

UNIT FIVE

ACTIVITY AND EXERCISE

Ctd--

- Activity and exercise is important for normal functioning of the respiratory, cardiac system and musculoskeletal systems.
- Subjective data on mobility and self care includes:
 - activity of daily living (self care skills, bathing toileting, dressing, feeding)
 - Simple motor activities(sitting, standing, Walking)
 - Home maintenances skills (cooking, shopping, bed making, washing dishes)
 - Any restriction of activity or exercise

Ctd--

- ❑ Objective data (Musculoskeletal assessment)
 - Motor examination (gait and balance, coordination, abnormal movement)
 - Joint mobility
 - Muscle strength
- ❑ Subjective data on respiration
 - Sign and symptom of respiratory disease such as cough, chest pain
 - Risk factors for lung disease such as smoking, exposure to pollutants.

Ctd--

- ❑ Objective data – respiratory pattern assessment
 - assessment of lung and thorax
- ❑ Subjective data on cardiovascular function
 - risk factor for cardiovascular disease such as family history, smoking, elevated cholesterol

Care of unit environment (different bed making)

- Bed making: is usual procedure to change bed linen after bath or soiling
- Purpose: To make smooth and comfortable bed with list disturbance of the patient.

Fundamentals of bed making

- when removing sheet from the bed lift the mattress, while loosening the bed linen never pool sheet with force
- Turn the mattress from top to bottom or from side to side when making un occupied bed

Ctd--

- Always arrange in correct order
- Do not let your uniform touch the bed
- While tucking bedding under the mattress the palm of the hand should face down in order to protect your nails
- The open end of the pillow should be placed away from the entrance of the ward
- Never throw soiled linen on the floor
- After completing bed making see that the locker and chair are in place and that **the beds are on the line**

Ctd--

❑ **Equipment :-**

- **2 large sheet**
- **Rubber draw sheet**
- **Cotton draw sheet**
- **Blanket, Glove**
- **Pillow case, Bed spread**
- **Mattress cover as needed**
- **Large rubber sheet (if the client is incontinent or obstetric)**
- **Charting material**
- **See procedures??**

Ctd--

❑ **An occupied bed**

- Pt is in bed and has weakness to go out of bed.
- Making an occupied bed
- It is changing bed linen with the client in bed

Purpose – To provide comfort and patient movement

Ctd--

- Precaution- work quickly and disturb the patient as little as possible
- This tasks of bed making may be done alone however if the client is large or his or her medical condition is unstable ask a coworker to assist you
- Equipments are same.

Ctd--



Fig 51. Fan-fold the bottom
linens



Fig 52. Fan-fold the clean
bottom linens



Fig. 53 an-fold the draw
sheet



Fig 54 unfold bottom sheet

Ctd--

❑ Anesthetic bed

- It is a bed that is prepared for a patient that is recovering from anesthesia

Purpose: - to facilitate easy transfer of the patient from stretcher to bed

- to prevent the patient from chillness
- to protect the mattress and the bedding from vomiting, drainage, bleeding or discharge.



Fig.9 Post-operative bed

Ctd--

□ Equipment-

- Linen
- small rubber sheet
- cotton draw sheet
- an extra rubber and cotton draw sheet for operated area
- paper and pen for recording vital sign
- swab, towel or tissue paper

Ctd--

- Receiver for waste
- IV stand
- Blood pressure apparatus
- Oxygen as needed
- Emergency drug
- Bed block as needed
- Suction machine

Ctd--

- ❑ Receiving patient from operation room
- 1. keep bed warm with extra blanket if needed
- 2. Close window and door
- 3. Remove folded top cover of the bed
- 4. Place patient on bed covering the patient quickly
- 5. See that the patient is properly placed in bed with the head to the side
- 6. check patients condition – operated area
 - urine out put
 - v/s of the patient

Ctd--

❑ **Making cardiac bed**

- Cardiac bed is one prepared for a patient with heart disease in order ease difficulty in breathing

Purpose: - to relieve dyspnea

- To prevent

- To provide comfort

- Equipment: The same as closed bed but extra pillow and oxygen should be ready for use

Ctd--

□ Procedure:

1. make bed same as closed bed
2. But bed in semi fowlers position
3. Put foot rest to prevent patient from slipping down

Ctd--

❑ Making amputated bed

- It is regular bed with bed cradle or bed in which the upper closes are divided

Purpose

- To leave part for observation
- To maintain position
- To make the patient comfortable
- To prevent the affected part from the weight of upper bedding
- To protect the upper bedding from moisture

Ctd--

Equipment : The same as anesthetic bed except

- One large rubber sheet for the needed part
- Tourniquet
- 2 Sand bags and draw sheet to support the stump
- Bed cradle

Ctd--

❑ Fractured Bed

- Is a bed with bed board under normal bed and bed cradle

Purpose

- to provide a flat un yielding surface to support the fractured limb
- To maintain position
- To make the patient comfort
- Equipment : - As for closed bed

Ctd--

- Sand bags
- Pillow if required
- Fractured board
- Bed cradle
- Small blanket or draw sheet
- Small rubber sheet

Perineal Care

- is cleansing of the external genitalia, perineum, and surrounding area.
- purposes :- to prevent or eliminate infection and odor,
 - to promote healing,
 - remove secretions, and provide comfort.
- Perineal care can be provided alone or as part of the bed bath.
- It may be an embarrassing procedure for both the client and the nurse, especially if the client is of the opposite sex.
- Clients who are embarrassed may elect to perform their own perineal care.

Ctd--

- **nurse should provide** the client:-
 - with warm water,
 - moistened washcloth, soap, a dry towel, and privacy.
- If pt is unable it is the responsibility of nurse to provide care.

Ctd--

Equipment- Bath basin

- Waterproof pads
- Soap
- Toilet tissue
- Two or three washcloths
- Lotion or ointment
- Dry bath towel
- Disposable gloves and Bath blanket

Ctd--

Procedure

1. Explain procedure and purpose to client.
Obtain permission. Close door and pull curtain around bed.
 2. Wash hands and apply gloves.
 3. Place waterproof pad under client's buttocks.
Client may be placed on a bedpan for perineal care.
- ☐ Females usually assume the dorsal recumbent position.
 - ☐ Males may assume the dorsal recumbent or supine position with knees and hips flexed.

4. Expose perineal area. Fold client's gown up above the genital area. Fold top linen down to the end of the bed



Fig. 55 Drape the client for perineal care.

5. Moisten and lather washcloths.

Ctd--

- ❑ Female: Clean perineal area in the downward direction (from pubic area to rectum).
 - Clean and dry upper thighs. (far 1st and then near thigh)
 - Use separate quarters of the washcloth for each cleaning stroke.
 - Discard soiled washcloths as necessary.
 - Clean the labia majora.
 - Separate the labia majora to clean between the labia majora and labia minora.
 - With the labia separated, clean the clitoris, urethral meatus, and vaginal orifice.
 - Rinse the area well with warm water. Pat perineal area dry. Apply lotion to upper thighs.

Ctd--

- ❑ Male: Gently raise penis.
 - Place a bath blanket under the penis.
 - If the client develops an erection, delay perineal care.
 - Gently grasp the shaft of the penis.
 - If the client is uncircumcised, retract the foreskin.
 - Use a circular motion to clean the meatus of the penis and glans in an outward direction (Fig. 57).
 - Replace the foreskin after cleansing the glans.
 - Clean the shaft of the penis. Rinse penis.
 - Pat glans and shaft of penis dry.
 - Clean and dry scrotum.
 - Discard soiled washcloths as necessary

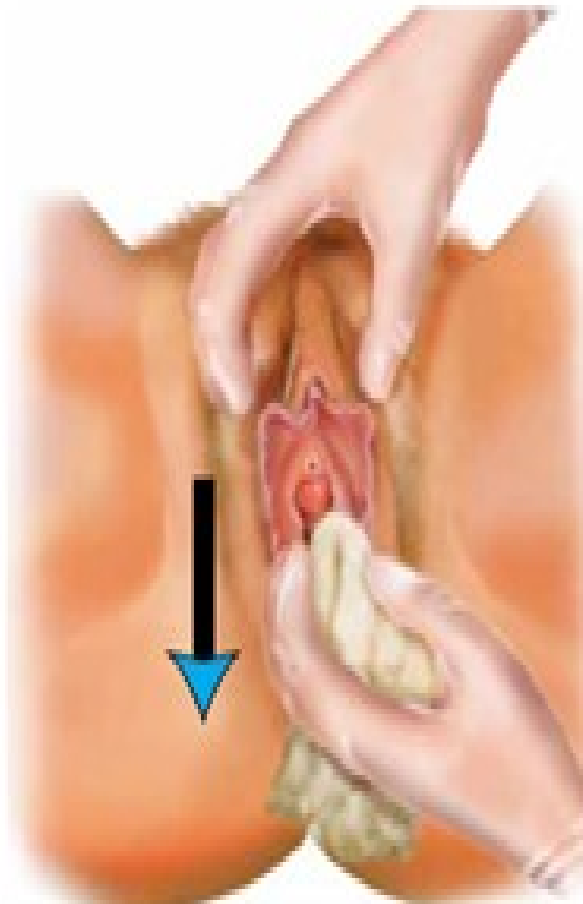


Fig 56 clean female perineal area

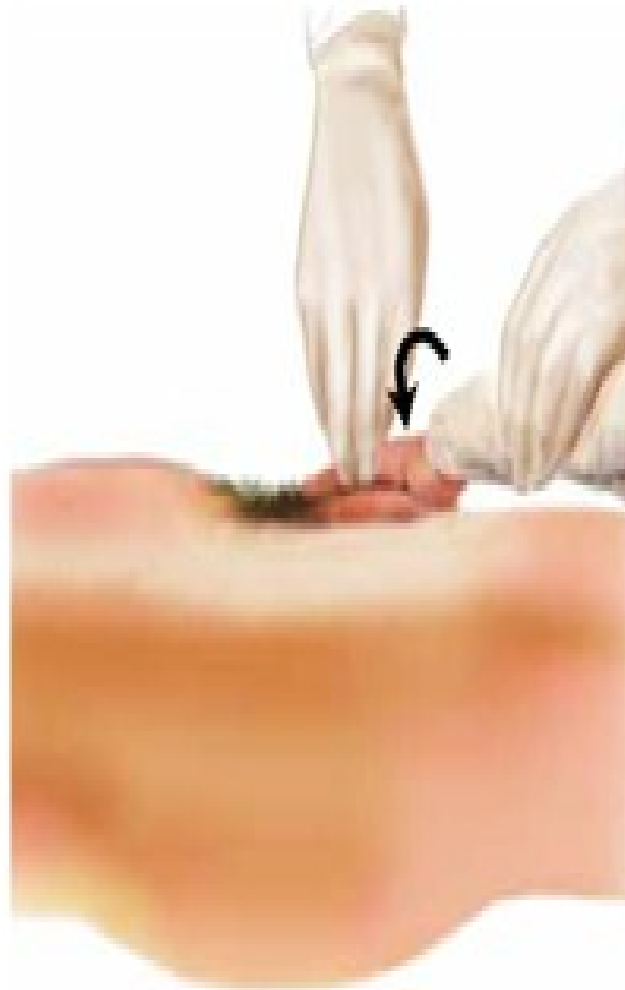


Fig 57 clean male perineal area

Ctd--

6. Perform anal care.

- First remove any fecal material with toilet tissue.
- Clean perineal area by wiping from genitals to anus with one stroke.
- Discard soiled washcloths as necessary.
- Clean anus in circular motion. Rinse anal area. Pat dry. Apply lotion.

7. Remove gloves. Wash hands. Remove bath blanket. Place gown down over genitals. Place top linen on client.

8. Document procedure performed, client's response, and assessment findings.

Provide Oral Care

- The oral cavity functions in mastication, secretion of mucus to moisten and lubricate the digestive system, and secretion of digestive enzymes.
- ❑ Common problems occurring in the oral cavity are:
 - Bad breath (halitosis)
 - Dental caries (cavities)
 - Plaque
 - Periodontal disease (pyorrhea)
 - Inflammation of the gums (gingivitis)
 - Inflammation of the oral mucosa (stomatitis)

Ctd--

- Purpose: - To keeps the mouth teeth and gum clean
 - to stimulate appetite

Equipment:

- Denture cup
- cotton tipped applicator
-
- spatula
- Toothbrush
- lubricant
- Glove
- Toothpaste
- Receiver for waste
-
- Emesis basin
- Drinking tube
- Towel
- Charting material
- Glass of water
- mouth wash solution



Fig.18 Placing a kidney tray on the mackintosh covered a face towel



Fig. 19 Cleansing teeth with supporting padded tongue depressor

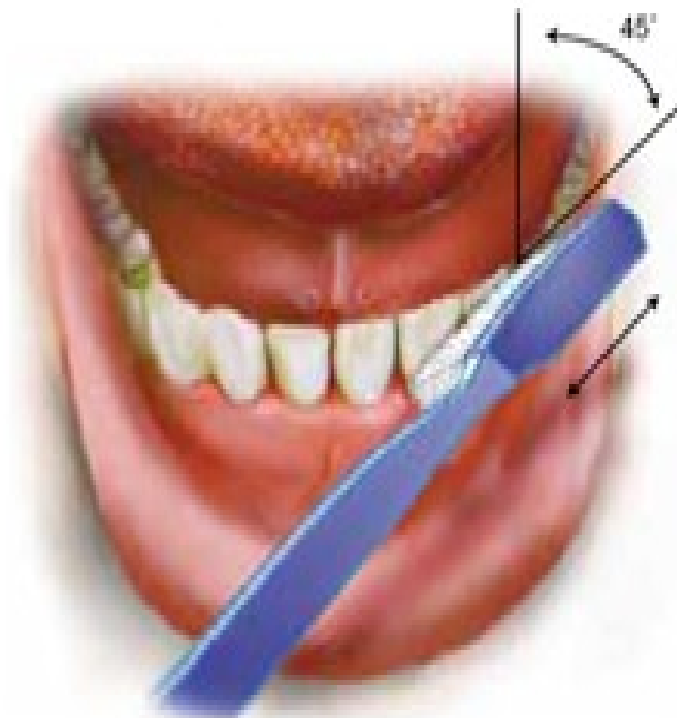
Ctd--

- **Procedure:**

1. explain the procedure to the patient
2. Wash your hands
3. Collect the necessary equipment
4. Place the towel under the patients chin across his chest
5. Turn the patients head to side if in bed
6. Dip applicator in mouth wash solution and clean inside of the mouth, tongue and teeth gently and carefully
7. Discard the swab
8. If the teeth are difficult to clean a large swab can be used

Ctd--

- 9.If the tongue or lips are dry and cracked
moisten an applicator with lubricant and
gently wipe them with mineral oil, liquid
paraffin or Vaseline
- 10.Frequent mouth care should be given to
a patient who has fever especially before
meals
- 11.If he is unconscious hold the mouth open
with tongue depressor padded with gauze
- 12.If he can do give teeth brush



- 13) Oral hygiene should be given in the morning at night and after each meal if possible
- 14) Wait at least ten minute after patient has eaten to prevent nausea and vomiting
- 15) Chart the procedure, care of equipment and wash your hands

Ctd--

- **Care of denture**

- assist the patient to remove the denture
- Place denture in denture cup or clean emesis basin take to sink and wash thoroughly using the patients brush or application
- Rinse thoroughly
- Place in clean basin or denture cup and return to bedside
- Assist the patient to rinse with mouth wash solution before denture are replaced
- Use tissue paper to handle dentures and assist as necessary

Offering bed pan and urinals

Equipment –

- bed pan or urinal and cover
- toilet paper
- basin with soap and water may or may not be necessary
- charting material
- Glove

Ctd--

- **Procedure**

- 1.Explain the procedure to the patient
- 2.Wash your hands and assemble equipment
- 3.Don glove
- 4.Dry the outer part of the bed pan and carry to bed side and place it on the chair
- 5.Screen the bed
- 6.Expose the part
- 7.Insert free hand under the patients buttock and have him flex knee and help in lifting his body with the other hand adjust the bed pan under him

Ctd--

8. Place paper with in reach and be sure the patient can reach bell
 9. Be sure to remove bed pan when patient calls. if he is not able to care for him self give necessary care
 10. Arrange beddings neatly
 11. Remove screen and carry bedpans or urinalis to utility room
 - Care of equipment, chart the procedure and lastly wash your hands
- NB:- the out put is measured if indicated
- Collect specimen if ordered
 - Observe color, amount, consistence and report any thing unusual

- Care of equipment after use
- Empty bed pan and urinal and rinse well
- If possible soak in 2.5% Lysol for at least half a hour
- Return to the patients bed side or utility room

8

GENERAL CARE OF PATIENT

- Bed Bath is a bath given to a patient in the bed who is unable to care for himself/herself.

Importance of bath

- To promote comfort and cleanliness
- To stimulate circulation
- To prevent pressure sores
- To promote relaxation, comfort and cleanliness
- .

Importance of bath cont--

- To prevent or eliminate unpleasant body odors
- To give an opportunity to assess ill clients
- To remove transient moist, body secretions and excretions, and dead skin cell

Cleaning Baths

- Cleaning baths are provided as routine client care.
- The purpose of a cleaning bath is personal hygiene.
- The five types of cleaning baths are shower, tub, self-help, or assisted bed bath, complete bed bath, and partial bat

Shower

- Most ambulatory clients are capable of taking a shower.
- Clients with limited physical ability can be accommodated by placing a waterproof chair in the shower
- The nurse provides minimal assistance with a shower.

Tub bath

- Clients frequently prefer and enjoy tub baths.
- A tub bath permits washing and rinsing in the tub.
- Tub baths can also be therapeutic.
- Clients with limited physical ability should be assisted with entering and exiting the tub.

Self help bath

- A self-help, or assisted, bed bath is used to provide hygienic care for clients who are confined to bed.
- In the self-help (assisted) bed bath, the nurse prepares bath equipment but provides minimal assistance.
- This assistance is usually limited to washing difficult-to-reach body areas such as the feet and back.

Complete bed bath

- A complete bed bath is provided to dependent clients
- confined to bed. The nurse washes the client's entire
- body during a complete bed bath

Partial bath

- A partial (or abbreviated) bath consists of cleaning only
- body areas that would cause discomfort or odor if not washed thoroughly.
- These areas are the face, axillae, hands, and perineal area.
- The nurse or client may perform a partial bath depending on the client's self-care ability.
- Partial baths may be performed with the client lying in bed or standing at the sink

Therapeutic baths

- Therapeutic baths require a physician's order stating the type of bath, temperature of water, body surface to be treated, and the type of medicated solutions to use.
- A therapeutic bath is usually performed in a tub and lasts about 20 to 31 minutes.
- Therapeutic baths are classified as hot or warm water, cool or tepid water, soak, sitz

Cont--

- Hot or warm water tub baths are used to reduce muscle spasms, soreness, and tension.
- Hot- or warm-water baths, however, have the potential for causing skin burns.
- Cool or tepid baths are used to relieve tension or lower body temperature.
- The nurse needs to prevent chilling and rapid temperature fluctuations during a cool or tepid bath

Cont--

- Sitz baths cleanse and reduce inflammation in the perinea and anal areas.
- Sitz baths are commonly used for hemorrhoids or anal fissures and after perineal or rectal surgery.

Equipment

- Trolley
- Two bath towels
- Face towel
- Wash cloth
- Clean pajamas or gown
- Pillow case

Cont--

- Additional bed linens, Linen for making bed(one or two large sheets as needed)
- Two bath basins or one large jug containing warm water and one basin
- Brush and comb
- Bed pan or urinal if needed

Cont--

- Tray for nail care and mouth care
- Bed protecting materials such as rubber sheet and towels
- Bath blanket (or use top linen), Hamper for soiled cloths
- Basin with warm water (43-46⁰c for adult and 38-40⁰c for children)

Cont--

- Soap on a soap dish
- Hygienic supplies, such as, lotion, powder or deodorants (if required)
- Screen, Disposable gloves.

Back care

- Back massage is the application of pressure and motion by the hands.

☐ Purposes:-

- To relieve muscle tension
- To promote physical and mental relaxation
- To improve muscle and skin
- To relax patient and to relieve insomnia

Basic techniques

- There are 4 types:-
 - Effleurage- a form of massage involving a repeated circular stroking movement made with the palm of the hand(*stroke lightly*)
 - petrissage-Squeezing
 - Friction
 - tapotement- rapid and repeated striking of the body as a technique in massage

Cont--

- the application of pressure and motion by the hands with the intent of improving the recipient's well-being.
- It involves kneading, rubbing, and using friction.

Cont--

□ Effleurage:

- The whole hand is used.
- Gliding and long rhythmic strokes are used.
- Firm, even-pressured strokes are directed toward the heart to assist blood return.
- Lighter pressure is used when moving away from the heart.

Cont--

☐ Petrisage:

- Pressing, squeezing, kneading, and rolling move-ments by both hands (use entire hand) are used.
- Deep circulation is enhanced.
- C-shaped motions stimulate the muscle body.
- Promotes muscle relaxation.

Cont--

❑ Friction:

- Thumb pads, heel of hand, or fingertips are used.
- Focused, deep, circular motions are used.
- Penetrates deeper muscle layers.
- Is done after effleurage and petrissage.

Cont--

□ tapotement:

- Palms, fingertips, and knuckles are used.
- Brisk, vigorous, rhythmic, percussive movements are used.
- Hands alternately tap, cup, slap, and pummel muscles.
- Invigorates and stimulates tired muscles.

Precautions during back care

- used with caution for people with:
 - heart disease, DM, HTN, or kidney disease because increased circulation in these conditions may be harmful.
- Massage should never be attempted in areas of circulatory abnormalities such as:-
 - aneurysm, varicose veins,
 - necrosis, phlebitis, or thrombus or in areas of soft-tissue injury, open wounds, inflammation,
 - joint or bone injury, dermatitis, recent surgery.

Shampooing

- Hair wash
- To promote/stimulate scalp circulation
- To remove soil from hair
- To facilitate combing
- Hair can be washed in:-
 - in tube
 - shower
 - at sink or in the bed based on pt's preferences and ability.

- Ask the pt's preferences and prepare materials.
- Wet hair→ apply shampoo →massage →rinse →dry with towel →comb based on pt's style.
- Hair care can be also:-
 - shampoo,shaving,combing,beard care--

Provide Eye, Ear, and Nose Care

- Eyes- **Eyelids should be washed daily with a warm washcloth from the inner to outer canthus.**
- Eyelashes and eyebrows should be washed as necessary.
- client's artificial eye may require daily cleaning,
- artificial eye be removed from the eye socket and washed.
- Some artificial eyes are permanently implanted.

- Comatose clients have special eye care **needs**
- They require frequent instillations of lubricants or eye drops to prevent corneal abrasions.
- indicate if the client wears contact lenses, and the routine care and level of assistance should be recorded on the client's care plan.

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- Ears:-
- foreign material or wax in the external ear canal can affect hearing.
- Cleaning of the ears involves cleaning of the external ear canal and auricles
- Objects should not be inserted into the ear canal
- Excess wax or foreign material should be removed by gently washing the external ear and auricles with a warm wash cloth while pulling the ear downward in the adult client.
- Irrigation of the ear may be necessary to remove dried wax.
- Notify physician prior to irrigation of the ear.

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- **Nose** care:-
- sense of smell, prevents entrance of foreign material into the respiratory tract, humidifies inhaled air, and facilitates breathing.
- Excessive or dried secretions may impair nasal function.
- Excessive nasal secretions are removed by inserting **a cotton-tipped applicator moistened with** water or saline into the nostrils.
- The applicator should not be inserted beyond the cotton tip.
- Infants may have excessive nasal secretions removed by a suction bulb for Clients with a nasogastric tube.

Applying Principles of Body Mechanics

- have physical strength in order to assist clients in achieving mobility.
- Carrying, pulling, pushing, or lifting clients and/or equipment are all activities involved in the delivery of nursing care.
- Nurses' implementation of correct body mechanics help minimize the following:
 - Client injury
 - Nurse work-related musculoskeletal injury
 - Nurse fatigue

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- Back injury is mainly caused by lifting unreasonable loads .
- The following variables can increase the risk of nurse injury:
 - Client weight
 - Client weight-bearing ability
 - Client combativeness and unpredictability
 - Height of bed
 - Confined work space
 - Wheelchairs without adjustable arms

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- Educating staff about the use of proper body mechanics is essential in preventing injury; see Procedure.
- The following recommendations are made to prevent MSDs:
 - Adjust the height of working surfaces to reduce long reaches and awkward postures.
 - Reduce the weight and size of items that workers must lift.
 - Provide mechanical lifting equipment

Alignment: Positioning

- Clients cannot always move independently and reposition themselves in bed.
- Nurse must use proper turning and positioning techniques in order to achieve the following outcomes:
 - Increase client comfort
 - Prevent contractures
 - Prevent decubitus (pressure sores)
 - Make portions of the client's body accessible for procedures
 - Help clients access their environment

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- Clients who cannot move independently must be repositioned every 2 hours.
- Repositioning must be done more often for clients who are:-
 - uncomfortable or incontinent, or
 - who have fragile skin,
 - poor circulation, fragile skin,
 - decreased sensation,
 - poor nutritional status, or impaired mental status.

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- Nurses need to be aware of three essential concepts when positioning clients:
pressure, friction, and skin shear.
- A pressure site is any skin surface area on which the client is lying or sitting.
.its force can compromise circulation and lead to skin breakdown and ulceration.
- prominences are more likely to experience impaired skin integrity, so observe.

- **Friction** is caused when the skin is dragged across a rough surface such as bed sheets or stretcher surfaces.
- it causes heat, which damages the skin and may lead to decreased skin integrity with resultant infection and/or skin breakdown.
- **Skin shear** is the result of dragging skin across a hard surface.
- The force of resistance to being dragged tears the deep layers of skin which can lead to skin ulceration.
- Practicing Proper Body Mechanics- see procedure.

Prepared to assist with client movement

- Assisting patient transfer as required.
- Select necessary equipment for transfer.
- Prepare environment
- Explain procedure to patient.
- Take consent of the patient for cooperation.
- Performing procedure in safe working manner

Moving Clients

- Prolonged immobility can cause discomfort, muscle wasting, clot formation, and skin breakdown.
- Frequent positioning is important for the patient to prevent bed sore and for patient comfort.
- Moving patient can be by one person, two person or three person.

Patient transfer

- ❑ Client Transfer: Hazards and Safety Measures
 - falling-Assess client's size and ability to assist
 - Ask for help from other staff members if needed
 - skin damage-Use a transfer board or draw sheet
 - Lift client instead of sliding
 - foot injury-Place nonskid slippers on client.

Before moving

- Safe manual handling(reduce or avoid injury to the pt and health professionals)
 - Check v/s....stable
 - Ability of the pt
 - Weight of the pt
 - 50=112kg
 - Assistive device
- crutch,wheel chair,strecher,belt

Transfer cont--

- Patient may move from bed to wheel chair, or from wheel chair to bed.
- Wheel chair transfer need care because the patient fall down forward.

Wheelchair Technique

- When pushing a wheelchair, back into and out of elevators.
- Back slowly down wheelchair ramps.
- Push the wheelchair ahead of you when going up ramps.
- Lock brakes **when** the wheelchair is standing still.
- A wheelchair is a means of transportation for clients unable to support their weight while standing.
- When we say unable patient :-right or left paralysis.
- Wheel chair should be locked and other safety materials used to comfort patient.

Wheel chair Cont--

- Equipment:- wheel chair/s materials such as watch, stethoscope, BP apparatus, thermometer, swab, pen, v/s sheet, slipper, safety belt, blanket or towel.

1) Inform patient

2) Washing hand

3) Collect materials as mentioned above.

4) Lower bed

Cont--

5) Allow client to dangle for a few minutes.

- take v/s and record.

- assessing client's response to sitting.

- it reduces possibility of orthostatic hypotension.

6) Bring wheelchair close to the side of the bed, toward the foot of the bed.(45 degree)

7) Lock wheelchair brakes and elevate the foot Pedals.

Cont--

- 8) Assist client to side of bed until feet touch the floor.
- 9) Assess client for dizziness. Remain in front of client until dizziness has subsided.
- 10) Apply gait belt if necessary
- 11) Reach under client's axillae and place hands on client's scapulae.
- 12) Assist the client to a standing position and provide support.

Cont--

- 13) Pivot client so client's back is toward the wheel-chair
- 14) Instruct client to place hands on the arm sup-ports of the wheelchair
- 15) Bend at the knees, easing the client into a sitting position(you have to push the affected leg from behind while patient is moving to wheel chair with unaffected leg).

Cont--

- 16) Secure the safety belt, place client's feet on feet pedals, and release brakes.
- move the patient to the designated area.
 - patient can take rest by sitting on wheel chair, even seeing TV as recreation, but give ring bell for the patient to call if emergency case occur.
 - finally patient should returned to his or her bed after preparing open bed.
 - Returning patient the wheel chair is opposite side of the first.

Assistive Devices

- ❑ **Reasons for using an assistive gait device are:**
 - Poor balance,
 - Inability to bear weight on a lower extremity due to fracture or other injury,
 - Paralysis involving one or both lower extremities, or
 - Amputation of a lower extremity

Assistive device cont--

❑ **Advantages to early ambulation following an injury:**

- Aiding circulation,
- Preventing calcium loss in bones, and
- Aiding the pulmonary and renal systems

General principles

- ❑ The patient to be carefully evaluated in order to select the appropriate assistive device to meet the patient's needs.
- ❑ The therapist must be aware of the patient's total medical condition, weight-bearing status of the involved extremity when considering which type of assistive device to use with the patient.
- ❑ The therapist will need to determine the range of motion of the extremities and the strength of the primary muscles required for

General principles cont--

- The patient must press downward on the assistive gait device in order to move the body forward.
- The scapular, shoulder, and elbow musculature supports the body's weight while the non-affected lower extremity is moved forward.
- The finger flexors fold the hand-piece of the assistive gait device.

Cont--

- Clients who are unable to ambulate independently can use devices designed to help them walk safely.
- ❑ Determination of which device to use is based on the following:
 - Upper arm strength
 - Endurance (stamina)
 - Presence or absence of one-sided weakness
 - Weight-bearing ability

Types of assistive devices

- Assistive gait devices are designed to improve the patient's stability by increasing the base of support.
- The categories of assistive ambulation devices, in order from greatest to least amount of support, are:
 - **Parallel bars,**
 - **Walkers,**
 - **Axillary crutches,**
 - **Forearm (Loftstrand) crutches,**
 - **Two canes, and**
 - **One cane.**

Crutch walking

- a wooden or metal staff used to increase client mobility.
- There are two types of crutches: axillary and forearm.
- The most commonly used type, the axillary crutch, fits under the axilla with the weight being placed on the handgrips.

Crutch walking cont--

- To prevent slipping, crutches have rubber tips, which must be kept dry. If the tips are worn or loose, they must be replaced.
- must be regularly inspected; if cracks or bends are present, the person's weight will not be properly supported.
- used by clients who are unable to bear any weight on one leg, clients who can bear partial weight on one leg, as well as clients who have full weight bearing on both legs

Cont--

- Several gaits are used with crutches:-
 - the four-point gait
 - three-point gait
 - two-point gait, and swing-through gait.
- The four-point gait for weight bearing with both legs follows the pattern of right crutch forward, left foot forward, left crutch forward, then right foot forward. - is very stable but slow.

Cont--

- The two-point gait for weight bearing with both legs has the pattern of right crutch and left foot forward together, then left crutch and right foot forward together.
 - require as more balance but is a faster gait.

The three-point gait

- Has pattern of crutches and weak leg forward together, then weight-bearing leg forward.

Cont--

- The swing-through gait has the pattern of crutches forward, then legs swing forward together.
- it has the advantage of speed; however, it requires good balance.

Performing Range-of-Motion Exercises

- Ability of joints to extent they can move.
- It may passive- assisted by nurse
- Active ROM- self exercised by pt.
- **Purposes:-**
 - to maintain full flexibility,
 - maintain muscle tone and strength,
 - prevent contractures, and
 - improve circulation

- Types of ranges of motion:-
- Active- patient perform by himself
- Passive-patient depends on health professionals
- Active-passive- patient need assistance.

ROM cont--

- ❑ Wash hands: Explain procedure to patient. Position patient.
- ❑ Head: Flexion-Extension-Hyper extension-Rotation-Lateral flexion.
 - Shoulder: Abduction and Adduction
 - Flexion and Extension
 - Internal and External Rotation
- ❑ Elbow: Flexion and extension
 - Pronation and supination

ROM cont--

- ❑ Wrist:-Flexion and extension, hyperextension.
 - Radial deviation (abduction) and ulnar deviation (adduction)
 - Circumducton.
- ❑ Fingers: Abduction and adduction.
 - Flexion and extension.
- ❑ Thumb: Circumduction, opposition, abduction and adduction, flexion & extension.
- ❑ Hip: Abduction and adduction.
 - Flexion and extension. –
 - Internal and external rotation.
 - Hyperextensions of hips: on lateral position support from the buttocks and hyperextend the legs.

Cont--

- ❑ Knee- Flexion and extension.
 - Internal & external rotation.
- ❑ Ankles- Dorsiflexion and planetary flexion.
 - Inversion and Eversion .
- ❑ Toes: Flexion and extension.
 - Abduction and adduction.
- ❑ Trunk: Flexion and extension and hyperextension.
 - Lateral flexion and rotation (NB; in lateral position Support from the waist.)

THE END