

## Chapter 4: Infancy from the Newborn Baby to the Toddler

- Newborn States (Deep Sleep)
  - The deep (also known as non-rapid-eye-movement—NREM) sleep state of full rest
    - AKA “sleeping like a baby”
  - Neonates spend about 8 hours in deep sleep.
  - Is characterized by low muscle tone and motor activity, closed eyelids, still eyes, and regular breathing.
- The Mysterious Tragedy of Sudden Infant Death Syndrome
  - SIDS is the leading cause of infant mortality between 1 week and 12 months in industrialized nations.
  - Its occurrence tends to peak between 2 and 4 months of age.
  - How Can SIDS be Lessened?
    - Quit smoking
    - Putting babies to sleep on their backs
    - Removing bedclothes
    - Pacifiers
- Sleep Patterns
  - During the first 2 years, the organization of sleep and wakefulness changes
    - Result of brain growth
  - Sleep moves to an adult-like night-day schedule during the first year.
  - Sleep needs decline from 18 to 12 hours a day by age 2.
  - Naptime
    - Most 6-9 month olds take 2 daytime naps
    - Around 18 months, they usually take one nap, which is longer and later in the day
    - Around 3-5 years old, naps go bye bye
  - Nighttime
    - Changing sleep/arousal pattern due to brain development
      - Environment influences too
    - Western nations, parents try to get their baby to sleep through the night around 4 months of age
      - Feed solid foods at night
      - Put in a separate, quiet room with the lights off
    - At odds with infants' neurological development?
      - Not until middle of first year is melatonin secreted in brain more at night than during day
      - Melatonin: brain hormone that promotes drowsiness
    - At end of 1<sup>st</sup> year, REM sleep declines
    - REM often prompts waking
  - FINALLY, sleep thru the night!
    - Even after infants sleep through the night, they continue to wake occasionally.
    - Temporary periods of disrupted sleep
      - Ex- Mobility (crawl, walk), around 6 or 7 months
      - Ex- Separation anxiety
    - Night wakings increase between one and a half and 2 years and then decline
- Make It Real: Co-Sleeping

- o Some families practice “co-sleeping,” in which the family shares a bed.
- o Why might a family do this?
  - More comfort for the child
  - Child sleeps easier
  - Feedings are easier
  - Increased emotional attachment
  - More time with child for working parents
- o Do you think it could benefit or harm an infant?
  - Could potentially be harmful because:
    - We don't know how to get babies out of bed
    - People may not get good sleep for fear of rolling onto the child
    - Child may become dependent on sleeping with parents
    - Loss of intimacy
  - Solutions:
    - Neutral space
    - Cribs for side of bed
    - Bassinet
- o Research on Co-Sleeping
  - CULTURE influences the decision (it is more common in Eastern culture)
  - Cosleeping is the norm for 90% of the world's population.
  - It is NOT harmful to an infant, under normal circumstances (e.g., if adult is not drunk)
  - It may increase dependence on parents
- o Cultural Variations in Infant Sleeping Arrangements
  - Cultural values of collectivism vs. individualism strongly influence infant sleeping arrangements.
  - Cosleeping is increasing in North America, perhaps because more mothers are breastfeeding.
- Physical Growth During Infancy
  - o Body Growth
    - Gain 50% in height from birth to age 1; 75% by age 2.
    - Grow in spurts.
    - Gain “baby fat” until about 9 months, then get slimmer
    - Girls slightly shorter and lighter than boys
  - o Growth Trends
    - Cephalocaudal: “head to tail”
      - Lower part of the body grows later than the head
    - Proximodistal: “near to far”
      - From the center of the body, outwards
      - Head, trunk, arms, legs, hands, feet
  - o Skeletal Age:
    - Assess physical maturity via skeletal age
    - Measure body's bone development
    - X-rays show if growth plates still exist
  - o Epiphyses of the bone:
    - Epiphyses: growth centers in the bone

- Cartilage cells produced at the growth plates of the epiphyses throughout childhood
    - Eventually thin and disappear, and harden into bone
    - After that, growing stops
  - The Skull at birth:
    - Because of large increases in brain size, skull growth is especially rapid during the first two years.
    - At birth, the bones of the skull are separated by 6 gaps called fontanel, which gradually shrink and close.
- Motor Development
  - Follows an organized sequence
  - Motor skills develop according to two principles:
    - Cephalocaudal (e.g., head lift before sit, stand, walk)
    - Proximal-distal (e.g., sucking before kicking)
  - Large individual differences in rate of motor progress
  - Independence of systems
    - Different parts of the body develop along different time scales
      - Recall Figure 4.3: Differential Growth Rates in the Human Body
        - Nervous system: 0-2 years
        - Sexual development: after puberty
        - Height: 0-2 years and again after puberty
  - The Sequence of Motor Development
    - Gross motor development: crawling, standing, walking
    - Fine motor development: reaching, grasping, writing
    - Gross Motor Accomplishments (pretty highly canalized)
      - About 6 months sit up by themselves
      - By 8-10 months begin crawling
      - By 1 year starting to walk
  - Motor development influenced by parental expectations and childrearing practices
  - Motor Milestones of the First Two Years
    - Lifting Head
      - On average, infants can lift their head by about 1-2 months. This motor milestone occurs early, often in combination with the reflexive movements of the arms and legs that are observed when infants lie on their stomach. As control of head and neck muscles increases, the reflexive movement of the legs decreases.
    - Rolling Over
      - At 2 or 3 months, most infants can roll over without assistance.
    - Sitting Up
      - Most infants sit without support around 5-7 months. This child's ability to sit alone gives her some independence in exploring her world—at least the part of it she can reach.
      - Can also manipulate things with both hands
    - Crawling
      - By 5-11 months, (usually around 7) months, most children can lift their bellies off the floor and crawl on their hands and knees, or hands and feet.