Chapter 67

Care of the Normal Newborn
Newborn

- Neonates
  - Newborns during the first 28 days of life
- First 24 hours of life are critical for the newborn.
  - Temperature regulation
  - Circulation
  - Respiration
  - Source of nourishment
**Respiration and Circulation**

- In utero, no gas exchange occurred across the alveoli.
- The first few breaths set into process events that
  - Assist with the conversion from fetal to adult type circulation
  - Empty the lungs of liquid
  - Establish neonatal lung volume and function in the newborn
- Circulatory pathway changes abruptly when the umbilical cord is clamped and then cut.
Question

Is the following statement true or false?

It is normal for the newborn to have a respiratory rate greater than 60 breaths per minute.
False

The newborn’s respirations may not stabilize for about 2 hours after birth. During that time, some breaths may sound noisy and wet. However, it is abnormal for the respiratory rate to be greater than 60 breaths per minute at 2 hours of life.
Body Temperature

- Heat loss in the newborn can be caused by
  - Conduction
  - Convection
  - Evaporation
  - Radiation

- The baby has three ways to maintain its temperature
  - Shivering, muscle movements, and the production of heat caused by using brown fat
Immediate Management of the Newborn

- Goals
  - Establish and maintain an airway and respirations.
  - Provide warmth and prevent hypothermia.
  - Provide a safe environment and routine preventive measures.
  - Promote maternal–infant attachment.
Initial Assessment: Apgar Score

- Apgar score
  - Appearance
  - Pulse
  - Grimace
  - Activity
  - Respiratory effort
- The score determines need for immediate assistance or resuscitation.
Neonatal Resuscitation

- If breathing does not begin either spontaneously or following tactile stimulation
  - Resuscitate immediately to prevent brain damage.
    - Establish an airway.
    - Provide oxygen to the lungs.
    - Stimulate the newborn to breathe.
Maintaining Body Temperature

- Birthing room temperature is set at 75°F (23.9°C)
- The air is a cold shock to the baby wet with amniotic fluid.
- The baby should be quickly dried.
- Warm towels or receiving blankets should be placed over mother and newborn.
- Place a cap on the baby’s head to conserve warmth.
- During infant assessment, use a prewarmed mattress, a radiant warmer, and warmed instruments.
Clamping and Cutting the Cord

- Place two Kelly clamps on the umbilical cord.
- After the cord is clamped, the infant must obtain oxygen through its own respiratory effort.
- The cord is cut between the two clamps; usually a cord blood sample is obtained from the portion of the cord still attached to the placenta.
- A plastic clamp is applied 1 to 2 cm above the umbilicus.
- Remove the Kelly clamp.
Identification

• Identification bands
  – One band is placed around the mother’s wrist
  – Two on the infant (wrist and ankle)
  – One on the father or significant other
  – The printed number on the band is recorded

• Electronic bracelets

• Footprinting

• Completing birth information in the health record
Protection Against Disease

- Standard Precautions
- Eye prophylaxis
- Vitamin K administration
- Vaccinations
Question

Is the following statement true or false?

An infant delivered by cesarean section of a mother with gonorrhea is not at risk of being infected by ophthalmia neonatorum.
Answer

False

If the mother has gonorrhea or chlamydia infecting her reproductive organs, the birth process could result in the infant being exposed to those organisms.

Even babies born by cesarean section may have been exposed. Each of these organisms can cause blindness, or ophthalmia neonatorum, if left untreated.
Promoting Parental–Infant Bonding

• The nurse assists in the attachment, or bonding, process by encouraging parents to see, touch, and hold their newborn baby.

• Behaviors that indicate this beginning attachment include:
  
  – The mother moves from touching with her fingertips only, to stroking and massaging her baby.
  
  – The mother and baby assume the en face position, in which their heads align as they look at each other.
  
  – The parents speak to the infant in high-pitched voices.
Characteristics of a Newborn

- Weight: 5.5 to 9.5 pounds
- Length: 18 to 22 inches
- Head: Large head, 13 to 14 inches in circumference
  - Irregular shape due to the events of labor and birth.
    - Temporary molding
    - Caput succedaneum
    - Cephalohematoma
Characteristics of a Newborn (cont’d)

- **Body**: Chest is 10 to 12 inches in circumference
  - Engorgement of the breasts is common
- **Female infant**: Pseudomenstruation
- **Male infant**: Phimosis, hypospadias, epispadias
- **Skin**: Changes to a color typical of its race within 2 weeks
  - Acrocyanosis, desquamate, bumps, rashes and other marks
- **Hair and vernix**: Lanugo, vernix caseosa
Movement and Activities

- Maturity
- Behavior
- Reflexes
  - Rooting reflex, Palmar grasp reflex, Moro’s or startle reflex, tonic neck reflex, Babinski’s reflex, stepping reflex, and sucking reflex
- Senses
  - Newborns can see shades of light and darkness, can hear, and touch is well developed.
Data Gathering: Initial Observations

- Umbilical Cord: Normally, there are two arteries and one vein in the umbilical cord.
- Measurements: Weigh and measure the newborn; record the weight in grams.
- Vital Signs: Take respiration, pulse, and temperature, and record them every 1 to 2 hours immediately after birth and then every 4 hours for the first 24 hours.
Data Gathering: Ongoing Observations

- Respiratory status
  - Normal if the movements of diaphragm and abdominal muscles are synchronized
- Crying
  - Hungry, wet, disturbed, uncomfortable, or sick
- Elimination
  - First urine within 24 hours of birth
  - First stool within 12 hours of birth—meconium is greenish-black, tarry in appearance
Signs of Newborn Respiratory Distress

- Chest movements
  - A lag on inspiration or a seesaw movement
- Intercostal retractions: Any indentation is abnormal.
- Xiphoid retraction: Any indentation is abnormal.
- Nares dilating (flaring)
- Expiratory grunt
Protecting the Newborn

- Identification
- Security
- Sleeping position
  - Risk of sudden infant death syndrome (SIDS)
- Protection from nosocomial infection
Daily Newborn Care

- Data gathering
  - Respirations, pulse, temperature, blood pressure, weight, urine, stools

- Basic needs
  - Handling the newborn
  - Dressing and wrapping the newborn
  - Cord care
  - Care of the genitals
  - Sleep
Question

Is the following statement true or false?
A full-term newborn can be given a tub bath shortly after birth.
**Answer**

False

A newborn is not given a tub bath until after the cord falls off. The cord will dry and fall off naturally about 10 to 14 days after birth.
Feeding

- Newborns are fed approximately every 2 to 4 hours.
- Breastfeeding
  - Better nutrition, lower risk of allergies, reduced risk of infections, enhanced maternal–newborn bonding
  - Involution of the uterus promoted by breastfeeding
  - Delayed ovulation for women who breastfeed only
  - Correct temperature of milk
- Bubbling must be done whether the baby is breastfed or bottle-fed.
Breastfeeding

• LATCH
  - Latch, audible, swallowing, type of nipple, comfort, hold

• Common problems of breastfeeding
  - Sore and cracked nipples
  - Engorgement
  - Plugged ducts
  - Mastitis
Drug Safety in Breastfeeding

- Drugs that are dangerous to the nursing newborn:
  - Anticancer drugs, radioactive substances, lithium
  - All drugs of abuse

- These drugs are generally considered compatible:
  - Acetaminophen and many antibiotics
  - Codeine
  - Phenytoin
  - Pseudoephedrine
Bottle Feeding

- The person feeding the baby must wash his or her hands before receiving the newborn.
- Use care in keeping the nipple of the bottle clean.
- Tilt the bottle, and keep the baby from swallowing air.
- Hold the newborn exactly as you would the breastfed baby.
- Formula is usually given at room temperature.
Question

Is the following statement true or false?
A bottle should not be warmed in a microwave.
True

A bottle should not be warmed in a microwave; this creates “hot spots” in the formula that may burn the baby’s mouth and throat unexpectedly.
Discharge

- Before the newborn is discharged, the birth attendant examines him or her thoroughly.
- All birth and newborn records are completed.
- At discharge, the nurse should remove one of the newborn’s identification bands and place it on the chart, which the mother then signs.
- All babies should be sent home securely restrained in an infant car seat.
End of Presentation