Chapter 20
The Newborn at Risk: Gestational and Acquired Disorders
Classifications of Gestational Age

- **Small for gestational age (SGA)**
  - Weight, length, and/or head circumference falls below the 10th percentile

- **Appropriate for gestational age (AGA)**
  - Weight, length, and/or head circumference falls between the 10th and 90th percentiles

- **Large for gestational age (LGA)**
  - Weight, length, and/or head circumference is above the 90th percentile
Classifications of Newborns Based on Weight

- **Low birth-weight (LBW)**
  - Weigh less than 2500 g (5.51 lbs)
- **Very low-birth-weight (VLBW)**
  - Weigh less than 1500 g (3.3 lbs)
Newborn Classification Based on Gestational Age

- **Preterm or premature**
  - A newborn born at 37 weeks’ gestation or less

- **Postterm or postmature**
  - A newborn born at 42 weeks’ or more gestation

- **Term**
  - A newborn who is born between the beginning of week 38 and the end of week 41 of gestation
Ballard Scoring System

- Maturity rating and classification
- Assessment tool to determine gestational age
- Involves physical and neuromuscular maturity
Categories Rated to Determine Physical Maturity of the Newborn

- Skin
- Lanugo
- Plantar creases
- Breast buds
- Ears
- Genitals
Categories Rated to Determine Neuromuscular Maturity of the Newborn

- Posture
- Square window
- Arm recoil
- Popliteal angle
- Scarf sign
- Heel to ear
Common Factors Related to Restriction in Growth Rate of SGA Newborn

- Chromosomal abnormalities
- Congenital defects
- Congenital infections
- Multiple gestations
- Maternal history of long-term problems
- Fetal nutritional deficiencies
- Maternal complications during pregnancy
Routine Nursing Care for the SGA Newborn

- Monitoring respiratory status
- Maintaining normal skin temperature
- Monitoring blood glucose levels
- Monitoring results of other blood studies
- Observing feeding tolerance
- Monitoring intake and output and daily weights
- Observing for jaundice
- Encouraging parents to visit and care for their child
Risk Factors for Having a LGA Newborn

- Parents who are larger than average
- Newborn male (typically larger than females)
- Multiparous women
  - Have 2 to 3 times the number of LGA newborns compared with primiparous women
- Congenital disorders
  - Beckwith’s syndrome
  - Umbilical abnormalities
- Maternal diabetes
Characteristics of the LGA newborn

- Demonstrates less motor skill ability and difficulty regulating behavioral states
- Exhibits immaturity with reflex testing
- Possibly has signs and symptoms of birth trauma such as bruising or a broken clavicle
- Newborn’s skull may show evidence of molding, cephalohematoma, or caput succedaneum
Nursing Care for the LGA Newborn

- Monitoring vital signs frequently
- Observing for signs and symptoms of hypoglycemia
- Noting any signs of birth trauma or injury
- Helping parents verbalize feelings about any bruising or trauma that they will notice
- Encouraging parent–newborn bonding
Factors Contributing to the Incidence of Preterm Births

- Poor health habits and diet
- Inadequate living conditions
- Overwork of the pregnant woman
- Low income
- Frequent pregnancies occurring in close succession
- Maternal age extremes
- PROM
- Hydramnios in multiple births
- Need for early delivery due to maternal or fetal factors
Complications of Preterm Newborns

- Respiratory distress syndrome
- Intraventricular hemorrhage
- Cold stress
- Retinopathy of prematurity (ROP)
- Necrotizing enterocolitis
- Liver complications
Nursing Care for the Preterm Newborn

- Improving respiratory function
- Maintaining body temperature
- Preventing infection
- Maintaining adequate nutrition
- Preserving skin integrity
- Promoting energy conservation and sensory stimulation
- Reducing parental anxiety
- Improving parenting skills and family functioning
Mechanisms and Examples of Heat Loss

- **Evaporation**
  - Wet skin during bathing
- **Conduction**
  - Lying on a cold surface such as a scale for weighing
- **Radiation**
  - Exposure to but not in contact with surfaces
- **Convection**
  - Exposure to drafts
Characteristics of the Postterm Newborn

- Little lanugo or vernix remains
- Scalp hair is abundant and fingernails are long
- Skin is dry, cracked, wrinkled, peeling, and whiter
- Little subcutaneous fat
- Long and thin appearance
Types of Respiratory Disorders of the Newborn

- Transient tachypnea of the newborn (TTN)
- Meconium aspiration syndrome (MAS)
- Sudden infant death syndrome (SIDS)
Newborn of a Chemically Dependent Mother

- Mother chemically dependent on alcohol
  - Newborn may develop fetal alcohol syndrome
- Mother chemically dependent on illicit drugs
  - Newborn may experience withdrawal symptoms
Major Causes of Infection in the Newborn

- Group B beta-hemolytic streptococcus
- Rubella virus
- *Chlamydia trachomatis* or *Neisseria gonorrhoeae* (leading to ophthalmia neonatorum)
- Hepatitis B
- Herpes virus type 2
- Human immunodeficiency virus (HIV)
Criteria for Giving RhoGAM

- The mother must be Rh negative
- The mother must not be sensitized by an earlier pregnancy
- The infant must be Rh positive
- The direct Coombs' test (a test for antibodies performed on cord blood at delivery) is weakly reactive or negative