i>termination of pregnancy</i>                                 |
| <i>TRP</i>           | <i>temperature, pulse, respiration</i>                          |
| <i>TV</i>            | <i>trichomonas vaginalis</i>                                    |
| <i>U</i>             | <i>urea</i>                                                     |
| <i>U &amp; E</i>     | <i>urea and electrolytes</i>                                    |
| <i>URTI</i>          | <i>upper respiratory tract infection</i>                        |
| <i>VD</i>            | <i>venereal disease</i>                                         |
| <i>VDRL</i>          | <i>venereal disease research laboratory Sp.<b>serologia</b></i> |
| <i>VE</i>            | <i>vaginal examination</i>                                      |
| <i>W</i>             | <i>widow/widower</i>                                            |
| <i>WBC</i>           | <i>white blood cell count; white blood corpuscles</i>           |
| <i>WNL</i>           | <i>within normal limits</i>                                     |
| <i>XR</i>            | <i>X-ray</i>                                                    |
| <i>YOB</i>           | <i>year of birth</i>                                            |

## ***Medical Glossary***

**Abdomen:** The belly, that part of the body that contains all of the structures between the chest and the pelvis. The abdomen is separated anatomically from the chest by the diaphragm, the powerful muscle spanning the body cavity below the lungs.

**Abdominal cavity:** The cavity within the abdomen, the space between the abdominal wall and the spine.

**Abdominal muscles:** A large group of muscles in the front of the abdomen that assists in the regular breathing movement and supports the muscles of the spine while lifting and keeping abdominal organs such as the intestines in place. Abdominal muscles play a key role in exercises such as "sit-ups." They are informally called the "abs".

**Abdominal pain:** Pain in the belly (the abdomen). Abdominal pain can come from conditions affecting a variety of organs. The abdomen is an anatomical area that is bounded by the lower margin of the ribs above, the pelvic bone (pubic ramus) below, and the flanks on each side. Although abdominal pain can arise from the tissues of the abdominal wall that surround the abdominal cavity (the skin and abdominal wall muscles), the term abdominal pain generally is used to describe pain originating from organs within the abdominal cavity (from beneath the skin and muscles). These organs include the stomach, small intestine, colon, liver, gallbladder, and pancreas.

**Abortion:** Premature or untimely expulsion of the fetus.

**Abscess:** A collection of pus that requires surgical drainage. The following are some examples of abscesses:

- A perianal abscess is a pool of pus that forms next to the anus, often causing considerable tenderness and swelling in that area and pain on sitting down and on defecating.
- A peritonsillar abscess is a persistent collection of pus behind the tonsils.

**ACE inhibitors:** A drug that inhibits ACE (angiotensin converting enzyme) which is important to the formation of angiotensin II. Angiotensin II causes arteries in the body to constrict and thereby raises the blood pressure. ACE inhibitors lower the blood pressure by inhibiting the formation of angiotensin II. This relaxes the arteries. Relaxing the arteries not only lowers blood pressure, but also improves the pumping efficiency of a failing heart and improves cardiac output in patients with heart failure. ACE inhibitors are therefore used for blood pressure control and congestive heart failure.

**Acute:** Of abrupt onset, in reference to a disease. Acute often also connotes an illness that is of short duration, rapidly progressive, and in need of urgent care.

**Adenoidectomy:** Surgical removal of the adenoids.

**Adenoiditis:** An infection of the adenoids.

**Adenoids:** Gland-like lymphoid tissue at the back of the throat behind the nose that may help protect against infection.

**Adenopathy:** Any disease affecting a gland, more particularly a lymph gland.

**Adhesion:** The union of normally separate parts by new tissue, produced as a result of inflammation.

**Adjacent:** Lying nearby. Related terms include superjacent, subjacent, and circumjacent. From ad-, near + the Latin jacere, to lie = to lie near.

**Adnexal:** Related to the anexa. See anexa.

**Aggressive:** In oncology, quickly growing, tending to spread rapidly.

**Airway:** The path air follows to get into and out of the lungs. The mouth and nose are the normal entry and exit ports. Entering air then passes through the back of the throat (pharynx), continues through the voice box (larynx), down the trachea, and finally out the branching tubes known as bronchi.

**Alcoholism:** Physical dependence on alcohol to the extent that stopping alcohol use will bring on withdrawal symptoms. In popular and therapeutic parlance, the term may also be used to refer to ingrained drinking habits that cause health or social problems.

**Amenorrhea:** absence or abnormal cessation of the menses (menstrual cycle).

**Ammonia:** A colorless gas with a very sharp odor. Made both by humans and by nature, ammonia dissolves easily in water and evaporates quickly. Liquid ammonia is found in many household cleaners. Ammonia is irritating to the skin, eyes, nose, throat, and lungs. Exposure to high concentrations in the air can severely burn the skin, eyes, throat, or lungs.

**Amygdala:** an obsolete name for the tonsil.

**Anemia:** The condition of having less than the normal number of red blood cells or less than the normal quantity of hemoglobin in the blood. The oxygen-carrying capacity of the blood is, therefore, decreased.

**Anesthetic:** A substance that causes lack of feeling or awareness. A local anesthetic causes loss of feeling in a part of the body. A general anesthetic puts the person to sleep.

**Aneurysm:** A localized widening (dilatation) of an artery, vein, or the heart. At the area of an aneurysm, there is typically a bulge and the wall is weakened and may rupture. The word "aneurysm" comes from the Greek "aneurysma" meaning "a widening."

**Anexa:** Parts accessory to an organ or structure, especially the uterus.

**Angina pectoris:** See angina.

**Angina:** Chest pain due to an inadequate supply of oxygen to the heart muscle. The chest pain of angina is typically severe and crushing. There is a feeling just behind the breastbone (the sternum) of pressure and suffocation. The term "angina pectoris" comes from the Latin "angere" meaning "to choke or throttle" + "pectus" meaning "chest". Angina pectoris was first described by the English physician William Heberden (1710-1801) and may be referred to simply as angina.

**Angiotensin:** A family of peptides (smaller than proteins) that acts as vasoconstrictors to narrow blood vessels.

**Antibiotic:** A drug used to treat infections caused by bacteria and other microorganisms. Originally, an antibiotic was a substance produced by one microorganism that selectively inhibits the growth of another. Synthetic antibiotics, usually chemically related to natural antibiotics, have since been produced that accomplish comparable tasks.

**Antibodies:** Proteins made in the body that fight infection and destroy harmful organisms (bacteria and viruses) or toxins.

**Anticoagulant:** Any agent used to prevent the formation of blood clots.

**Apoplexy:** a sudden loss of consciousness (a "stroke"). The result of an acute vascular disturbance caused by the rupture of an intracerebral artery or its occlusion by thrombosis or embolism.

**Appendectomy:** Removal by surgery of the appendix, the small worm-like appendage of the colon (the large bowel). An appendectomy is performed because of probable appendicitis, inflammation of the wall of the appendix generally associated with infection.

**Appendiceal:** Relating to the appendix. As, for example, an appendiceal abscess. Perforation of the appendix can lead to a periappendiceal abscess or diffuse peritonitis (infection of the entire lining of the abdomen and the pelvis).

**Appendicitis:** Inflammation of the appendix, the small worm-like projection from the first part of the colon. Appendicitis usually involves infection of the appendix by bacteria that invade it and infect the wall of the appendix. Appendicitis can progress to produce an abscess (a pocket of pus) and even peritonitis (inflammation of the lining of the abdomen and pelvis).

**Appendix:** A small outpouching from the beginning of the large intestine (the ascending colon). Formally called the vermiform appendix because it was thought to be wormlike.

**Areola:** The small darkened area around the nipple of the breast.

**Arterial blood pressure:** the pressure of the column of blood in the arterial system. It depends upon the pumping action of the heart, the peripheral resistance, the amount of blood in the system, the viscosity of the blood and the elasticity of the arterial walls.

**Aspirin:** A good example of a trade name that entered into the language, Aspirin was once the Bayer trademark for acetylsalicylic acid.

**Asthma:** A common disorder in which chronic inflammation of the bronchial tubes (bronchi) makes them swell, narrowing the airways. Asthma involves only the bronchial tubes and does not affect the air sacs (alveoli) or the lung tissue (the parenchyma of the lung) itself.

**Atherosclerosis:** A process of progressive thickening and hardening of the walls of medium-sized and large arteries as a result of fat deposits on their inner lining.

**Atypical:** Not typical, not usual, not normal, abnormal. Atypical is often used to refer to the appearance of precancerous or cancerous cells.

**Autonomic nervous system:** the part of the nervous system that regulates internal bodily processes requiring no conscious effort (sympathetic and parasympathetic nervous system).

**Axillary:** Pertaining to the cavity beneath the junction of the arm and the body, better known as the armpit.

**Bacteria:** Single-celled microorganisms which can exist either as independent (free-living) organisms or as parasites (dependent upon another organism for life) *sing. bacterium*

**Barium enema:** A series of x-rays of the lower intestine (colon) and rectum that are taken after the patient is given an enema with a white, chalky solution that contains barium. The barium outlines the intestines on the x-rays. These x-rays permit the detection of colon and rectal abnormalities including diverticulosis, diverticulitis, abnormal colon movement, dilation (widening) of the colon, polyps and cancers of the colon and rectum.

**Barium:** In medicine, refers to a chalky solution of barium used to coat the inside of organs so that they will show up on an x-ray.

**Belly button:** The navel or umbilicus. The one-time site of attachment of the umbilical cord. The term "belly button" was coined around 1877.

**Belly:** That part of the body that contains all of the structures between the chest and the pelvis. Also called the abdomen.

**Bladder:** Any pouch or other flexible enclosure that can hold liquids or gases but usually refers to the hollow organ in the lower abdomen that stores urine -- the urinary bladder. The kidneys filter waste from the blood and produce urine, which enters the bladder through two tubes called ureters. Urine leaves the bladder through

another tube, the urethra. In women, the urethra is a short tube that opens just in front of the vagina . In men, it is longer, passing through the prostate gland and then the penis. Infection of the bladder is called cystitis .

**Blood clot:** Blood that has been converted from a liquid to a solid state. Also called a thrombus.

**Blood pressure:** The blood pressure is the pressure of the blood within the arteries. It is produced primarily by the contraction of the heart muscle. It's measurement is recorded by two numbers. The first (systolic pressure) is measured after the heart contracts and is highest. The second (diastolic pressure) is measured before the heart contracts and lowest. A blood pressure cuff is used to measure the pressure. Elevation of blood pressure is called "hypertension".

**Blood:** The familiar red fluid in the body that contains white and red blood cells, platelets, proteins, and other elements. The blood is transported throughout the body by the circulatory system.

**Bloodstream:** the blood circulating through the body.

**Bone:** Bone is the substance that forms the skeleton of the body. It is composed chiefly of calcium phosphate and calcium carbonate . It also serves as a storage area for calcium, playing a large role in calcium balance in the blood.

**Bowel sounds:** *Sp. ruidos hidroaéreos.*

**Brain stem:** The stem like part of the brain that is connected to the spinal cord. Or conversely, the extension of the spinal cord up into the brain. The brain stem is small but important. It manages messages going between the brain and the rest of the body, and it also controls basic body functions such as breathing, swallowing, heart rate, and blood pressure. The brain stem also controls consciousness and determines whether one is awake or sleepy.

**Brain swelling:** See cerebral edema.

**Brain:** That part of the central nervous system that is located within the cranium (skull). The brain functions as the primary receiver, organizer and distributor of information for the body. It has two (right and left) halves called "hemispheres."

**BRCA2:** A gene that normally acts to restrain the growth of cells in the breast and ovary but which, when mutated, may predispose to breast cancer and to ovarian cancer. BRCA2 mutations have also been discovered to be responsible for a significant fraction of early-onset prostate cancer. The first breast cancer genes identified were BRCA1 and BRCA2. Mutations of BRCA1 and BRCA2 account for about half of all cases of inherited breast cancer. These tumors tend to occur in young women. BRCA1 and BRCA2 are usually not involved in breast cancer that is not hereditary.

**Breast:** The breast refers to the front of the chest or, more specifically, to the mammary gland. The mammary gland is a milk producing gland. It is composed largely of fat. Within the mammary gland is

a complex network of branching ducts. These ducts exit from sac-like structures called lobules, which can produce milk in females. The ducts exit the breast at the nipple.

**Breast lump:** A localized swelling, knot, bump, bulge or protuberance in the breast. Breast lumps may appear in both sexes at all ages. In women, the fear is usually of breast cancer but many breast lumps turn out, fortunately, to be due to benign conditions that can be successfully treated such as infection, trauma, fibroadenoma, cyst, or fibrocystic condition of the breast. However, no breast lump should be dismissed as benign until it has been checked by a physician.

**Breathing:** The process of respiration, during which air is inhaled into the lungs through the mouth or nose due to muscle contraction, and then exhaled due to muscle relaxation.

**Bronchi:** The large air tubes leading from the trachea to the lungs that convey air to and from the lungs. The bronchi have cartilage as part of their supporting wall structure. The trachea divides to form the right and left main bronchi which, in turn, divide to form the lobar, segmental, and finally the subsegmental bronchi. *Sing. bronchus*

**Bronchoscopy:** A procedure that permits the doctor to see the breathing passages through a lighted tube.

**CAD:** coronary artery disease. CAD is a major cause of illness and death. It begins when hard cholesterol substances (plaques) are deposited within a coronary artery. These arteries arise from the aorta adjacent to the heart and supply the heart muscle with blood that is rich in oxygen. They are called the coronary arteries because they encircle the heart in the manner of a crown.

**Cancer:** An abnormal growth of cells which tend to proliferate in an uncontrolled way and, in some cases, to metastasize (spread).

**Candida albicans:** is the most frequent etiological agent of candidiasis but numerous other candida species have been implicated as pathogens in man, especially in compromised individuals.

**Candida:** a genus of yeast-like fungi, species of which cause candidiasis.

**Carcinoma in situ:** Cancer that involves only the place in which it began and that has not spread. Carcinoma in situ is an early-stage tumor.

**Carcinoma:** Cancer that begins in the skin or in tissues that line or cover body organs. For example, carcinoma can arise in the breast, colon, liver, lung, prostate, and stomach.

**Cardiac arrest:** cessation of the action of the heart. The term is generally used to describe sudden ventricular asystole such as may occur in subjects with variable atrioventricular block or after a

paroxysm of ventricular arrhythmia or in acute myocardial failure. It may occur as a result of sudden vagal over-action, occasionally during the induction of anesthesia.

**Cardiac output:** the volume of blood expelled from the left ventricle in 1 minute. *Sp. gasto cardíaco.*

**Cardiac/heart murmur:** a sound produced within the heart which continues through at least part of the systole or of a diastole. Murmurs are produced by turbulent blood flow, and this in turn is usually the consequence of structural abnormality. *Sp. soplo cardíaco.*

**Cardiopulmonary resuscitation:** The emergency substitution of heart and lung action to restore life to someone who appears dead. The two main components of cardiopulmonary resuscitation (CPR) are chest compression to make the heart pump and mouth-to-mouth ventilation to breath for the victim.

**Cecum:** The cecum (also spelled caecum), the first portion of the large bowel, situated in the lower right quadrant of the abdomen.

**Cell:** The basic structural and functional unit in people and all living things. Each cell is a small container of chemicals and water wrapped in a membrane.

**Cerebellum:** The portion of the brain in the back of the head between the cerebrum and the brain stem. The cerebellum controls balance for walking and standing and other complex motor functions.

**Cerebral aneurysm:** A localized widening of a vessel within the brain. See: Berry aneurysm.

**Cerebral hemispheres:** The two halves of the cerebrum, the largest part of the brain.

**Cerebrospinal fluid:** (CSF) A watery fluid, continuously produced and absorbed, which flows in the ventricles (cavities) within the brain and around the surface of the brain and spinal cord.

**Cervical os:** cervical orifice.

**Chemotherapy: 1.** In the original sense, a chemical that binds to and specifically kills microbes or tumor cells. The term chemotherapy was coined in this regard by Paul Ehrlich (1854-1915).**2.** In oncology, drug therapy for cancer. Also called "chemo" for short.

**Chest pain:** There are many causes of chest pain. One is angina which results from inadequate oxygen supply to the heart muscle. Angina can be caused by coronary artery disease or spasm of the coronary arteries. Chest pain can also be due to a heart attack (coronary occlusion) and other important diseases. i.e. dissection of the aorta and pulmonary embolism.

**Chest X-ray:** Commonly used to detect abnormalities in the lungs, but can also detect abnormalities in the heart, aorta, and the bones of the thoracic area. Metallic objects, such as jewelry are removed from

the chest and neck areas for a chest x-ray to avoid interference with x-ray penetration and improve accuracy of the interpretation.

**Chest:** The area of the body located between the neck and the abdomen. The chest contains the lungs, the heart and part of the aorta. The walls of the chest are supported by the dorsal vertebrae, the ribs, and the sternum.

**Chlamydia:** A very small parasitic bacterium which can cause various diseases.

**Chronic obstructive pulmonary disease:** COPD. Any disorder that persistently obstructs bronchial airflow. COPD mainly involves two related diseases -- chronic bronchitis and emphysema. Both cause chronic obstruction of air flowing through the airways and in and out of the lungs. The obstruction is generally permanent and progresses (becomes worse) over time.

**Chronic:** This important term in medicine comes from the Greek *chronos*, time and means lasting a long time.

**Cilia:** Plural of cilium (a motile extension of a cell surface).

**Circulation:** The movement of fluid in a regular or circuitous course. Although the noun "circulation" does not necessarily refer to the circulation of the blood, for all practical purposes today it does. Heart failure is an example of a problem with the circulation.

**Cirrhosis:** An abnormal liver condition characterized by irreversible scarring of the liver. Alcohol and viral hepatitis B and C are among the many causes of cirrhosis. Cirrhosis can cause yellowing of the skin (jaundice), itching, and fatigue.

**Cleft Palate:** A birth defect that consists of a fissure in the tissues of the roof of the mouth.

**Clot:** A soft, non-rigid, insoluble mass formed when a liquid (e.g. blood) gels.

**Cocaine:** The most potent stimulant of natural origin, a bitter addictive anesthetic (pain blocker) which is extracted from the leaves of the coca scrub (*Erythroxylon coca*) indigenous to the Andean highlands of South America.

**Colitis:** Inflammation of the large intestine (the colon). There are many forms of colitis, including ulcerative, Crohn's, infectious, pseudomembranous, and spastic.

**Colon:** The part of the large intestine that runs from the cecum to the rectum as a long hollow tube that serves to remove water from digested food and let the remaining material, solid waste called stool, move through it to the rectum and leave the body through the anus.

**Coma:** A state of deep unarousable unconsciousness.

**Complication:** In medicine, an additional problem that arises following a procedure, treatment or illness and is secondary to it.

**Compression:** The act of pressing together. As in a compression fracture, nerve compression, or spinal cord compression.

**Computerized tomography:** Pictures of structures within the body created by a computer that takes the data from multiple X-ray images and turns them in pictures.

**Conception:** Act of conceiving, or becoming pregnant.

**Condition:** The term "condition" has a number of biomedical meanings including the following:

**Connective tissue:** Consists of cells that make up fibers in the framework supporting other body tissues

**Constipation:** Infrequent (and frequently incomplete) bowel movements. The opposite of diarrhea, constipation is commonly caused by irritable bowel syndrome, diverticulosis, and medications (constipation can paradoxically be caused by overuse of laxatives).

**Contraceptive:** Any agent or measure used to prevent conception.

**Cornerstone:** Something of basic importance.

**Coryza:** Nasal catarrh.

**Cough:** A rapid expulsion of air from the lungs typically in order to clear the lung airways of fluids, mucus, or material. Also called tussis.

**Cramp:** painful and involuntary contraction of muscles leading to spasm of variable duration.

**Cranial nerves:** Nerves that emerge from or enter the skull (the cranium), as opposed to the spinal nerves which emerge from the vertebral column. Cranial nerves come directly from the brain through the skull.

**Cranial:** 1. Pertaining to the cranium or skull. 2. Toward the head. As opposed to caudad. The eye is cranial to the jaw.

**Creatine:** A compound the body synthesizes (makes) and then utilizes to store energy.

**Creatinine:** A white crystalline strongly basic compound formed from creatine and found specially in muscle, blood, and urine.

**Crohn's disease :** A chronic inflammatory disease, primarily involving the small and large intestine, but which can affect other parts of the digestive system as well. It is named for Burrill Crohn, the American gastroenterologist who first described the disease in 1932.

**CT scan:** Computerized tomography scan. Pictures of structures within the body created by a computer that takes the data from multiple X-ray images and turns them into pictures on a screen. CT stands for computerized tomography.

**Culture:** A culture is the propagation of microorganisms in a growth media. Any body tissue or fluid can be evaluated in the laboratory by culture techniques in order to detect and identify infectious processes. Culture techniques also be used to determine sensitivity to antibiotics.

**Cut:** Severed skin. A wound made with something sharp.

**Cysts:** Cysts are abnormal, closed sac-like structures within a tissue that contain a liquid, gaseous, or semisolid substance. Cysts can occur anywhere in the body and can vary in size. The outer, or capsular, portion of a cyst is termed the cyst wall.

**DCIS:** Ductal carcinoma in situ. A precancerous condition characterized by the clonal proliferation of malignant-looking cells in the lining of a breast duct without evidence of spread outside the duct to other tissues in the breast or outside the breast. DCIS is clearly the precursor (forerunner) of invasive breast cancer. Also called intraductal carcinoma.

**Delivery:** The act of being delivered of the product of conception.

**Diabetes mellitus:** Better known just as "diabetes" - a chronic disease associated with abnormally high levels of the sugar glucose in the blood. Diabetes is due to one of two mechanisms: (1) Inadequate production of insulin (which is made by the pancreas and lowers blood glucose) (2) Inadequate sensitivity of cells to the action of insulin. The two main types of diabetes correspond to these two mechanisms and are called insulin dependent (type 1) and non-insulin dependent (type 2) diabetes. In type 1 diabetes there is no insulin or not enough of it. In type 2 diabetes, there is generally enough insulin but the cells upon it should act are not normally sensitive to its action.

**Diarrhea:** A familiar phenomenon with unusually frequent or unusually liquid bowel movements, excessive watery evacuations of fecal material. The opposite of constipation. The word "diarrhea" with its odd spelling is a near steal from the Greek "diarrhoia" meaning "a flowing through."

**Diastole:** The period of the cardiac cycle from the closure of the aortic and pulmonary valves to the beginning of the next ventricular contraction. The period when the heart fills with blood and dilates.

**Diastolic pressure:** the lowest or minimal arterial pressure at the resting phase of the cardiac cycle, coinciding with ventricular diastole and resulting from resistance of the arterial walls.

**Diphtheria:** a specific infectious disease caused by virulent strains of a bacillus, which gains alodgment and usually forms a fibrinous exudate on the throat or elsewhere in the upper respiratory tract.

**Discharge:** 1. That which is emitted or evacuated, as an excretion or a secretion. 2. *Sp. dar de alta.*

**Disease:** Illness or sickness often characterized by typical patient problems (symptoms) and physical findings (signs).

**Diverticulitis:** Inflammation of the diverticula (small outpouchings) along the wall of the colon, the large intestine. (One outpouching is a diverticulum; two or more are diverticula).

**Drain:** A device for removing fluid from a cavity or wound. A drain is typically a tube or wick.

**Drooling:** salivation.

**Dull pain:** not sharp or acute in any sense.

**Duodenal ulcer:** An ulcer (a hole in the lining) of the duodenum (the first portion of the small intestine).

**Duodenum:** The first part of the small intestine. The duodenum extends from the pylorus at the bottom of the stomach to the jejunum, the second part of the small intestine.

**Dura:** The outermost, toughest, and most fibrous of the three membranes (meninges) covering the brain and the spinal cord . Dura is short for dura mater (from the Latin for hard mother). Also called the pachymeninx (singular) or pachymeniges (plural).

**Dysmenorrhea:** Difficult and painful menstruation.

**Dyspareunia:** Pain during sexual intercourse.

**Dysphagia:** Difficulty in swallowing.

**Dyspnea:** The subjective feeling of discomfort or distress which occurs when the need for increased pulmonary ventilation has reached the point of obtruding unpleasantly into consciousness.

**ECG:** Abbreviation for electrocardiogram or EKG. The K is from the Greek "kardia". See Electrocardiogram.

**Edema:** The swelling of soft tissues as a result of excess water accumulation.

**Effusion:** Too much fluid, an outpouring of fluid. A hemorrhagic effusion is one that has blood within the fluid. A pericardial effusion is an outpouring of fluid within the fibrous sac (the pericardium) that surrounds the heart. The lungs are covered by two-layered membranes which are called the pleura. A pleural effusion involves the presence of an excessive amount of pleural fluid (between the two layers of the pleural membranes). The term "effusion" comes from the Latin "effusio" meaning a pouring out.

**Electrocardiogram :** A recording of the electrical activity of the heart. An electrocardiogram is a simple, non-invasive procedure. Electrodes are placed on the skin of the chest and connected in a specific order to a machine that, when turned on, measures electrical activity all over around the heart. Output is usually in the form of a long scroll of paper displaying a printed graph of activity. Newer models output the data directly to a computer and screen, although a print-out may still be made.

**Embolism:** The obstruction of a blood vessel by a foreign substance or a blood clot blocking the vessel. Something travels through the bloodstream, lodges in a vessel and plugs it.

**Embryo:** The developing organism from conception until approximately the end of the second month.

**Empysema:** 1) A lung condition featuring an abnormal accumulation of air in the lung's many tiny air sacs, a tissue called alveoli. As air continues to collect in these sacs, they become enlarged, and may break, or be damaged and form scar tissue.

**Empyema:** The presence of pus in the pleural space which is between the outer surface of the lung and the chest wall. Empyema is often a complication of pneumonia caused by bacteria such as *Streptococcus pneumoniae*, *Staphylococcus aureus*, or *Haemophilus influenzae* (H. flu) type b.

**Endometritis:** inflammation of the endometrium.

**Endoscopy:** Endoscopy is a broad term used to describe examining the inside of the body using a lighted, flexible instrument called an endoscope. In general, an endoscope is introduced into the body through a natural opening like the mouth or anus. Although endoscopy can include examination of other organs, the most common endoscopic procedures evaluate the esophagus (swallowing tube), stomach, and portions of the intestine.

**Enzyme:** A protein (or protein-based molecule) that speeds up a chemical reaction in a living organism. An enzyme acts as catalyst for specific chemical reactions, converting a specific set of reactants (called substrates) into specific products.

**Epidural:** Outside the dura, the outermost, toughest, and most fibrous of the three membranes (meninges) covering the brain and the spinal cord. An epidural hematoma is a collection of blood beneath the skull but outside the dura.

**Epistaxis:** Bleeding from the nose. It may be due to a local disease of the nasal passages, or sometimes occurs as a manifestation of a general disease, as in the early stages of acute fevers and in some of the blood diseases, and also in high blood pressure from any cause.

**Erythema:** Redness of the skin due to hyperemia (an excess of blood in any part of the body).

**Esophageal ulcer:** A hole in the lining of the esophagus corroded by the acidic digestive juices secreted by the stomach cells. Ulcer formation is related to *H. pylori* bacteria in the stomach, anti-inflammatory medications, and smoking cigarettes.

**Esophagus:** The tube that connects the pharynx (throat) with the stomach. The esophagus lies between the trachea (windpipe) and the spine. It passes down the neck, pierces the diaphragm just to the left of the midline, and joins the cardiac (upper) end of the stomach.

**Event:** A set of outcomes. Cardiovascular events might include a heart attack and gastrointestinal events a GI bleed. The use of the term "event" in medicine comes from probability theory.

**Extremity:** The extremities in medical language are not freezing cold or scorching heat but rather the uttermost parts of the body. The extremities are simply the hands and feet.

**Fahrenheit:** Thermometer scale in which the freezing point of water is 32°F and the boiling point of water 212°F.

**Failure:** A term applied with reference to bodily organs, systems or processes when their function fails to fulfill demands made on them, e.g., heart failure.

**Fallopian tube:** One of the two Fallopian tubes that transport the egg from the ovary to the uterus (the womb). The Fallopian tubes have small hair-like projections called cilia on the cells of the lining. See *tubes*.

**Fatigue:** A condition characterized by a lessened capacity for work and reduced efficiency of accomplishment, usually accompanied by a feeling of weariness and tiredness.

**Fauces:** The constricted opening between the mouth and the oral part of the pharynx.

**Fecalith:** A hard stony mass of feces. A fecalith can obstruct the appendix, leading to appendicitis. Fecaliths also can obstruct diverticuli. Called also a coprolith and stercolith. From fecal + -lith for stone.

**Fever :** Although a fever technically is any body temperature above the normal of 98.6 degrees F. (37 degrees C.), in practice a person is usually not considered to have a significant fever until the temperature is above 100.4 degrees F (38 degrees C.).

**Fibroid (growth):** Benign tumors that originates in the uterus, usually round or semi-round in shape. *Sp. fibroma*

**Film:** Slang shortening of X-ray film, an X-ray, a radiograph.

**Flexion:** The process of bending or the state of being bent. Flexion of the fingers results in a clenched fist.

**Flush:** Redness, usually temporary, caused by a rush of blood to the face and neck; a vasomotor disturbance for which there are many causes, physiological and pathological. It is often associated with palpitations, sweating and giddiness.

**Fungal:** Pertaining to a fungus. For example, a fungal skin infection.

**Fungus:** A single-celled or multicellular organism. Fungi can be true pathogens that cause infections in healthy persons or they can be opportunistic pathogens that cause infections in immunocompromised persons. Fungi are also used for the development of antibiotics, antitoxins, and other drugs used to control various human diseases. *pl. fungi*.

**Gallbladder:** A pear-shaped organ just below the liver that stores the bile secreted by the liver. During a fatty meal, the gallbladder contracts, delivering the bile through the bile ducts into the intestines to help with digestion.

**Gallop (rhythm):** The rhythm of the heart sounds when there is tachycardia with three sounds to each cycle, this being likened to the sound of a horse galloping.

**Gargle:** A liquid preparation for irrigating the throat, not usually intended to be swallowed.

**Gastritis:** Inflammation of the stomach. From the Latin *gastricus* meaning stomach + *tis*, meaning inflammation.

**Gene:** The basic biological unit of heredity . A segment of deoxyribonucleic acid (DNA) needed to contribute to a function.

**Glomerulonephritis:** nephritis (a bilateral disease of the kidneys of toxic origin, affecting the glomeruli, tubules and interstitial tissue in varying degree) which is characterized primarily by inflammation of the glomeruli of the kidney and which may appear in acute, subacute or chronic forms.

**Glucose:** The simple sugar (monosaccharide) that serves as the chief source of energy in the body. Glucose is the principal sugar the body makes. The body makes glucose from proteins, fats and, in largest part, carbohydrates. Glucose is carried to each cell through the bloodstream. Cells, however, cannot use glucose without the help of insulin. Glucose is also known as dextrose.

**Glycosuria:** The excretion of sugar in the urine.

**Groins:** The external depression that marks the junction of the lower part of the anterior abdominal wall and the thigh.

**Guarding:** A spasm of muscle to minimize motion or agitation of sites affected by injury or disease.

**Hard palate:** The anterior part of the roof of the mouth, made up by the palatine processes of the maxillae and the horizontal plates of the palatine bone.

**Health:** As officially defined by the World Health Organization, a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity.

**Heart attack:** The death of heart muscle due to the loss of blood supply. The loss of blood supply is usually caused by a complete blockage of a coronary artery, one of the arteries that supplies blood to the heart muscle. Death of the heart muscle, in turn, causes chest pain and electrical instability of the heart muscle tissue.

**Heart disease:** Any disorder that affects the heart. Sometimes the term "heart disease" is used narrowly and incorrectly as a synonym for coronary artery disease. Heart disease is synonymous with cardiac disease but not with cardiovascular disease which is any disease of the heart or blood vessels. Among the many types of heart disease, see, for example: Angina; Arrhythmia; Congenital heart disease; Coronary artery disease (CAD); Dilated cardiomyopathy; Heart attack (myocardial infarction); Heart failure; Hypertrophic cardiomyopathy; Mitral regurgitation; Mitral valve prolapse; and Pulmonary stenosis.

**Heart failure:** The clinical conditions caused by the failure of the heart to maintain an output of blood appropriate to the demands of the body and to the prevailing conditions affecting the cardiac performance.

**Heart muscle:** A type of muscle with unique features only found in the heart. The heart muscle, or cardiac muscle, is medically called the myocardium ("myo-" being the prefix denoting muscle).

**Heart rate:** The number of heart beats per unit time, usually per minute. The heart rate is based on the number of contractions of the ventricles (the lower chambers of the heart). The heart rate may be too fast ( tachycardia ) or too slow ( bradycardia ). The pulse is bulge of an artery from the wave of blood coursing through the blood vessel as a result of the heart beat. The pulse is often taken at the wrist to estimate the heart rate.

**Heart:** The muscle that pumps blood received from veins into arteries throughout the body. It is positioned in the chest behind the sternum (breastbone; in front of the trachea, oesophagus, and aorta; and above the diaphragm muscle that separates the chest and abdominal cavities. The normal heart is about the size of a closed fist, and weighs about 10.5 ounces. It is cone-shaped, with the point of the cone pointing down to the left. Two-thirds of the heart lies in the left side of the chest with the balance in the right chest.

**Heartbeat:** a pulsation of the heart.

**Hematemesis:** The medical term for bloody vomitus.

**Hemoglobin:** The oxygen-carrying pigment and predominant protein in the red blood cells . Hemoglobin forms an unstable, reversible bond with oxygen. In its oxygenated state it is called oxyhemoglobin and is bright red. In the reduced state it is called deoxyhemoglobin and is purple-blue.

**Hemorrhage:** Bleeding or the abnormal flow of blood.

**Hepatic encephalopathy:** Brain dysfunction directly due to liver dysfunction, most often recognized in advanced liver disease. Hepatic encephalopathy may cause disturbances of consciousness and progress to coma .

**Hepatic:** Having to do with the liver. Pronounced hi-'pa-tik. From the Latin hepaticus derived from the Greek hepar meaning (not too surprisingly) the liver.

**Heroin:** Semisynthetic drug derived from morphine. Discovered in 1874, it was introduced commercially in 1898 by the Bayer company in Germany. The name heroin was coined from the German heroisch meaning heroic, strong. Heroin is stronger (more potent) than morphine.

**Histamine:** Substance that plays a major role in many allergic reactions. Histamine dilates blood vessels and makes the vessel walls abnormally permeable.

**Histoplasmosis:** A disease caused by the fungus *Histoplasma capsulatum*. Most people with histoplasmosis have no symptoms. However, histoplasma can cause acute or chronic lung disease and progressive disseminated histoplasmosis affecting a number of organs. It can be fatal if untreated.

**Hot flash:** Colloquialism for one of the vasomotor symptoms of the climacteric that may involve the whole body as a flash of heat.

**Hydramnios:** Excessive accumulation of amniotic fluid.

**Hypercapnia:** The presence of raised carbon dioxide content in the blood.

**Hyperlipidemia:** High lipid (fat) levels in the blood.

**Hypertension:** High blood pressure, defined as a repeatedly elevated blood pressure exceeding 140 over 90 mmHg -- a systolic pressure above 140 with a diastolic pressure above 90.

**Hypoglycemia :** Low blood sugar (glucose). When symptoms of hypoglycemia occur together with a documented blood glucose under 45 mg/dl, and the symptoms promptly resolve with the administration of glucose, the diagnosis of hypoglycemia can be made with some certainty. Hypoglycemia is only significant when it is associated with symptoms.

**Hypothyroid:** Deficiency of thyroid hormone which is normally made by the thyroid gland which is located in the front of the neck:

**Immune system:** A complex system that is responsible for distinguishing us from everything foreign to us, and for protecting us against infections and foreign substances. The immune system works to seek and kill invaders.

**In situ:** In the normal location. An "in situ" tumor is one that is confined to its site of origin and has not invaded neighboring tissue or gone elsewhere in the body.

**Incision:** A cut. When making an incision, a surgeon is making a cut.

**Indicate:** In medicine, to make a treatment or procedure advisable because of a particular condition or circumstance. For example, certain medications are indicated for the treatment of hypertension during pregnancy while others are contraindicated.

**Infarction:** The formation of an infarct, an area of tissue death due to a local lack of oxygen.

**Infection:** The growth of a parasitic organism within the body. (A parasitic organism is one that lives on or in another organism and draws its nourishment therefrom.) A person with an infection has another organism (a "germ") growing within him, drawing its nourishment from the person.

**Infectious (infective) mononucleosis:** An acute febrile illness mostly in young adults. Generally mild, but may be prolonged and debilitating. The main features are lymphadenopathy, fever and sore throat

(which may ulcerate to infection, irritation or other injury, the key feature being redness, warmth, swelling and pain. Inflammation is now recognized as a type of nonspecific immune response.

**Inflammation:** A basic way in which the body reacts to infection , irritation or other injury, the key feature being redness, warmth, swelling and pain . Inflammation is now recognized as a type of nonspecific immune response.

**Influenza:** The flu is caused by viruses that infect the respiratory tract which are divided into three types, designated A, B, and C. Most people who get the flu recover completely in 1 to 2 weeks, but some people develop serious and potentially life-threatening medical complications, such as pneumonia. Much of the illness and death caused by influenza can be prevented by annual influenza vaccination.

**Injure:** To harm, hurt, or wound. The word injure may be in physical or emotional sense. Treadmill machines may injure anyone who gets on one. Sexual molestation injures children. From the Latin injuria meaning injury.

**Injury:** Harm or hurt. The term "injury" may be applied in medicine to damage inflicted upon oneself as in a hamstring injury or by an external agent on as in a cold injury. The injury may be accidental or deliberate, as with a needlestick injury. The term "injury" may be synonymous (depending on the context) with a wound or with trauma.

**Insulin:** A natural hormone made by the pancreas that controls the level of the sugar glucose in the blood. Insulin permits cells to use glucose for energy. Cells cannot utilize glucose without insulin.

**Intestinal obstruction:** Blockage of the intestine by infolding (intussusception), malformation, tumor, digestive problems, a foreign body, or inflammation. Symptoms can include crampy abdominal pain, lack of ability to eliminate normal feces, and eventually shock. On examining the abdomen, the doctor may feel a mass. Abdominal X-rays may suggest intestinal obstruction, but a barium enema may be needed to show the actual cause. Treatment depends on the cause of the obstruction.

**Intestine:** The long, tube like organ in the abdomen that completes the process of digestion. It consists of the small and large intestines

**Kidney:** One of a pair of organs located in the right and left side of the abdomen which clear "poisons" from the blood, regulate acid concentration and maintain water balance in the body by excreting urine. The kidneys are part of the urinary tract. The urine then passes through connecting tubes called "ureters" into the bladder. The bladder stores the urine until it is released during urination.

**Korotkoff's sounds:** The sounds heard with the stethoscope in the auscultatory method of estimating blood pressure.

**Laparoscope:** An instrument through which structures within the abdomen and pelvis can be seen. A small surgical incision (cut) is made in the abdominal wall to permit the laparoscope to enter the abdomen or pelvis. A diversity of tubes can be pushed through the same incision or other small incisions permitting the introduction of probes and other instruments. In this way, a number of surgical procedures can be performed without the need for a large surgical incision.

**Laparoscopy:** A type of minimally invasive surgery in which a small incision (cut) is made in the abdominal wall through which an instrument called a laparoscope is inserted to permit structures within the abdomen and pelvis to be seen. The abdominal cavity is distended and made visible by the instillation of absorbable gas, typically, carbon dioxide. A diversity of tubes can be pushed through the same incision in the skin. Probes or other instruments can thus be introduced through the same opening.

**LDL cholesterol:** Lipoproteins which are combinations of lipids (fats) and proteins are the form in which lipids are transported in the blood. The low-density lipoproteins transport cholesterol from the liver to the tissues of the body. LDL cholesterol is therefore considered the "bad" cholesterol.

**Legionella:** The bacterium that causes Legionnaires' disease. This disease is due specifically to the bacterium *Legionella pneumophila* found in plumbing, shower heads and water-storage tanks. Outbreaks of *Legionella pneumonia* have been attributed to evaporative condensers and cooling towers. The bacterium thrives in the mist sprayed from air-conditioning ducts and so it can infest an entire building or airplane. Travelers are especially vulnerable in the closed space within a plane.

**Lightening:** Not to be confused with a discharge of atmospheric electricity, lightening refers to the sensation that a pregnant woman feels when the baby drops. This is the time when the presenting (lowermost) part of the fetus descends into the maternal pelvis.

**Lingual tonsil:** a collection of lymphoid tissue in the submucous layer of the posterior one-third, or pharyngeal part of the tongue.

**Liver:** An organ in the upper abdomen that aids in digestion and removes waste products and worn-out cells from the blood. The liver is the largest solid organ in the body. The liver weighs about three and a half pounds (1.6 kilograms). It measures about 8 inches (20 cm) horizontally (across) and 6.5 inches (17 cm) vertically (down) and is 4.5 inches (12 cm) thick.

**Lobe:** Part of an organ that appears to be separate in some way from the rest. A lobe may be demarcated from the rest of the organ by a fissure (crack), sulcus (groove), connective tissue or simply by its shape. For example, there are the frontal, parietal, temporal, and occipital lobes of the brain.

**Lobule:** A little lobe.

**Lumpectomy:** The surgical removal of a small tumor (a lump) which may or may not be benign (or malignant). Lumpectomy has come to refer specially to the removal of a lump from the breast.

**Lungs:** The lungs are a pair of breathing organs located with the chest which remove carbon dioxide from and bring oxygen to the blood. There is a right and left lung.

**Lymph node:** Also sometimes referred to as lymph glands, lymph nodes are small rounded or bean-shaped masses of lymphatic tissue surrounded by a capsule of connective tissue. Lymph nodes are located in many places in the lymphatic system throughout the body. Lymph nodes filter the lymphatic fluid and store special cells that can trap cancer cells or bacteria that are traveling through the body in the lymph fluid. The lymph nodes are critical for the body's immune response and are principal sites where many immune reactions are initiated. During a physical examination, doctors often look for swollen lymph nodes in areas where lymph nodes are abundant, including the neck, around the collarbone, the armpit (axilla), and the groin.

**Lymph:** An almost colorless fluid that travels through vessels called lymphatics in the lymphatic system and carries cells that help fight infection and disease.

**Lymphadenopathy:** Any morbid condition of the lymph glands.

**Lymphatic tissue:** A part of the body's immune system that helps protect it from bacteria and other foreign entities.

**Lymphoid tissue:** Part of the body's immune system that helps protect it from germs.

**Macrosomia:** Abnormally large size of the body.

**Malaise:** A vague feeling of discomfort, one that cannot be pinned down but is often sensed as "just not right."

**Mammogram:** An X-ray of the breast with the breast in a device that compresses and flattens it. There are two basic mammogram tests -- screening mammograms and diagnostic mammograms.

**Mastectomy:** A general term for removal of the breast, usually to remove cancerous tissue. The operation can be done in a hospital or in an outpatient clinic, depending on how extensive it needs to be. It takes from two to three hours, with three to five weeks for full recovery. Drainage shunts are left in the surgical incision for a few days after the operation; these are removed in three to five days if the area is healing normally. After the mastectomy, reconstructive surgery may be performed to restore a more normal appearance.

**Mediastinitis:** Inflammation affecting the cellular substance of the mediastinum.

**Melena:** Stools or vomit stained black by blood pigment or dark blood products.

**Membrane:** A very thin layer of tissue that covers a surface.

**Mesentery:** A fold of tissue which attaches organs to the body wall.

**Metabolism:** The whole range of biochemical processes that occur within us (or any living organism). Metabolism consists both of anabolism and catabolism (the buildup and breakdown of substances, respectively). The term is commonly used to refer specifically to the breakdown of food and its transformation into energy.

**Metastasis:** **1.** The process by which cancer spreads from the place at which it first arose as a primary tumor to distant locations in the body. **2.** The cancer resulting from the spread of the primary tumor. For example, someone with melanoma may have a metastasis in their brain. And a person with colon cancer may, fortunately, show no metastases.

**Metastasize:** The spread from one part of the body to another. When cancer cells metastasize and cause secondary tumors, the cells in the metastatic tumor are like those in the original cancer.

**Metropathia hemorrhagica:** Abnormal, excessive, often continuous uterine bleeding due to persistence and exaggeration of the follicular phase of the menstrual cycle.

**Metrorrhagia:** Any irregular acyclic bleeding from the uterus between periods.

**Microscope:** An optical instrument that augments the power of the eye to see small objects. The name microscope was coined by Johannes Faber (1574-1629) who in 1628 borrowed from the Greek to combined micro-, small with skopein, to view. Although the first microscopes were simple microscopes, most (if not all) optical microscopes today are compound microscopes.

**Micturition:** Urination, frequency of urination.

**Missed abortion (delayed abortion):** *Sp. aborto diferido*

**Mitral stenosis:** Narrowing of the orifice of the mitral valve, which in almost every case is the result of rheumatic endocarditis, the very rare exception being of congenital origin.

**Motor:** In medicine, having to do with the movement of a part of the body. Something that produces motion or refers to motion. For example, a motor neuron is a nerve cell that conveys an impulse to a muscle causing it to contract. The term "motor" today is also applied to a nerve that signals a gland to secrete. Motor is as opposed to sensory.

**Mucus:** A thick slippery fluid produced by the membranes lining certain organs such as the nose, mouth, throat, and vagina. Mucus is the Latin word for "a semi fluid, slimy discharge from the nose." Note that mucus is a noun while the adjective is mucous.

**Muscle:** Muscle is the tissue of the body which primarily functions as a source of power. There are three types of muscle in the body. Muscle which is responsible for moving extremities and external areas of the body is called "skeletal muscle." Heart muscle is called "cardiac muscle." Muscle that is in the walls of arteries and bowel is called "smooth muscle."

**Mycoplasma:** The mycoplasma are a very large group of bacteria. There are more than 70 types. Mycoplasma hominis and Mycoplasma pneumoniae are among the dozen types of mycoplasma that occur in humans.

**Myocardial infarction:** The process of formation of a myocardial infarct.

**Myometritis:** Inflammation of the muscular wall of the uterus.

**Narcotic: 1.** A drug that causes insensibility or stupor. A narcotic induces narcosis, from the Greek "narke" for "numbness or torpor." **2.** A drug such as marijuana which is subject to regulatory restrictions comparable to those for addictive narcotics.

**Nasopharyngeal tonsil:** A mass of lymphoid tissue in the roof and posterior wall of the nasopharynx. It is also referred to, when enlarged, as adenoids.

**Nausea:** Nausea is the urge to vomit. It can be brought by many causes including, systemic illnesses, such as influenza, medications, pain, and inner ear disease.

**Nerve:** A bundle of fibers that uses chemical and electrical signals to transmit sensory and motor information from one body part to another. See: Nervous system.

**Node:** Literally a knot, a node is a collection of tissue. For example a lymph node, is a collection of lymphoid tissue. A nodule is a small node, a little collection of tissue.

**Nulliparous:** Never having born children.

**Onset:** In medicine, the first appearance of the signs or symptoms of an illness as, for example, the onset of rheumatoid arthritis. There is always an onset to a disease but never to the return to good health. The default setting is good health.

**Oophoritis:** Inflammation of an ovary.

**Oropharynx:** The part of the pharynx which lies below the soft palate and behind the mouth, the buccal part of the pharynx.

**Orthopnea:** A condition in which the patient can breathe comfortably only when he is sitting or standing erect.

**Orthostatic hypotension; postural hypotension:** A condition in which the blood pressure falls, often to the extent of producing syncope, when the subject assumes the erect posture. It is due to failure of

the normal autonomic response to the change of posture and may result from the effect of drugs or from disease of the autonomic nervous system.

**Outpatient:** A patient treated in a hospital dispensary or clinic instead of in a room or ward.

**Ovum:** A female germ cell or egg. The early embryo and its membranes derived from the growth of the fertilized eggs.

**Pain:** An unpleasant sensation that can range from mild, localized discomfort to agony. Pain has both physical and emotional components. The physical part of pain results from nerve stimulation. Pain may be contained to a discrete area, as in an injury, or it can be more diffuse, as in disorders like fibromyalgia. Pain is mediated by specific nerve fibers that carry the pain impulses to the brain where their conscious appreciation may be modified by many factors.

**Palatine tonsil:** A mass of lymphoid tissue on the side wall of the oral part of the pharynx between the palatoglossal and palatopharyngeal arches.

**Pancreas:** A fish-shaped spongy grayish-pink organ about 6 inches (15 cm) long that stretches across the back of the abdomen, behind the stomach. The head of the pancreas is on the right side of the abdomen and is connected to the duodenum (the first section of the small intestine). The narrow end of the pancreas, called the tail, extends to the left side of the body.

**Paralysis:** Loss of voluntary movement (motor function). Paralysis that affects only one muscle or limb is partial paralysis, also known as palsy; paralysis of all muscles is total paralysis.

**Parametritis:** Inflammation of the tissue adjacent to the uterus, particularly in the broad ligament.

**Paroxysmal nocturnal dyspnea:** paroxysmal cardiac dyspnea occurring at night.

**Pelvis:** The lower part of the abdomen located between the hip bones.

**Peptic ulcer:** A hole in the lining of the stomach, duodenum, or esophagus. A peptic ulcer of the stomach is called a gastric ulcer, an ulcer of the duodenum is a duodenal ulcer, and a peptic ulcer of the esophagus is an esophageal ulcer. A peptic ulcer occurs when the lining of these organs is corroded by the acidic digestive juices which are secreted by the stomach cells.

**Peritoneum:** The membrane that lines the abdominal cavity and covers most of the abdominal organs. (From the Greek peri- meaning around + tonos meaning a stretching = a stretching around).

**Peritonitis:** Inflammation of the peritoneum (The peritoneum is the tissue layer of cells lining the inner wall of the abdomen and pelvis). Peritonitis can result from infection (such as bacteria or parasites), injury and bleeding, or diseases (such as systemic lupus erythematosus).

**Peritonsillar abscess:** A collection of pus surrounding an infected tonsil. It can occur as a complication of tonsillitis.

**Petechia:** A small spot, generally reddish or purple ranging in size from a pinpoint to a pinhead, appearing under the epidermis and caused by extravasation of blood.

**Pharyngitis:** inflammation of the pharynx; it may be due to organismal infection, or to reflex disturbance from another part of the body, such as the gastrointestinal tract, or the pelvis, particularly in the female.

**Plaque:** A semi-hardened accumulation of substances from fluids that bathe an area. Examples include dental plaque and cholesterol plaque.

**Pleural effusion:** Excess fluid between the two membranes that envelop the lungs. These membranes are called the visceral and parietal pleurae. The visceral pleura wraps around the lung while the parietal pleura lines the inner chest wall. There is normally a small quantity (about 3 to 4 teaspoons) of fluid that is spread thinly over the visceral and parietal pleurae and acts as a lubricant between the two membranes. Any significant increase in the quantity of pleural fluid is a pleural effusion.

**Pneumonia:** Inflammation of one or both lungs with consolidation. Pneumonia is frequently but not always due to infection. The infection may be bacterial, viral, fungal or parasitic. Symptoms may include fever, chills, cough with sputum production, chest pain, and shortness of breath.

**Poison:** Any substance that can cause severe distress or death if ingested, breathed in, or absorbed through the skin. Many substances that normally cause no problems, including water and most vitamins, can be poisonous if taken in too large of a quantity. Poison treatment depends on the substance: if there are treatment instructions on the substance's container and you are sure it contained no other item, follow those directions immediately. Always contact your nearest Poison Control Center if you are concerned about possible poison ingestion.

**Preeclampsia:** Development of hypertension with proteinuria or edema, or both, due to pregnancy or the influence of a recent pregnancy.

**Primary tumor:** A tumor that is at the original site where it first arose. For example, a primary brain tumor is one that arose in the brain as opposed to one that arose elsewhere and metastasized (spread) to the brain. The original tumor is sometimes called "the primary."

**Primary/essential hypertension:** Hypertension which cannot be shown to be secondary to other pathological conditions, such as renal disease; this is the commonest type of hypertension.

**Prognosis:** **1.** The expected course of a disease **.2.** The patient's chance of recovery. The prognosis predicts the outcome of a disease and therefore the future for the patient. His prognosis is grim, for example, while hers is good.

**Protein:** A large molecule composed of one or more chains of amino acids in a specific order determined by the base sequence of nucleotides in the DNA coding for the protein.

**Pulmonary embolism:** The obstruction of the pulmonary artery or a branch of it leading to the lungs by a blood clot, usually from the leg, or foreign material causing sudden closure of the vessel. (Embolus is from the Greek "embolos" meaning plug.)

**Puncture wound:** An injury caused by a pointed object that pierces or penetrates the skin. Any puncture wound through tennis shoes (as with a nail) has a high risk of infection, because the foam in tennis shoes can harbor the bacteria *Pseudomonas*. Puncture wounds also carry a danger of tetanus.

**Pus:** A thick whitish-yellow fluid which results from the accumulation of white blood cells (WBCs), liquified tissue and cellular debris. Pus is commonly a site of infection or foreign material in the body.

**Pyrexia:** A fever, a condition characterized by fever.

**Quinsy:** Peritonsillar abscess.

**Radiation therapy:** The use of high-energy rays to damage cancer cells, stopping them from growing and dividing. Like surgery, radiation therapy is a local treatment that affects cancer cells only in the treated area.

**Rash:** Breaking out (eruption) of the skin. Medically, a rash is referred to as an exanthem.

**Rebound tenderness:** Pain when pressure is released. *Sp. dolor a la descompresión.*

**Rebound:** Return of the original symptoms when maneuvers or treatment is discontinued.

**Recurrence:** The return of a sign, symptom or disease after a remission. The reappearance of cancer cells at the same site or in another location is, unfortunately, a familiar form of recurrence.

**Red blood cell:** The blood cell that carries oxygen. Red cells contain hemoglobin and it is the hemoglobin which permits them to transport oxygen (and carbon dioxide). Hemoglobin, aside from being a transport molecule, is a pigment. It gives the cell its red color (and name).

**Reflex:** A reaction that is involuntary. The corneal reflex is the blink that occurs with irritation of the eye. The nasal reflex is a sneeze.

**Retinopathy:** Any diseased condition of the retina, usually associated with impairment of vision, distortion of objects, and edema and sometimes hemorrhage into the substance of the retina.

**Retropharyngeal abscess:** A collection of pus at the back of the throat. It can occur as a complication of tonsillitis.

**Reye's syndrome:** A disorder associated with using aspirin that can affect children after a viral illness.

**Rheumatic fever:** A disease that is caused by the body's reaction to infection by a bacterium known as group A beta hemolytic streptococcus. The disease can cause inflammation of the joints and damage to the heart.

**Rule out:** Exclude. *Sp. descartar*

**Rupture:** A break or tear in any organ (such as the spleen) or soft tissue (such as the achilles tendon). Rupture of the appendix is more likely among uninsured and minority children when they develop appendicitis.

**Saturated fat:** A fat that is solid at room temperature and comes chiefly from animal food products. Some examples are butter, lard, meat fat, solid shortening, palm oil, and coconut oil. These fats tend to raise the level of cholesterol in the blood.

**Scarlet fever (scarlatina):** An acute infectious disease caused by strains of hemolytic streptococci, and characterized by fever, inflammation of the fauces and a punctate erythematous (scarlet) rash.

**Scarring:** The fibrous tissue replacing normal tissues destroyed by injury or disease.

**Screening mammogram :** A mammogram (an X-ray of the breast) in women who have no signs of breast cancer . It usually involves two X-rays of each breast. The aim of a screening mammogram is to detect a tumor that cannot be felt.

**Secondary hypertension:** Hypertension which is secondary to other pathological conditions, such as renal disease.

**Seizure:** Uncontrolled electrical activity in the brain, which may produce a physical convulsion, minor physical signs, thought disturbances, or a combination of symptoms.

**Sensation:** In medicine and physiology, sensation refers to the registration of an incoming (afferent) nerve impulse in that part of the brain called the sensorium , which is capable of such perception. Therefore, the awareness of a stimulus as a result of its perception by sensory receptors. (Sensory is here synonymous with sensation.)

**Sepsis:** Commonly called a "blood stream infection." The presence of bacteria (bacteremia) or other infectious organisms or their toxins in the blood (septicemia) or in other tissue of the body.

**Shock:** In medicine, shock is a critical condition brought on by a sudden drop in blood flow through the body. There is failure of the circulatory system to maintain adequate blood flow. This sharply curtails the delivery of oxygen and nutrients to vital organs. It also compromises the kidney and so curtails the removal of wastes from the body.

**Side effects:** Problems that occur when treatment goes beyond the desired effect. Or problems that occur in addition to the desired therapeutic effect.

**Sign:** Any objective evidence of disease. Gross blood in the stool is a sign of disease. It can be recognized by the patient, doctor, nurse, or others. In contrast, a symptom is, by its nature, subjective. Abdominal pain is a symptom. It is something only the patient can know.

**Silent killer:** Sp. enemigo silencioso.

**Sinusitis:** Inflammation affecting the mural epithelium of a sinus, particularly of the paranasal sinuses.

**Skin:** The skin is the body's outer covering. It protects us against heat and light, injury, and infection. It regulates body temperature and stores water, fat, and vitamin D. Weighing about 6 pounds, the skin is the body's largest organ. It is made up of two main layers; the outer epidermis and the inner dermis.

**Skull:** The skull is a collection of bones which encase the brain and give form to the head and face. The bones of the skull include the following: the frontal, parietal, occipital, temporal, sphenoid, ethmoid, zygomatic, maxilla, nasal, vomer, palatine, inferior concha, and mandible.

**Smear:** A thin specimen for microscopic examination; it is usually prepared by spreading liquid or semisolid material uniformly onto a glass slide, fixing it, and staining it before examination.

**Soft palate:** The fold from the posterior border of the hard palate, extending into the pharynx.

**Sphygmomanometer:** An instrument for measuring the arterial blood pressure. By means of an inflatable rubber cuff which encircles the limb, air pressure within the cuff is balanced against the pressure in the artery (usually the brachial artery); the pressure is estimated by means of a mercury or aneroid manometer.

**Spinal cord:** The major column of nerve tissue that is connected to the brain and lies within the vertebral canal and from which the spinal nerves emerge. Thirty-one pairs of spinal nerves originate in the spinal cord: 8 cervical, 12 thoracic, 5 lumbar, 5 sacral, and 1 coccygeal. The spinal cord and the brain constitute the central nervous system (CNS). The spinal cord consists of nerve fibers that transmit impulses to and from the brain. Like the brain, the spinal cord is covered by three connective-tissue envelopes called the meninges. The space between the outer and middle envelopes is filled with cerebrospinal fluid (CSF), a clear colorless fluid that cushions the spinal cord against jarring shock. Also known simply as the cord.

**Sputum:** The mucus and other matter brought up from the lungs, bronchi, and trachea that one may cough up and spit out or swallow. The word "sputum" is borrowed directly from the Latin "to spit." Also called *expectoration*.

**Stenosis:** The constriction or narrowing of an orifice or the lumen of a hollow or tubular organ.

**Stethoscope:** an instrument used for conducting sounds to the ear.

**Stillbirth:** The birth of a dead fetus.

**Stool:** The solid matter discharged in a bowel movement.

**Strawberry cervix:** Macular erythema of the uterine cervix, characteristic of vaginitis due to trichomonas vaginalis.

**Strep throat:** Streptococcal sore throat.

**Streptococcus:** A group of bacteria, familiarly known as strep, that cause a multitude of diseases. The name comes from the Greek strepto- meaning twisted + kokkos meaning berry, and that is exactly what strep look like under the microscope, like a twisted bunch of little round berries. Illness caused by strep includes strep throat, strep pneumonia, scarlet fever, rheumatic fever , etc.

**Stroke :** The sudden death of some brain cells due to a lack of oxygen when the blood flow to the brain is impaired by blockage or rupture of an artery to the brain. A stroke is also called a cerebrovascular accident or, for short, a CVA. It is also the commonly used term for apoplexy.

**Subarachnoid:** Literally, beneath the arachnoid, the middle of three membranes that cover the central nervous system. In practice, subarachnoid usually refers to the space between the arachnoid and the pia mater, the innermost membrane surrounding the central nervous system.

**Subchorionic:** Beneath the chorion (the double-layered nutritive envelope which protects and covers the fertilized ovum).

**Subdural:** Below the dura, the outermost, toughest, and most fibrous of the three membranes (meninges) covering the brain and the spinal cord. An subdural hematoma is a collection of blood beneath the dura.

**Swab:** A wad of cotton, gauge, or other absorbent material attached to the end of a stick; used to apply or remove a substance from a surface.

**Sweating:** The act of secreting fluid from the skin by the sweat (sudoriferous) glands. These are small tubular glands situated within and under the skin (in the subcutaneous tissue). They discharge by tiny openings in the surface of the skin.

**Symptom:** Any subjective evidence of disease. Anxiety, lower back pain, and fatigue are all symptoms. They are sensations only the patient can perceive. In contrast, a sign is objective evidence of disease. A bloody nose is a sign. It is evident to the patient, doctor, nurse and other observers.

**Syncope:** Partial or complete loss of consciousness with interruption of awareness of oneself and ones surroundings. When the loss of consciousness is temporary and there is spontaneous recovery, it is referred to as syncope or, in nonmedical quarters, fainting. Syncope accounts for one in every 30 visits to an emergency room.

**Systole:** The period during which the heart contracts.

**Systolic blood pressure:** The peak or maximal pressure in the arteries during the cardiac cycle, corresponding to the contraction of the ventricle.

**Temporal:** 1. Pertaining to time, limited in time, temporary, or transient.  
2. Pertaining to the temple region of the head. The temporal lobe of the brain is located beneath the temple. From the Latin tempus which means both time and the temple of the head.

**Tenderness:** Painful reaction to palpation.

**Tendon:** The tissue by which a muscle attaches to bone. A tendon is somewhat flexible, but fibrous and tough. When a tendon becomes inflamed, the condition is referred to as tendinitis or tendonitis. Inflamed tendons are at risk for rupture.

**Therapy:** The treatment of disease.

**Thoracentesis:** Removal of fluid in the pleura through a needle.

**Threatened abortion:** Sp. amenaza de aborto

**Thyroid:** **1.** The thyroid gland. Also, pertaining to the thyroid gland. **2.** A preparation of the thyroid gland used to treat hypothyroidism. **3.** Shaped like a shield. (The thyroid gland was so-named by Thomas Wharton in 1656 because it was shaped like an ancient Greek shield.)

**Tinnitus:** Ringing or buzzing in the ears.

**Tissue:** A tissue in medicine is not like a piece of tissue paper. It is a broad term that is applied to any group of cells that perform specific functions.

**Tomography:** The process for generating a tomogram, a two-dimensional image of a slice or section through a three-dimensional object. Tomography achieves this remarkable result by simply moving an x-ray source in one direction as the x-ray film is moved in the opposite direction during the exposure to sharpen structures in the focal plane, while structures in other planes appear blurred. The tomogram is the picture; the tomograph is the apparatus; and tomography is the process.

**Tonsillar pillar:** An elongated structure which appears to support another structure; usually arranged in pairs beneath either end of an arch-like structure, e.g., pillars of fauces, the folds of mucous membrane covering the palatoglossal and palatopharyngeal muscles on either side of the passage from mouth to pharynx beneath the arch-like palate.

**Tonsillectomy:** Surgical removal or excision of the tonsils.

**Torticollis:** spasm of the neck muscles, drawing the head to one side and twisting the neck.

**Toxin:** One of a number of poisons produced by certain plants, animals, and bacteria.

**Trauma:** Any injury, whether physically or emotionally inflicted. "Trauma" has both a medical and a psychiatric definition. Medically, "trauma" refers to a serious or critical bodily injury, wound, or shock. This definition is often associated with trauma medicine practiced in emergency rooms and represents a popular view of the term. In psychiatry, "trauma" has assumed a different meaning and refers to an experience that is emotionally painful, distressful, or shocking, which often results in lasting mental and physical effects.

**Trismus:** Inability to open the mouth due to tonic contracture of the muscles of the jaw.

**Tubes:** The "tubes" are medically known as the Fallopian tubes.

**Tumor:** An abnormal mass of tissue. Tumors are a classic sign of inflammation, and can be benign or malignant (cancerous). There are dozens of different types of tumors. Their names usually reflect the kind of tissue they arise in, and may also tell you something about their shape or how they grow. For example, a medulloblastoma is a tumor that arises from embryonic cells (a blastoma) in the inner part of the brain.

**Ulcer:** An area of tissue erosion, for example, of the skin or lining of the gastrointestinal (GI) tract. Due to the erosion, an ulcer is concave. It is always depressed below the level of the surrounding tissue.

**Ulceration:** The process or fact of being eroded away, as by an ulcer.

**Ultrasound:** High-frequency sound waves. Ultrasound waves can be bounced off of tissues using special devices. The echoes are then converted into a picture called a sonogram. Ultrasound imaging, referred to as ultrasonography, allows physicians and patients to get an inside view of soft tissues and body cavities, without using invasive techniques. Ultrasound is often used to examine a fetus during pregnancy. There is no convincing evidence for any danger from ultrasound during pregnancy

**Unconscious:** 1. Interruption of awareness of oneself and one's surroundings, lack of the ability to notice or respond to stimuli in the environment. A person may become unconscious due to oxygen deprivation, shock, central nervous system depressants such as alcohol and drugs, or injury. 2. In psychology, that part of thought and emotion that happens outside everyday awareness.

**Urea:** A nitrogen-containing substance normally cleared from the blood by the kidney into the urine. Diseases that compromise the function of the kidney often lead to increased blood levels of urea, as measured by the blood urea nitrogen (BUN) test.

**Uremia:** The presence of excessive amounts of urea in the blood, which may be a sign of kidney disease or failure.

**Urinalysis:** A test that determines the content of the urine. Because urine removes toxins and excess liquids from the body, it can contain important clues. Urinalysis can be used to detect some types of disease, particularly in the case of metabolic disorders and kidney disease. It can also be used to uncover evidence of drug abuse.

**Uterus:** The uterus (womb) is a hollow, pear-shaped organ located in a woman's lower abdomen between the bladder and the rectum. The narrow, lower portion of the uterus is the cervix; the broader, upper part is the corpus. The corpus is made up of two layers of tissue.

**Vaginosis:** Disease of the vagina

**Vallate papillae:** About 10 large button-like projections of the mucous membrane of the tongue, rich in taste buds and parallel with and in front of the sulcus terminales.

**Ventricular fibrillation:** An abnormal irregular heart rhythm whereby there are very rapid uncoordinated fluttering contractions of the lower chambers (ventricles) of the heart.

**Ventricular hypertrophy:** Enlargement of the heart muscle of the ventricles as a result of valvular disease or hypertension.

**Vessel:** A tube in the body that carries fluids: blood vessels or lymph vessels.

**Virus:** A microorganism smaller than bacteria, which cannot grow or reproduce apart from a living cell. A virus invades living cells and uses their chemical machinery to keep itself alive and to replicate itself. It may reproduce with fidelity or with errors (mutations)-this ability to mutate is responsible for the ability of some viruses to change slightly in each infected person, making treatment more difficult. The plural form is *viruses*.

**Wheezing:** A whistling noise in the chest during breathing when the airways are narrowed or compressed and very typical of asthma.

**White coat hypertension:** temporary blood pressure increase caused by the stress of visiting a doctor's office. *Sp. hipertensión de (efecto) bata blanca.*

**Womb:** uterus.

**Yeast:** general term denoting true fungi of the family saccharomycetaceae.

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