- Newborn's First Minutes
  - Apgar Scale
  - An assessment of risk taken 1 and 5 minutes after birth
  - Measures of the 5 vital signs, each scored 0, 1, or 2
    - Appearance- typical to have blue hands and feet
    - Pulse- is there a heart beat?
    - Grimace- muscle reactions in the face
    - Activity- are they moving around?
    - Respiration- are they breathing?
  - Score of 7 or higher = infant is fine
  - Score below 7 = infant needs help breathing
  - Score below 4 = infant needs critical care
- Anoxia
  - Oxygen deprivation at birth
  - Can lead to brain damage and/or later cognitive, language problems
  - Cerebral palsy
    - Causes include:
      - Squeezing by umbilical cord
      - Placenta abruption (premature separation in utero), placenta previa (placenta covers cervical opening while baby is being born)
      - Failing to breathe after birth
      - Respiratory distress syndrome in preterm infants
        - Often because the lungs are the last organ to fully develop
  - Preventing Brain Cell Death From Anoxia
    - Researchers are experimenting with ways to prevent this secondary damage.
    - Anoxic newborns placed in a head cooling device shortly after birth for 72 hours substantially reduced brain injury and increased their assessment scores.
    - Precooled water blankets are also being used to reduce the rates of death and severe disabilities (brain damage)
- Preterm and Small-for-Date Babies
  - Preterm
    - Born weeks before their due date.
    - May be appropriate weight for length of pregnancy.
  - Small-for-Date
    - May be born at the due date or preterm.
    - Below expected weight for length of pregnancy. Some small-for-date babies have weakened abilities to manage stress.
  - Preterm Infants
    - 7 days in the womb—from 34 to 35 weeks can contribute greatly to infant health.
    - Babies born at 35 weeks show substantially reduced rates of illness and lengthy hospital stays compared to those born at 34 weeks.
  - Interventions for Preterm Infants
    - Isolette- controls temperature, breathing; prevents germs
    - Respirator- controls breathing

        - Feeding tube- monitors nutrients
        - IV medication
        - Kangaroo (skin-to-skin) contact
        - Parent training in care giving (monitors, infant CPR, etc)
- Precious Moments After Birth
    - Oxytocin causes the breasts to "let down" milk and heightens the mother's response to the baby.
    - First-time fathers also show hormonal changes, including an increase in prolactin and a decrease in androgens that are associated with positive emotional reactions to infants.
- Newborn Reflexes
    - Reflexes: involuntary, simple responses to certain stimuli
    - Most reflexes that develop before birth are present for 4 to 8 months after birth, and then suddenly disappear.
        - Highly canalized
    - The disappearance reflects normal brain development and the emergence of higher cortical function
    - Reflexes present at birth in the healthy infant are
        - Rooting- touch the side of the face, the baby will turn its head and begin to suck
        - Sucking- whenever anything is placed in the mouth
        - Swallowing- whenever anything wet is put in the mouth
        - Stepping
        - Grasping- whenever anything is put in its hands
        - Babinski- feet spread and tows curl whenever the bottom of the feet are stroked
        - Moro reflexes- startled; arms and legs flail whenever the baby experience the sensation of falling or being thrown
- Newborn States
    - Developmentalists have identified six primary states of arousal in newborns, which occur throughout the day and night.
    - Each state is associated with its own pattern of activity (gross muscle movements, eye movements, breathing patterns, and brain states).
    - Across a 24-hour period, a typical newborn in the United States will experience about 7 sleep intervals and 7 waking intervals, each lasting from a few minutes to a few hours.
    - Taken together, the sleep intervals occupy about 16 hours of each day, half spent in active (REM) sleep and half in deep sleep.
    - Over the first few years, total sleep decreases, and sleep bouts consolidate into fewer, more long-lasting intervals of sleep.
- Infant States of Arousal
    - Active/Irregular/REM Sleep
        - The active sleep state is characterized by increased muscle tone and motor activity, facial grimaces and smiles, occasional eye movements under closed lids, and irregular breathing.
    - Active sleep occurs at the beginning of a period of sleep in newborns.
    - After two or three months, the sequence of active sleep and quiet sleep will reverse—quiet sleep will occur before active sleep, as it does in adults. Newborns spend about 8 hours a day—50 percent of their total sleeping time—in REM sleep. The proportion of REM sleep declines rapidly in the months after birth.