PRACTICAL 2  CARE OF NORMAL NEWBORN

Structure

2.0 Objectives
2.1 Introduction
2.2 Levels of Neonatal Care
2.3 Immediate Needs of Baby at Birth
2.4 Care of a Normal Newborn Baby at Birth
  2.4.1 Maintenance of Body Temperature
  2.4.2 Breast-feeding
  2.4.3 Skin Care and Baby Bath
  2.4.4 Care of Umbilical Stump
  2.4.5 Care of Eyes
  2.4.6 Weight Record
  2.4.7 Immunization
2.5 Assessment of Newborn
2.6 Nursing Care of Neonate
2.7 Activities and Guidelines
2.8 Let Us Sum Up

2.0 OBJECTIVES

After completing this unit, you should be able to:

• State the levels of newborn care;
• Enumerate the immediate needs of newborn;
• Outline the essential care of new born at birth;
• Describe the principles of management of normal neonate;
• Assess physical and physiological parameters of the normal newborn; and
• Demonstrate nursing care of neonate.

2.1 INTRODUCTION

About 90% of babies born in India are full term (37 – 41 weeks). The remaining 10% of babies are born as premature (less than 37 weeks). A large number of newborn babies require minimal care which can be provided by mother under the supervision and guidance. The care of normal newborn can be given at home, sub centre, primary health centers or any other health facility. The care given to mothers and babies immediately after delivery and during the postnatal period will have greater impact in maintaining normal health and prevention of complications in them.

In India more than half of the infant deaths occur during newborn (first 28 days of life) period. Most of these deaths take place in the first week of life due to
Techniques in Newborn and Infant Care

Birth asphyxia, hypothermia and infections. Babies born with a low birth weight (below 2500gms) are at a higher risk of dying. Provision of essential care to the newborn at birth and during the neonatal period will have a significant impact on reduction of neonatal and infant mortality rate.

In this practical you will learn about the care of normal newborn and assessment of newborn.

2.2 LEVELS OF NEONATAL CARE

Neonatal mortality and morbidity is directly related to the birth weight and gestational maturity of the newborn. High risk pregnancies (which are associated with the birth of high risk infant) must be identified during antenatal period and referred to an appropriate center for skill management. Based on birth weight and gestational age, three tier system of care is provided to the newborn babies.

Level-I Care

More than 80 percent of newborn babies require minimal care which can be provided by their mother under supervision of basic health professionals. Neonates weighing above 2000 gm or having gestational maturity of 37 weeks or more belong to this category. The care can be provided at home, sub centre and primary health centre level. Basic care at birth, provision of warmth, maintenance of asepsis and promotion of breast feeding are the main components of level I care.

Level II Care

Infants weighing between 1500- 2000gm or having gestational maturity of 32-36 weeks need specialized neonatal care supervised by trained nurses and pediatrician. District hospitals, teaching institutions and nursing homes should be equipped to provide intermediate neonatal care. Neonatal intermediate care is needed for about 10 to 15 percent of newborns. It should be available at all hospitals catering to 1000 to 1500 deliveries per year.

Level III Care

Intensive neonatal care is required for babies weighing less than 1500gm or those born before 32 weeks of gestation. Apex institutions or regional perinatal centers equipped with centralized oxygen and suction facilities, servo controlled incubators, vital signs and transcutaneous monitors, ventilators and infusion pumps etc. are best suited to provide intensive neonatal care. About 3 to 5 percent of newborn babies require intensive care.

2.3 IMMEDIATE NEEDS OF A BABY AT BIRTH

Every baby has four immediate needs after birth. They are warmth, normal breathing, mother’s milk and protection from infection. For meeting these needs, the baby is totally dependant on the mother and care providers. Hence it is important to provide essential care to the newborn immediately after birth, because the first hour after birth has significant influence on the survival and well being of newborn. Keeping the normal term baby with the mother soon after birth will facilitate early initiation of breastfeeding and emotional bonding between the mother and the baby. This will also prevent hypothermia and hypoglycemia in
Care of Normal Newborn babies and increase self-confidence in mother. Good care given during this period can prevent infection in newborn period.

2.4 CARE OF NORMAL NEWBORN BABY AT BIRTH

It is important that the baby is received in a clean warm sheet and kept on the mother’s chest/abdomen. The umbilical cord should be tied using a sterile tie and cut using sterile blade about 2-3 cm (1 inch) away from the skin. The baby should be thoroughly dried and covered adequately with another clean, dry sheet to prevent heat loss. Blood and meconium on the baby’s body should be wiped away but not the vernix (the white greasy substance). It helps to protect the skin of the baby. The baby’s colour and breathing should be assessed. A normal newborn should be crying or breathing at the rate of 40-60 breaths per minute. If the baby is not crying or breathing well, the steps of resuscitation need to be carried out. The eyes of baby need to be cleaned with sterile gauze from medial side to the lateral side. Then, the baby needs to be placed in between the breasts of the mother to promote skin to skin contact and breastfeeding. The identity tag needs to be tied for both mother and baby to identify the baby.

2.4.1 Maintenance of Body Temperature

The mother and baby need to be covered with a warm and dry cloth, especially if the temperature of labour room is less than 25°C. A baby who is small (less than 2.5 kg at birth or born before 37 weeks gestation) and sick needs additional thermal protection and warmth to maintain normal body temperature. These babies become hypothermic very quickly, and rewarming the baby can take a long time. The risk of complications and mortality significantly increases if the thermal environment is not optimal. To maintain warm chain, it is essential that the temperature maintenance is a continuous process and continued from the time of delivery till discharge of the baby.

General principles to maintain the body temperature of newborn:

- Keep the baby clothed or covered as much as possible at all times, including during procedures (e.g. when establishing an IV line, during resuscitation):
  - Clothe the baby and cover the head with a cap or hat.
  - Wrap the baby in a soft dry cloth and cover with a blanket.
  - Uncover only parts of the body that need observation or treatment.
- Care for a sick or small baby in a warm room (not less than 25°C) that is free of draught.
- Do not place the baby near cold objects, such as a wall or window, even if the baby is in an incubator or under a radiant warmer.
- Do not place the baby directly on a cold surface (e.g. place a cloth or blanket under the baby before placing on a cold bed or examination table), and ensure that hands are warm before handling the baby.
- Keep the baby warm during transfer for diagnostic or treatment procedures. Use warming devices or transfer in skin to skin contact with the mother or another person.
Ensure warmth during procedures (e.g. use a radiant warmer).
Change napkins whenever they are wet.
If any thing wet is applied to the skin (e.g. moistened gauze), ensure that baby is warm.
Avoid bathing the baby during the first six hours of life or until the baby’s temperature is stable, delay bath for a small baby until at least the second day of life.

The methods of warming the baby are given in Table 2.1.

<table>
<thead>
<tr>
<th>Method</th>
<th>Guidelines for Selection &amp; Use</th>
<th>Advantages</th>
<th>Risks / Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin-to-skin contact</td>
<td>a) Appropriate for all stable babies.</td>
<td>a) Mother can closely monitor baby.</td>
<td>a) Mother may not always be available.</td>
</tr>
<tr>
<td></td>
<td>b) Appropriate for re-warming a baby with moderate hypothermia (32ºC to 36.4ºC) particularly when other methods are not available.</td>
<td>b) Another person can provide skin-to-skin contact if the mother is unavailable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Not appropriate for babies with life threatening problems (sepsis, severe breathing difficulty).</td>
<td>c) Babies usually maintain normal body temperature.</td>
<td></td>
</tr>
<tr>
<td>Kangaroo Mother Care (KMC)</td>
<td>a) Appropriate for stabilized babies weighing 1.5 to 2.5 kg but particularly recommended for continuous care of babies weighing 1.5 to 1.8 kg.</td>
<td>a) Mother can closely monitor baby.</td>
<td>a) Baby can become hyperthermic if temperature is not monitored.</td>
</tr>
<tr>
<td></td>
<td>b) Not appropriate for babies with life threatening problems (sepsis, severe breathing difficulty).</td>
<td>b) Babies usually maintain normal body temperature.</td>
<td>b) Baby can become dehydrated.</td>
</tr>
<tr>
<td></td>
<td>c) Not appropriate if mother has a serious illness or complication from labour or birth that prevents her from caring for the baby. In that case other family members can be involved.</td>
<td></td>
<td>c) Warmer is expensive to buy.</td>
</tr>
<tr>
<td>Radiant warmer</td>
<td>a) Appropriate for sick babies and babies weighing 1.5 kg or more.</td>
<td>a) Allows observation of baby.</td>
<td>d) Warmer requires reliable source of electricity.</td>
</tr>
<tr>
<td></td>
<td>b) Used to keep baby warm during initial assessment, treatment and procedures and to re-warm a cold baby.</td>
<td>b) Many procedures can be performed while baby is under warmer.</td>
<td></td>
</tr>
<tr>
<td>Incubator</td>
<td>a) Appropriate for continuous care of babies weighing less than 1.5 kg who are not eligible for kangaroo mother care.</td>
<td>a) Maintains constant temperature.</td>
<td>a) Baby can become hypothermic or hyperthermic if temperature is not monitored.</td>
</tr>
<tr>
<td></td>
<td>b) Appropriate for babies who have life threatening problems (sepsis, severe breathing difficulty).</td>
<td>b) Allows observation of baby.</td>
<td>b) Baby can become dehydrated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) Oxygen can be easily provided.</td>
<td>c) Incubator is easily colonized by bacteria.</td>
</tr>
</tbody>
</table>
2.4.2 Breast Feeding

Placing the baby between the breasts of mother promotes early initiation of breastfeeding. Initially the baby would be asleep for a period varying from 30-40 minutes. This time may vary from individual to individual. After this period, the baby is usually awake and opens his mouth and starts to move his head from side to side. This sign indicates that the baby is ready for breast feeding. Ensure that the baby is fed with breast milk during this period (within 1 hour of delivery).

The mother should be helped in breastfeeding her baby. The mother and the baby should be in a comfortable position. The baby needs to be placed next to the mother’s breasts with his mouth opposite the areola and nipple. The baby should attach to the breast by itself when it is ready. The positioning and attachment of baby with the breast should be checked.

Encourage early and exclusive breast-feeding. Explain to the mother and her family the benefits of early and exclusive breast-feeding.
• Breast milk contains all the essential nutrients that the baby requires for growth and development
• Breast milk is easily digested and efficiently used by the baby’s body.
• Breast milk protects the baby from infections.
• Breast-feeding can be used as a contraceptive method.

Encourage the mother to breast feed the baby on demand, both day and night (8 or more times in 24 hours), for as long as the baby wants. Mother should offer the second breast once the baby releases the first breast on her/his own.

2.4.3 Skin Care and Baby Bath

Skin Care: Use clean soft cotton clothes to dress the baby. Change diapers soon after they are wet or soiled. Ensure that caregivers wash their hands before handling the baby. Watch out for Pustules especially in axilla, groin and neck. Do not use plastic nappies and harsh detergents to wash the nappies as it can cause irritation to the skin. Wash hands after changing the soiled nappies.

Baby Bath: First bath can be given after 24 hours using mild unmedicated soap. After one month, oil massage can be given. There after skin can be exposed to sunlight for added advantage of Vitamin D. Avoid use of talcum powder.

2.4.4 Care of Umbilical Stump

The umbilical cord is an important site for entry of spores of tetanus. Keep the cord clean and dry and wash hands before touching it. Tie napkin or diaper below the cord stump. Leave the cord dry. Bandages are unnecessary and may delay healing and introduce infection. Applying traditional remedies to the cord may cause infections and tetanus. Watch out for Pus discharge from the cord stump. Redness around the cord, swelling, high temperature (more than 38°C) or other signs of infection should be observed.

2.4.5 Care of Eyes

Observe for any discharge from the eyes, especially with redness and swelling around the eyes. Other signs of severe infection, such as fever (more than 38°C) and poor feeding should be observed for.

Remember: Do not put anything else in baby’s eyes.

2.4.6 Weight Record

Most babies lose weight during first 2 to 3 days of life. The weight varies between 5-10 percent of birth weight. The birth weight is regained by ten days of birth. The factors contributing to initial weight loss include removal of vernix, mucus, and blood from skin, passage of meconium and reduction of extracellular fluid volume. The transition from in utero placental nutrition to post natal oral feeding is associated with transient interruption in the physical growth of babies. During first year of life average daily weight gain is around 30g, 20g, and 10g during first, second, third and fourth month’s period respectively. Most infants double their birth weight by 5-6 months of age and triple it by their first birth day. It is mandatory that periodic weight record should be taken and charted on growth chart.
2.3.7 Immunization

BCG and first dose of OPV and hepatitis B vaccine (HBV) are given at birth or before the baby is discharged from the hospital. The OPV may preferably be given after 3 days because colostrum may interfere with its uptake. The BCG site should be checked for “take” response after 4 weeks. The modified National Vaccination Schedule is depicted in Table 2.2 below.

Table 2.2: Schedule of Immunization

<table>
<thead>
<tr>
<th>Age</th>
<th>Vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 7 days</td>
<td>BCG, OPV-1, HBV-1.</td>
</tr>
<tr>
<td>6 to 8 weeks</td>
<td>DPT-1, OPV-2, HBV-2.</td>
</tr>
<tr>
<td>10 to 12 weeks</td>
<td>DPT-2, OPV-3.</td>
</tr>
<tr>
<td>14 to 16 weeks</td>
<td>DPT-3, OPV-4, HBV-3.</td>
</tr>
<tr>
<td>6 to 9 months</td>
<td>Measles, OPV-5.</td>
</tr>
<tr>
<td>15 to 18 months</td>
<td>MMR, DPT-booster, OPV-6.</td>
</tr>
<tr>
<td>4 ½ to 5 years</td>
<td>DPT-booster, OPV-7.</td>
</tr>
<tr>
<td>10 years</td>
<td>TT-booster every 5 years, MMR-booster.</td>
</tr>
</tbody>
</table>

- Breast-feeding can be given after OPV and it does not interfere with development of satisfactory immunity.
- Most immunization can be given in the presence of a minor illness.
- Live vaccines should be avoided in immuno-compromised children and symptomatic HIV positive infants.
- When a dose of a vaccine is missed the remaining doses should be administered at the earliest opportunity while keeping in mind that the vaccine dose already given is valid.

2.5 ASSESSMENT OF NEWBORN

While caring for the newborn babies, it is important to assess them so that you know their physical and physiological characteristics. It helps to identify any deviation from normal which needs attention. In the following sub section, you will learn about the physical and physiological characteristics of the newborns. Before we go on to discuss the characteristics we shall focus briefly on general examination of the baby and assessment of gestational age. These are also part of assessment. Here we shall only acquaint you with the head to toe examination.

Examination of the Neonate

You should conduct the examination of the baby at birth and late examination i.e. within 24 hours, or next day and at the time of discharge. Take care that the room should be warm, comfortable and there should be good source of light. Examine the baby with clean and warm hands. While examining you should undress the baby and put him or her on a flat warm surface. We shall discuss the examination of baby under the two headings as mentioned above. We shall begin with examination at birth. At this point we shall only focus on parameters for which you have to look for:
A) Examination at birth

A detailed examination of the newborn should be carried out to identify any problem in air passages, serious congenital malformations and assess adjustment to outside uterine life. The areas of examination at birth are:

1) Birth weight and gestational age

You have to assess/take birth weight and estimate gestational age because birth weight indicates the health status of newborn. Similarly you have to assess gestational age because the incidence of anomalies in preterm babies is twice as much as in term, appropriate for gestational age babies.

2) Examination of baby systematically from head-to-toe requires observation of:

a) General Appearance:
   - **Body structure**: Observe whether body structure is well developed (normal baby) or poorly developed (low birth weight baby).
   - **Skin**: Observe the skin for colour whether pink (normal baby), red (low birth weight baby), blue (cyanosed/asphyxiated baby) or yellow (jaundiced baby) or any cracks, spots or birthmarks.
   - **Cry**: Listen whether cry is loud and strong (normal baby), weak or whiny (low birth weight baby) or absent (asphyxiated baby).
   - **Activity**: Observe whether baby is active (normal baby), less active or in active (low birth weight/asphyxiated).

b) Limb size and shape in proportion to body size and shape: Observe whether the proportion between the two is normal or small (achondroplasia).

c) Head, Face and Neck:
   i) **Inspect the head for:**
      - **Hair** whether present or not and if present, note the colour and texture of hair.
      - **Shape** whether round (normal), oval (slight moulding or a small caput formation in normal labour), long (excessive moulding or a large caput formation in prolonged labour) or asymmetrical.
      - **Size** whether small (microcephaly), medium (normal), large (hydrocephaly or prematurity) or unusual (anecephaly).
   
ii) **Feel the head with hands for:**
      - Sutures, whether overriding (slight moulding or excessive moulding) and wide (hydrocephaly).
      - Fontanellae in front and back whether normal or tense (hydrocephaly).

iii) Take the **head circumference** and note whether it is between 32.5-35 cm (normal), less (microcephaly) or more (hydrocephaly).
iv) Observe the face whether triangular (normal), round/being swollen (prolonged labour or hemolytic disease) or asymmetrical and eye brows and eyelashes present (normal baby) or not (low birth weight).

v) Observe the eyes whether normal, or slanting, normally spaced or not (chromosomal abnormality), opened or closed. Observe for any squint (normal) and subconjunctival bleeding (in the form of red patch or ring).

vi) Observe the ears whether flattened against head due to well formed cartilage (normal) or not (low birth weight baby).

vii) Observe the nose for shape and size. Normally it is flat except at the tip which is prominent.

viii) Observe the mouth for cleft lip and cleft palate, frothy mucus coming out (esophageal atresia), tongue tie, false teeth.

ix) Inspect the neck. Normally it is so short that head seems to rest on shoulders.

d) Arms:
- Inspect arms whether moving freely (normal baby), less freely (low birth weight or asphyxiated baby) or not at all (paralysis, dislocation of shoulder or fracture). Observe hands for any folded digit or finger, any extra finger or fused finger, complete nails (normal baby) or incomplete nails (low birth weight babies).

e) Chest and Abdomen:
- Inspect nipples whether well formed (normal baby), poorly formed or absent (low birth weight baby), normally spaced or not (chromosomal abnormality).
- Palpate around one nipple to feel for small nodule of breast tissues whether present (normal baby) or absent (low birth weight baby).
- Count respiration and heart rate (apical pulse) – observe rise and fall of chest or abdomen. Normal rate of new born respiration is 40 – 60 per minute. More rate and difficult respiration is for LBW or irregular with period of apnea, chest in-drawing is for Asphyxiated baby.
- Measurement of chest circumference. It is 30.5 – 33cms in term baby.
- Observe the cord stump for any oozing/bleeding, presence or absence of any of the blood vessels. Normally there are two umbilical arteries and one umbilical vein. Absence of an artery indicates renal or cardiac abnormality.

f) Genitalia:
- Inspect the external genitalia to establish Sex and detect condition like inter-sex, epispadias, hypospadis. The labia of female or scrotum of male baby may appear large. The labia majora is poorly developed in female and does not cover the minora in low birth weight baby.
- Feel the scrotum on both sides in male to detect whether the testicles (nodular structures) are descended or not.
• Observe for phimosis. A slight degree is natural but of more degree interferes with cleaning of penis and requires circumcision.

g) Legs:
• Observe the legs whether the baby is moving both legs freely (normal baby), less freely (LBW) or not at all (paralysis, dislocation of hips or fractures).
• Observe the feet whether normal or bent inwards and downwards or outwards or up wards (club feet).
• Observe the soles for lines (creases) whether deep (normal baby), faint or absent (LBW).
• Count and inspect the toes for any extra toes or fused toes, complete or incomplete nails.

h) Back and Anus:
• Inspect the back for any congenital defect like spina bifida, meningocele, myelomenigocele.
• Observe for anal opening (imperforate anus or any others). Absence of anal opening is serious anomaly.

i) Length and breadth:
a) Take length (refer practical 3 for procedure of taking length) whether it is between 11 – 20 inches/ 45 – 50 cm (normal baby) or below (LBW).

b) Take the weight (refer practical 3 for procedure of taking weight) and see whether it is between 2500 – 4000 gm (normal baby) and 2500 gm or below (LBW).

j) Reflexes:
While examining the baby, simultaneously observe the baby for the following reflex Responses:

a) Sucking Reflex: - Observe the baby whether it is sucking on fist, finger, nipple or anything else that has come in to the mouth of the infant. This is the sucking reflex response.

b) Rooting Reflex: - Gently strike the baby’s cheek with the tip of your finger; it turns its head in that direction in search of nipple. This is the rooting reflex response.

c) Swallowing Reflex: - Put the baby on breast (usually it is put on breast soon after birth) or place little expressed breast milk with a dropper or spoon far back on the baby’s tongue. The baby swallows it. This is the swallowing reflex response.

d) Gagging Reflex: - Note if the baby gags in case the mouth is too full to allow swallowing. This is the gagging response.

e) Coughing Reflex: - Observe the baby as it may sneeze or cough to remove small obstructions such as mucus or gauze fibers from the nose or throat. This is the sneezing or coughing reflex response.
f) **Grasping Reflex:** - Place your one finger in the baby’s hand and see if it holds the finger momentarily. This is the grasping reflex response.

g) **Moro Reflex:** - Observe the baby when a loud noise is made or its sheet is suddenly moved, there is drawing up of the legs and bringing the arms upwards and forward. This is the Moro or startle reflex response.

h) **Tonic neck Reflex:** - Position the baby on its back with head turned to one side and observe for partial or complete extension of the arm and leg on the side it is facing and flexion of arm and leg on the opposite side. This is the tonic neck reflex response.

i) **Step or dance Reflex:** - The infant makes stepping movements when held in up right position. The reflex disappears by 6 months of age.

j) **Babinski’s Reflex:** - The toes flare open when the lateral planter is stroked. This reflex disappears by the end of first year.

**B) Late examination:**

The late examination means the examination of neonate within 18 – 72 hours of birth. Now we shall discuss the late examination of neonate in the following paragraphs. The purposes of conducting late examination are –

1) To assess adjustment of newborn to independent life in terms of temperature maintenance, respiration and feeding.
2) To assess breast feeding.
3) To find out about passage of meconium and urine.
4) To detect occurrence of any superficial infection.
5) To educate the mother about newborn care.

**Look for**

1) **General appearance:**
   a) Skin: - Observe the skin for colour whether pink (normal), yellow (jaundice) or pale (anaemia) and any boils (infection).
   b) Activity: - Observe whether baby is active (normal) or inactive (jaundice or hypoglycemic).

2) **Head, face, neck and arms:**
   a) Inspect head for shape whether moulding and caput have reduced or relieved.
   b) Feel the head for overriding whether reduced or relieved.
   c) Inspect the face whether any swelling, if it was present at birth, is reduced or relieved.
   d) Observe the eyes for sticking of eye lids due to eye discharge (eye infection) and inspect the conjunctiva for yellowish-ness (jaundice), redness (infection), red patch or ring (sub conjunctival bleeding), if it was present at birth, is reduced or relieved.
e) Open the mouth to inspect tongue whether normal or white coated (thrush). Inspect the ears, neck and arms for any abnormality.

f) Feel and count the pulse rate whether normal or not.

3) Chest and abdomen:
   a) Inspect the breast nodules for engorgement, some enlargement occurs on 3rd or 4th day.
   b) Observe and count the respiration and heart rate whether normal or not.
   c) Examine the abdomen whether soft or distended.
   d) Inspect the cord stump for redness, absence of discharge (healthy) or presence of discharge (infection).

4) Genitalia, Legs and back:
   a) Examine the genitalia whether it is clean or not, labia/scrotum is reduced to normal size if it was large at birth.
   b) Examine the legs and back for any abnormality.

5) Temperature:
   Take axillary temperature. Axillary temperature below 36.5°C (Hypothermia) and above 37.5°C (hyperthermia) are abnormal.

6) Weight:
   a) Take weight.
   b) Ask the mother whether baby passed urine and stool or not. And also baby taking breast feed well or not.

7) Recording:
   Record the following in the baby’s health card.
   a) Date and time of examination.
   b) Skin colour and condition, activity, vital signs, weight, urine and stool, acceptance of feeds, other findings indicating baby’s recovery from effects of birth and others indicating infection etc.
   c) Treatment given if there is eye or cord infection.
   d) Any instructions given to mother and family.
   e) If referred.

2.6 NURSING CARE OF NEONATE

a) Establishment and maintenance of respiration:
   • Assess the cry of the baby (failure to cry may be due to obstruction of the air passage with mucous).
   • Suck the oro-pharynx and naso-pharynx with bulb syringe or a catheter connected to suction as soon as the infant’s head is delivered.
   • Position on the back or the abdomen with the head lowered 15 – 30° to facilitate mucus drainage.
   • Keep the newborn warm.
b) **Stabilization and maintenance of body temperature:**
- Assess the body temperature of newborn.
- Dry the hair & skin with warm soft dry towels.
- Drape the neonate in blankets or put the neonate in heated environment.
- Don’t give bath until body temperature is normal and stable.
- Don’t expose the newborn.
- Dress the infant and cover with blankets.
- Head can be covered with cap and feet with booties, if heat loss is a problem.

c) **Provision of optimal nutrition:**
- Feed baby within one hour of delivery.
- Explain mother regarding importance of breast feeding & teach breast feeding technique.
- Feed child on demand for 2 – 3 days and thereafter burp the newborn after breast feeding.
- Advice parents and relatives to feed neonate exclusively with breast milk.

d) **Prevention of infection and injury:**
- Keep the baby’s environment clean and tidy.
- Hand-wash before handling the baby.
- Use clean clothes, linen and equipments only.
- Give injection Vit-K if prescribed.
- Assess the condition of umbilical cord, wash umbilical area gently with water and dry well. Apply any solution to promote drying and prevent growth of organism depending on policy of institution.
- Teach parents to tie diaper below the cord.
- Give baby bath in the midmorning. Give special attention to groin, axilla and anal regions.
- Change napkin whenever soiled.
- Don’t apply powder in excess on skin.

e) **Establishment of mother child bonding:**
- Place the baby over the mother’s abdomen immediately after delivery.
- Promote rooming-in by advising mother to put the baby near her.
- Assess maternal attaching behaviour by watching for gazing, kissing and holding the infant.
- Advice mother to talk to the infant.
- Assess infant attachment behaviour like sucking, crying, body and eye movements.
2.7 ACTIVITIES AND GUIDELINES

Activity 1
Select a neonate weighing 1800 to 2000 grams and perform assessment as per guidelines and show to your supervisor.

Guidelines
Follow the given guidelines to record your assessment findings.

Place of examination ………………………………………………………………

1) Identification data:
Name …………………………….    Age ……………………… Sex ……………
Date of Birth ………. Time of Birth …………. Birth Weight………………….
Gestational Age …………………………………………………………………
Time of examination from …………………… to ………………………
Category according to birth weight and gestational age ………………….

2) Head to Toe examination
3) Newborn Care

<table>
<thead>
<tr>
<th>Type of Care</th>
<th>Procedure</th>
<th>Observation and Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cord</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye</td>
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</tbody>
</table>

Signature of the Assessee/ Examiner ………………………………………

Activity 2
Repeat the above activity with assessment done on baby chosen by you.

2.8 LET US SUM UP

In this practical you have learnt about the examination and care of term baby at birth and after 24 hours. The main focus is given on head to toe examination that includes somatic and physiological measurement, general appearance and assessment of neurological reflexes. The care of the newborn is explained under two sub-sections. The first sub-section is on early care of newborn and second sub-section is related to maintenance of temperature, breast feeding, care of skin, eye and umbilical cord. We have discussed nursing care of neonate which focused on establishment of respiration, providing thermo-neutral environment and maintaining body temperature, promotion of exclusive breast feeding, maternal infant bonding and providing information to parents about various components of new born care.