

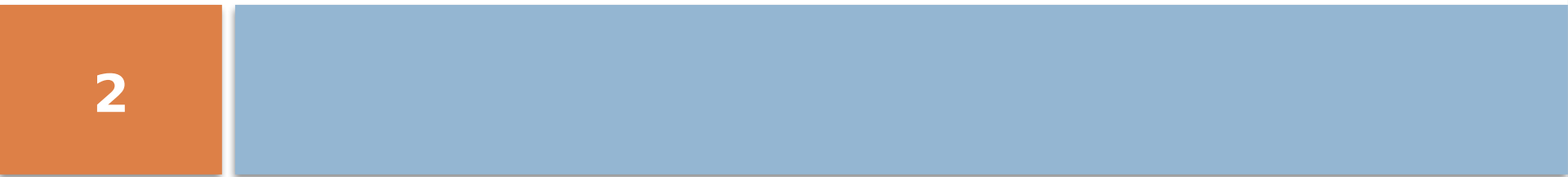
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Essential newborn care

- ❑ Care of the newborn baby at birth
- ❑ APGAR Score
- ❑ Resuscitation



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APGAR SCORE

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APGAR SCORE

Is quick test performed on a baby at 1 and 5 min after birth.

A - Appearance/color/

- Indicative of peripheral tissue oxygenation

□ **P - Pulse/heart rate/**

- < 100-indicative of severe asphyxia

□ **G - Grimace /Response to stimuli/**

- The neonate response

□ **A - Activity/Muscle tone/**

- Degree of flexion and resistance offered by the neonate when to extend his extremity

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□ **R - Respiratory effort**

APGAR SCORE

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2	1	0	Score
Completely pink	Body pink ,blue extremities	Blue , pale	Appearance/ Color
min/100<	min/100>	Absent	Pulse/Heart Rate
Vigorous cry	Grimace	No Response	Grimace/ Response to stimuli
Active motion	Some flexion	Limp/ Flaccid	Activity/ Muscle tone

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Cont...

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- ❑ APGAR score are generally obtained and totaled at 1 min and 5 min following birth, and scores should be recorded for longer periods (at 10 , 15 and even 20 min) if they are low (until the score is about or more 7)
- ❑ Score of 0-3 indicate that neonate required immediate resuscitation
- ❑ 4-7 required observation and admission to N.I.C.U. and
- ❑ 7-10 indicate good condition; **continue immediate new born care**

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Steps of essential new born care

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Step 1. Dry and Stimulate the Baby

- Dry the baby, including the head, immediately.
- Rub up and down the baby's back, using a clean, warm cloth or Slapping or flicking the soles of the feet.
- Do your best not to remove the vernix (the creamy, white substance which may be on the skin) as it protects the skin and may help prevent infection.

Cont...

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- Remove the wet towel
- Let the baby stay in skin-to-skin contact on the abdomen and cover the baby quickly, including the head with a clean dry cloth.
- Don't let the baby remain wet, as this will cool the body and make it hypothermic.

Drying The Newborn



- **Stimulates the newborn to breathe normally**

- 9 • **Minimizes heat loss**

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Step 2 -Evaluation of the Baby

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- Check the Baby's:
 1. Breathing
 2. Color and
 3. Heart rate .



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Breathing

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- Check if the baby is crying while drying it.
- If the baby does not cry, see if the baby is breathing properly.
- If the baby is not breathing and/or is gasping: Call for help.
- The assistant can provide basic care for the mother while you provide the more specialized care for the baby who is not breathing

- If the baby breathes well, continue routine essential newborn care.
- Do not do suction of the mouth and nose as a routine.
- Do it only if there is meconium, thick mucus, or blood.
- Normal breathing rate in a newborn baby is 30 to 60 breaths per minute.

- The baby should not have any chest in-drawing or grunting.
- Small babies (less than 2.5 kg at birth or born before 37 weeks gestation) may have some mild chest in-drawing and may periodically stop breathing for a few seconds.

Color

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- Look at the baby's color.
- The face and chest should be pink, not gray or blue.
- In darker-skinned babies, you can assess the color of the tongue, lips, and mucous membranes; they should be pink, not gray or blue.
- A baby's pink skin color is a good sign of adequate breathing and circulation.

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Cont...

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- A blue color of the tongue, lips, and trunk is a sign of a lack of oxygen in the blood called **Central cyanosis** and indicates the need for treatment.
- A bluish color of only the hands and feet may be present for 1-2 days after birth called **Acrocyanosis** and usually does not indicate a lack of oxygen.

□ **Pink** **Acro cyanosis** **Central**
cyanosis



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Heart Beat

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- The normal newborn heart rate is 100-160 BPM.
- Pediatric stethoscopes can be used to listen to the heartbeat, but palpating the newborn pulse is easy to do and requires no special equipment.
- If the pulse is **less than 100 BPM**, you should begin ventilating the baby artificially.



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Step 3. Cord Care

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Clamping /tying the cord:

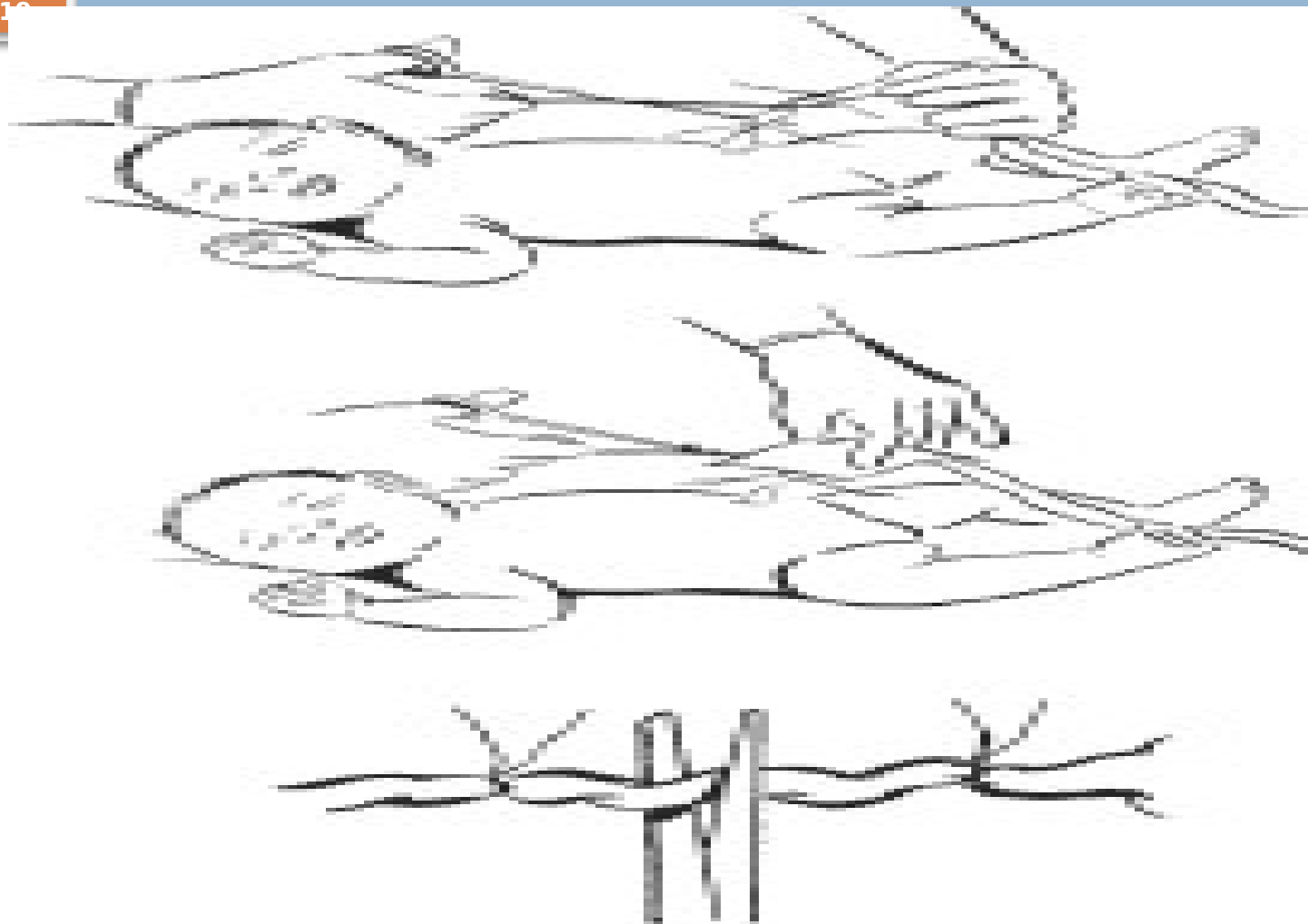
- If the baby does not need resuscitation, wait for cord pulsations to cease or approximately **1-3** minutes after birth, whichever comes first, and then place one metal clamp /cord tie 2 centimeters from the baby's abdomen and the second clamp / tie another 2 centimeters from the first clamp/tie .

Cont...

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- Cutting the cord soon after birth can decrease the amount of blood that is transfused to the baby from the placenta and, in preterm babies; it is likely to result in subsequent anemia and increased chances of needing a blood transfusion
- Cut the cord with sterile scissors or surgical blade, under a piece of gauze in order to avoid splashing of blood.
- At every delivery, a clean separate pair of scissors or blade should be designated for this purpose.

Cutting the cord:



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Counseling on cord care

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- Check for bleeding/oozing and retie if necessary.
- The cord may be tied by using sterile cotton ties, elastic bands, or pre-sterilized disposable cord tie.
- Advise the mother not to cover the cord with the diaper
- Don't use alcohol for cleansing as it may delay healing.
- Don't apply traditional remedies to the cord as it may cause tetanus and other infections.
- There is a global evidence that application of **chlorhexidine reduces** severe cord infection and newborn sepsis and thus recommended to apply 4% chlorhexidine immediately after cutting the

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Watch out for:-

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- Pus discharge from the cord stump.
- Redness around the cord especially if there is swelling.
- Fever (temperature more than 38°C) or other signs of infection.



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Step 4. Keep the newborn warm

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- **Keep the newborn warm (Place the Baby in Skin-to-Skin Contact with the Mother)**
- Keep the baby warm by placing it in skin-to-skin contact on the mother's chest.
- Cover the baby's body and head with clean cloth.
- If the room is cool ($<25^{\circ}\text{C}$), use a blanket to cover the baby over the mother.

The advantages of skin-to-skin contact are:

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- Provides warmth
- Improves bonding
- Provides protection from infection by exposure of the baby to good bacteria of the mother
- Increases the blood sugar of the baby
- Contributes to the overall success of breastfeeding

Cont...

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- If the mother does not want direct skin-to-skin contact, dry and wrap the baby.
- Make sure the head is covered and put the baby next to the mother.
- It is important to delay or defer the first bath.
- The baby should not be bathed at birth because a bath can cool him dangerously.
- After a minimum of 6 hours, preferably 24 hours, he can have his first sponge bath, if his temperature has stabilized.

Immediate skin-to-skin contact



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Immediate skin-to-skin contact



Maintain skin-to-skin contact

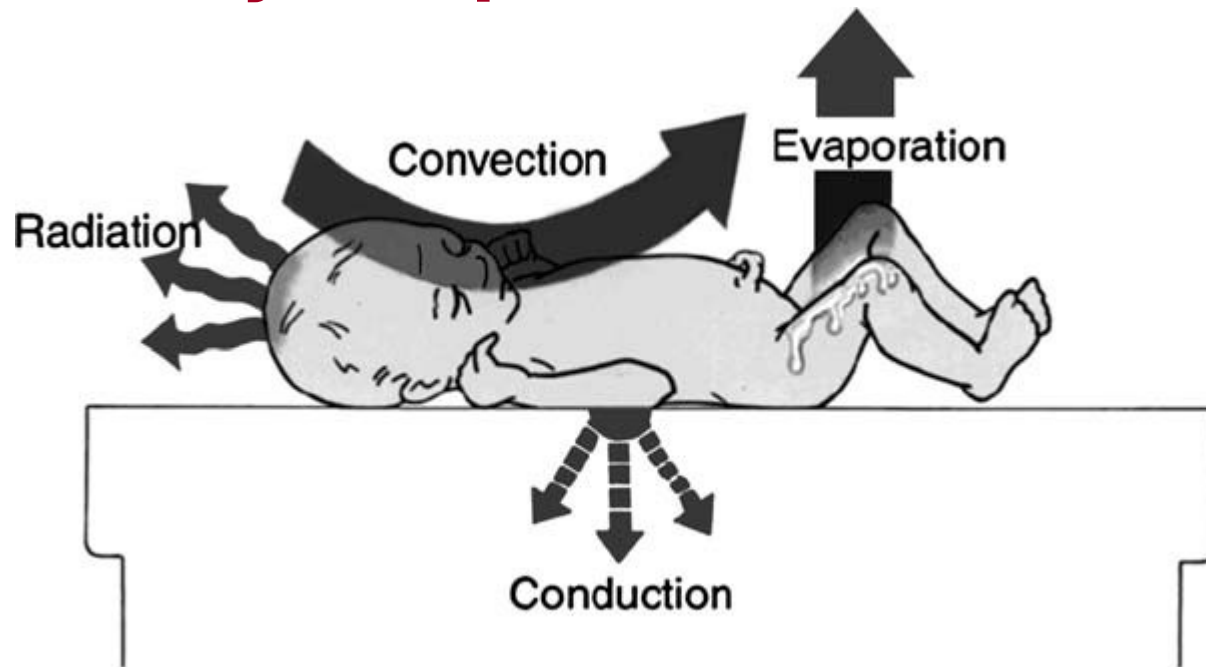


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Modalities of heat loss

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The Four modalities by w/c the infant lost his/ her body temperature:



i-Evaporation: Normally evaporation is high in the neonate as the neonate has large surface area and come to the cooler environment from the uterus

Prevention:

- **Carefully dry the infant after delivery or after bathing.**

ii-Conduction:

- ▯ Putting neonate on relatively cold surfaces
- ▯ By direct contact with the cooler solid body
- ▯ Contact with clothes, bed

Prevention:

- Warm all objects before the infant comes into contact with them.

iii-Radiation:

- ▮ Positioned the neonate near to window, metal surfaces or cold walls
- ▮ Without direct contact with the cooler solid body
- ▮ As electromagnetic rays

iv-Convection:

- Heat loss to cooler surrounding
- When the body is exposed to wind heat

Prevention:

- Keep infant out of drafts
- Close one end of heat shield in incubator to reduce velocity of air.

Step 5. Initiate Breastfeeding in the first one hour

- **Early breastfeeding** means breastfeeding within the first hour, with counseling for correct positioning.
- Early breastfeeding reduces the risk of postpartum hemorrhage for the mother.
- Colostrum (the "first milk") has many benefits for the baby, especially anti-infective properties.

Cont...

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- Skin to skin contact while feeding helps the baby to stay warm.
- Breastfeeding delays the mother's return to fertility because of lactation.
- Breastfeeding provides the best possible nutrition for the baby.
- Feed day and night, at least 8-10 times in 24 hours, allowing on-demand sucking by the baby.
- If the baby is small (less than 2,500 grams), wake the baby to feed every 3 hours

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Cont...

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- If the baby is not feeding well, seek help.
- Successful breastfeeding requires support for the mother from the family and health institutions
- There is no need for extra bottle feeds or water for normal babies, even in hot climates
- Avoid the use of the bottles and pacifiers.
- Make sure the baby has a good position, attachment, and suck

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Skin to skin contact & initiation of breastfeeding

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- To begin with the baby will want to rest
- **Rest period may take from a few minutes**
to 30 or 40 minutes before the baby shows feeding cues.



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Signs of readiness to breastfeed

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- Only once the newborn shows feeding cues (e.g. opening of mouth, tonguing, licking, rooting), make verbal suggestions to the mother to encourage her newborn to move toward the breast e.g. nudging.



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Cont...



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Cont...



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Help the mother and baby into a comfortable position

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Step 6. Eye Prophylaxis

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- Within an hour of birth; treat the newborn's eyes to prevent gonococcal infection.

Alternative medications include:

- 1% silver nitrate solution
- 1% tetracycline ophthalmic ointment
- 0.5% erythromycin ophthalmic ointment

Steps For Giving Eye Care

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1. Wash your hands.
2. Use one of the above eye care medications
3. Hold one eye open and allow one drop of medication to fall into the eye.
 - If you are using ointment, put a ribbon of ointment along the inside of the lower eyelid.
 - Make sure not to let the medicine dropper or tube touch the baby's eye or anything else.
4. Repeat this step to put medication into the other eye.
5. Do not rinse out the eye medication

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Cont...

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Step 7. Administer vitamin K (IM)

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- Administer 1 mg for babies with gestational age of 34 weeks or above
- 0.5 mg for premature babies less than 34 weeks gestation
- It prevents hemorrhagic disease

Step 8. Place the newborn's identification bands

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- ❑ ***Place the newborn's identification bands on the wrist and ankle***
- ❑ Putting the identification bands on the hands and ankle will save you from misshaping babies in busy delivery rooms.
- ❑ It incorporates mother's name, sex, wt, and card number

Step 9. Taking weight

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- It is a baseline for assessment of future growth because weight loss occurs rapidly.
- Normally the neonate loses about 10% of the birth weight by 3-4 days of age b/c of loss of excessive ECF, meconium and limited fluid intake.
- So the birth weight is regained by the tenth day of life.

Step 10. Record all observations and treatment

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- ***Record all observations and treatment provided in the registers/appropriate chart/cards***

Note:

- Defer the bath for at least 24 hours.
- Clean the newborn of an HIV-infected mother as recommended
- Organize transport if necessary
- Inform the mother of the newborn's weight

Neonatal Resuscitation

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Neonatal Resuscitation...

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- ❑ Birth asphyxia is defined as the failure to initiate and sustain breathing at birth.
- ❑ The common worry of health professionals and parents is the permanent brain damage that birth asphyxia can cause.

Adequate Preparation For resuscitation:

1. A self-inflating **Ambou bag** (newborn size)
2. Two infant **masks** (for normal and small newborn)
3. A **suction device** (mucus extractor)
4. A radiant **heater** (if available), warm towels, blanket, &

... are needed

Goals of neonatal resuscitation

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- ❑ Prevention of morbidity and mortality
- ❑ Establishment of adequate spontaneous respiration and cardiac output.
- ❑ Prevention of heat loss (hypothermia).

The elements of resuscitation

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1. Initial steps: thermal management, clearing the airway, tactile stimulation
2. Establishment of ventilation
3. Chest compression
4. Medication

Initial Steps for Neonatal Resuscitation

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1. PREVENT HEAT LOSS

- Place the infant under an overhead radiant heater to minimize radiant and convective heat loss.
- Dry the body and head to remove amniotic fluid and prevent evaporative heat loss. This will also provide gentle stimulation to initiate or help maintain breathing.

2.ABC STEP

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A. Airway

- **Position**
- Suction airway—if there is meconium stained fluid and baby is not crying and moving limbs:
- Suck the mouth, nose and oropharynx; do not suck right down the throat as this can cause apnea/bradycardia

B-BREATHING ADEQUACY

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i. TACTILE STIMULATION

- Slapping or flicking the soles of the feet
- Rubbing the back gently
- If after suctioning and tactile stimulation there is no respiration or the heart rate is less than 100/min, free flow oxygen and positive pressure ventilation (PPV) with 100% oxygen must be initiated.

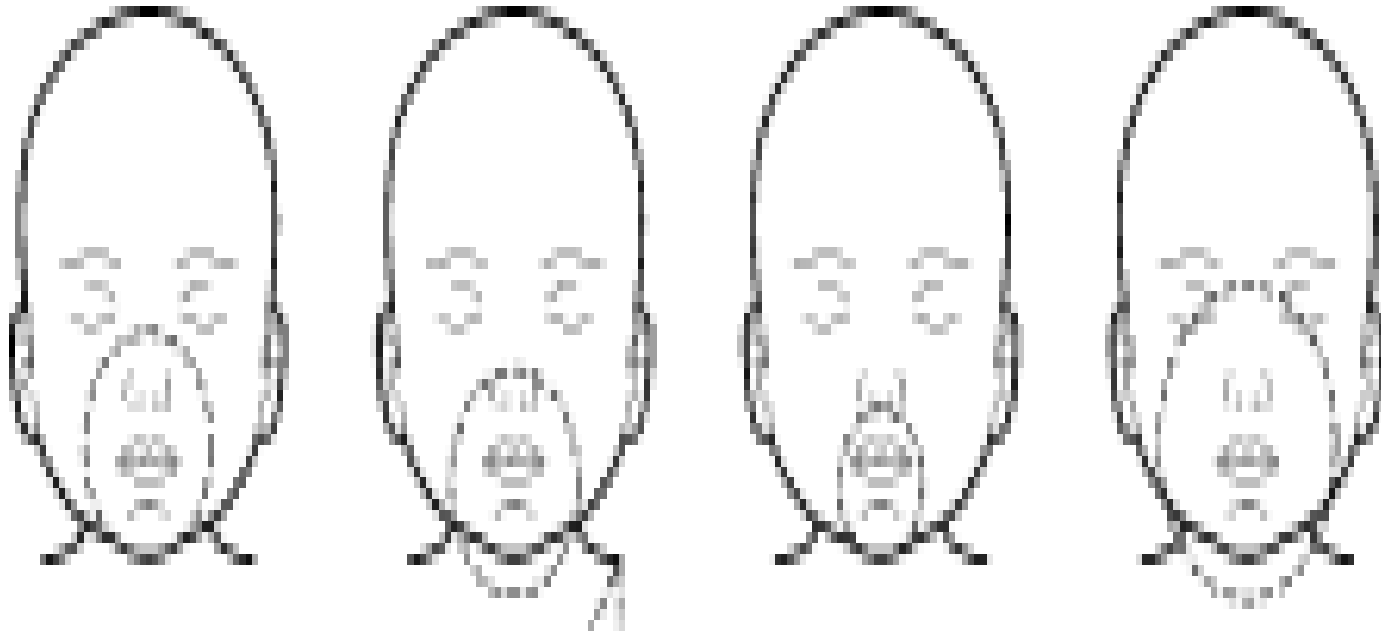
ii. FREE FLOW OXYGEN

- Choosing mask size: Size 1 for normal weight baby, size 0 for small (less than 2.5 kg) baby
 - Ventilation with bag and mask at 40–60 breaths/minute
 - Make sure the chest moves up with each press on the bag and in a very small baby make sure the chest does not move too much.

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Neonatal self-inflating resuscitation

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iii. Positive pressure ventilation

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- Usually can be provided quickly by bag and mask.
- Endotracheal intubation should be performed in any infant who does not respond to initial bag and mask ventilation or who was born apneic, pulseless, cyanotic, and limp with signs of fetal distress.
- In the vast majority of cases ventilation alone will be sufficient to resuscitate the infant.
- If after 30 seconds of positive pressure ventilation (PPV) with 100% oxygen the heart rate remains low, chest compression may be needed to assist a hypoxic and a failing myocardium.

C. CIRCULATION

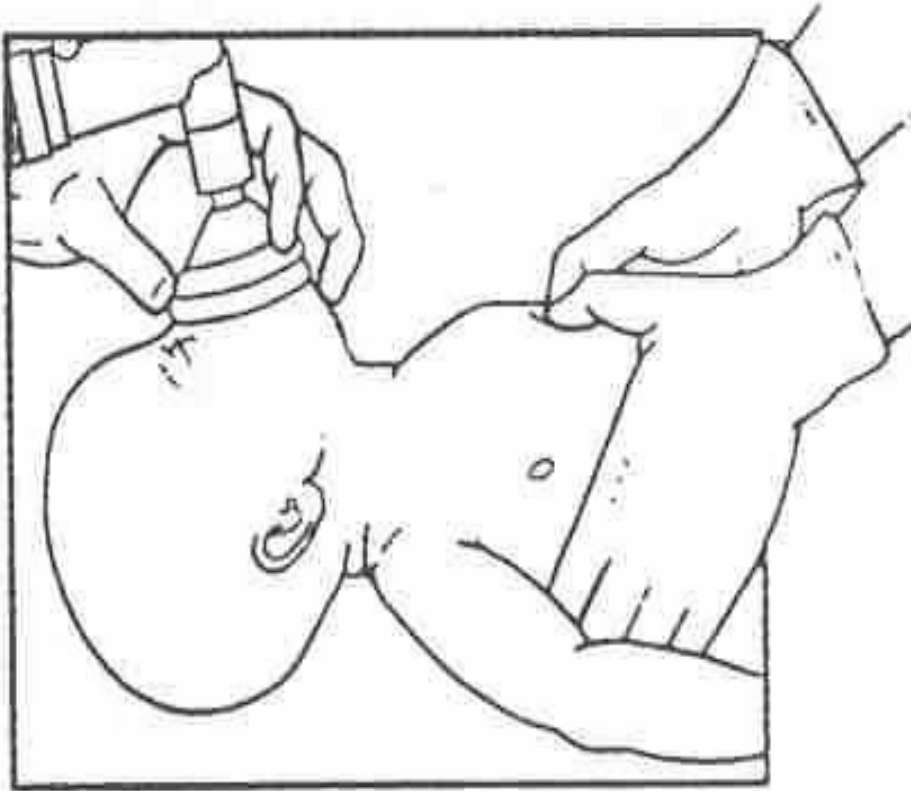
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- ❑ **Chest compression is recommended if:**
 - **After ventilation with 100% oxygen for 15 - 30 seconds the heart rate is below 60 or**
 - **Between 60 and 80 and not rising.**
- ▶ 90 compressions coordinated with 30 breaths/min (**3 compressions: 1 breath every 2 seconds**).
- ▶ Place thumbs just below the line connecting the nipples on the sternum (see below)

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Technique

Position of Hands on Chest



Thumb technique (preferred)

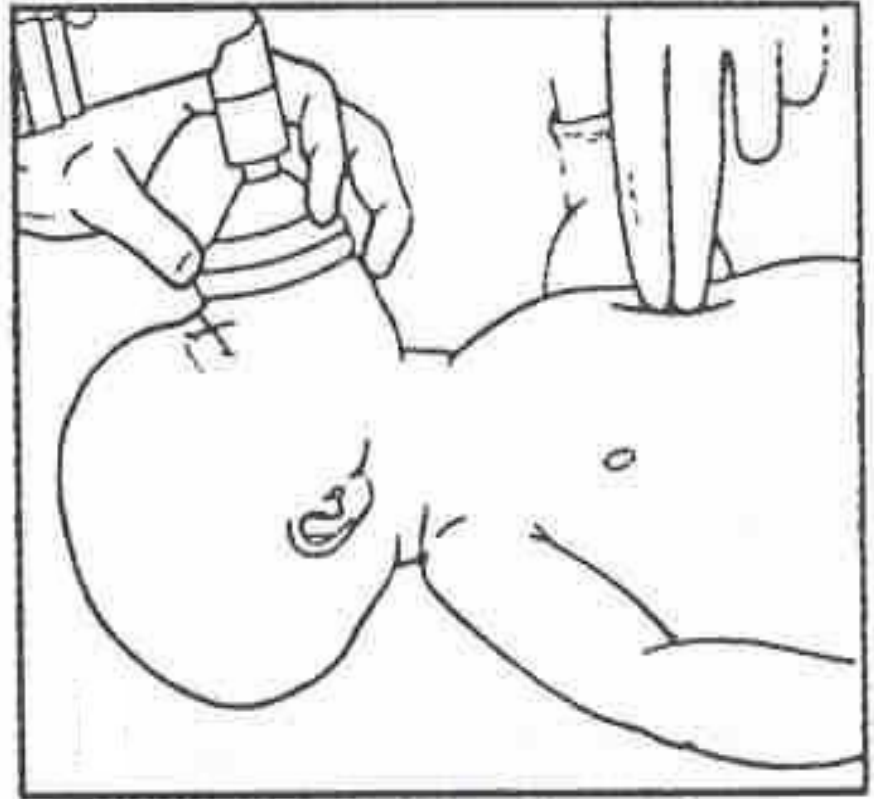
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Technique

Position of Hands on Chest

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- If chest compressions and ventilation do not raise the heart rate above 80 within 30 seconds, support for the cardiovascular system with medications is needed.



Two finger technique

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Care After Successful Resuscitation

- Do not separate the mother and the newborn.
- Leave the newborn skin-to-skin with the mother
- Encourage breast-feeding within one hour of birth.
- Observe suckling

Good suckling is a sign of good recovery.

Cessation of resuscitation

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- If resuscitative efforts do not result in spontaneous respiration within 30 minutes the prognosis is uniformly bad with respect to gross neurologic impairment.
- It is therefore entirely appropriate to discontinue active resuscitative efforts after 30 minutes if no spontaneous respiration has been observed, provided that the baby has been given intermittent opportunities to demonstrate spontaneous breathing.

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**Thank
You!!**

• **Thank**

you!!

Study

Hard!

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