

Al-Mustaqbal University College

Department of Nursing



كلية المستقبل الجامعة

قسم التمريض

07.11.2022

## Lecture 6

# Infant Normal Growth & Development

By

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## NORMAL INFANT

- Physical growth :  
a - Weight gain:
  - Birth to 4 months -  $3/4$  kg / month.
  - 5 to 8 months -  $1/2$  kg / month.
  - 9 to 12 months -  $1/4$  kg /month
  - He will double birth weight by 5-6 months and triple it by 10-12months of age.

# NORMAL INFANT

## length

- During the first year in life, the infant gains in length roughly 2.5cm cm/month during the first 6 months of age. Average height is 65 cm at 6 months and 75cm at 12 months
- Increase by about 25 cm in 1st year

## GROWTH OF HEAD:

- The posterior fontanel closes at 1-2 months.
- The anterior fontanel closes at 12- 18 months.
- Head circumference increases about 1.5 cm/month during the first 6 month of age, then 1/2cm /month during the second 6 months of age.
- It is 43 cm at 6 months. At the end of the first year, it is 46 cm.

## CHEST CIRCUMFERENCE:

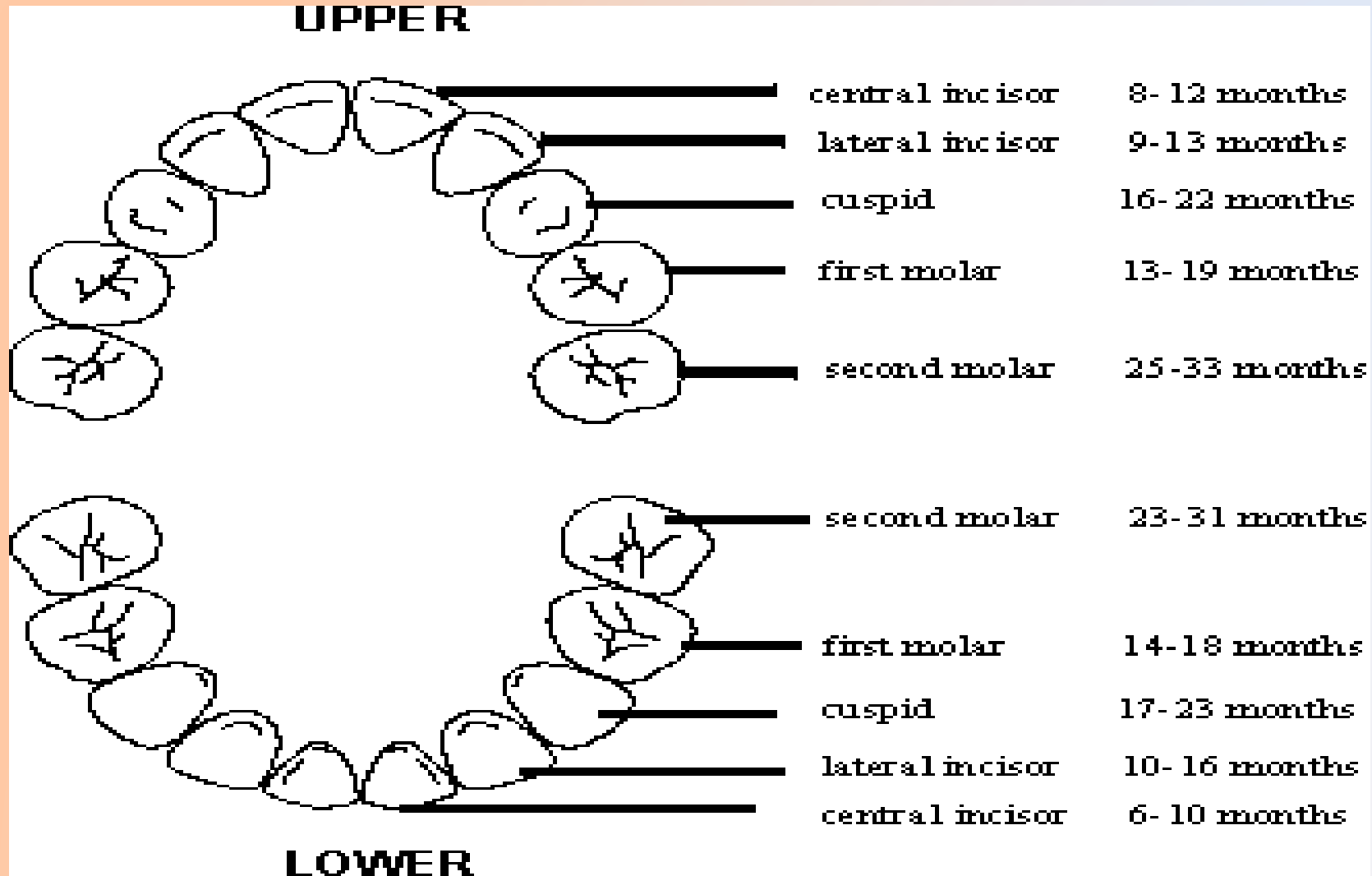
- **At the end of the first year, chest circumference and head circumference are equal .**
- **N.B: Chest is usually measured at nipple line, for greater accuracy, take two measurements- one during inspiration and the other during expiration-and record the average .**

# ERUPTION OF THE MILK TEETH (DECIDUOUS TEETH)

**5–7 months of life,** The first deciduous teeth usually erupt

- Babies may differ in the timing of tooth eruption
- Teething is a normal continuous process of development and does not cause fever or respiratory problems

# ERUPTION OF THE MILK TEETH



- **Body temperature**
  - Follows the average normal range after the initial adjustment to postnatal living 35.5-37.5°C
- **Respirations**
  - Average  $30 \pm 10$  breaths per minute according to the infant's activity



# GROSS MOTOR DEVELOPMENT

- 1 month** Raises head momentarily when prone, hips extended
- 2 months** When prone raises chin off couch
- 3 months** In a prone position, he will rest on forearm, keep head in midline
- 4 months** Sits with support.  
Moro reflex disappears.



## CONT. GROSS MOTOR DEVELOPMENT.

- 6 months** Puts feet in mouth in supine position. Sit alone briefly.
- 7 months** Sits without support leaning forward
- 8 months** Rolls over from prone to supine. Sits well with no support
- 9-10 months** Creeps on hands and knees.
- 11 months** Stands unsupported.
- 12 months** Walks supported. Toddles' way and cruises around furniture. Walks well. Starts crawling upstairs.



# MOTOR DEVELOPMENT IN INFANTS



**9-11 months  
creeping**



**12 months  
walks  
supported**



**Walks well  
12 months**

# FINE MOTOR DEVELOPMENT

- 1 months** Hands predominantly closed Grasp reflex strong
- 2 months** Hands often open. Grasp reflex is fading
- 3 months** Actively holds rattle but will not reach for it, Hands kept loosely open
- 4 months** pulls clothing or blanket over face in play , Grasps object with both hands Plays with rattle placed in hand and shakes it but cannot pick it up if dropped, Can carry objects to mouth
- 5 months** Able to grasp objects voluntarily. Takes objects directly to mouth
- 6 months** Resecures a dropped object Drops one cube when another is given

## CONT. FINE MOTOR DEVELOPMENT

**7 months** Can transfer a rattle from hands to hand. Reaches objects and brings them to mouth.

**8 months** Can feed himself with a biscuit.

**9 months** Tries picking things with fingers. Preference for use of dominant hand

**10 months** Grasps bell by handle.

**11 months** Can use a thumb and finger to pick a cube. Grasps by thumb and finger.

**12 months** Can pick small objects "pellets "No longer puts objects in mouth. Holds cup to drink.

# SOCIAL INFANT DEVELOPMENT

- He learns that crying brings attention.
- The infant smiles in response to smile of others.
- The infant shows fear of stranger (stranger anxiety).
- He responds socially to his name.
- By 9 to 10 months: play simple games with adults ,e. g. “bye-bye”.  
play with adult games such as “peek-a-boo” by 10 months

According to Erikson, the infant develops sense of trust or mistrust. Through the infant's interaction with caregiver (mainly the mother), especially during feeding, he learns to trust others through the relief of basic needs.



'peek-a-boo' by 10 months



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# COGNITIVE INFANT DEVELOPMENT

- Communicate at first by crying
- Begin to say a few words
- Explore objects by touching and putting them in their mouth
- Piaget explain cognitive development as (sensorimotor)it mean the infant explain his sensation by motor movement



# EMOTIONAL INFANT DEVELOPMENT

His emotions are instable, where it is rapidly changes from crying to laughter. His affection for or love family members appears.

# HEALTH PROMOTION OF THE INFANT

- **Nutrition requirements**
- **Promoting sleep**
- **Dental care**
- **Accident prevention**
- **Toy selection**

# NUTRITION OF INFANT

- **Nutrition is an essential component for healthy growth and development. Human milk is the preferred form of nutrition for all infants. Breastfeeding provides the infant with micronutrients, immunologic properties, and several enzymes that enhance digestion and absorption of these nutrients.**

# INFANT FEEDINGS

## (Birth to 1 Month )

- Breast every 2 to 3 hours
- Bottle every 3 to 4 hours

## (Two to 4 Months)

- Breast or bottle every 3 to 4 hours

## (Four to 6 Months)

- Breast or bottle four to six times per day

## (Six to 8 Months)

- Iron-fortified rice cereal
- Breast or bottle four times per day

## (Eight to 10 Months)

- Chopped or mashed foods
- use cup with formula, breast milk, juice, or water
- Breast or bottle four times per day

## (Ten to 12 Months)

- Self-feeding with fingers and spoon
- Most table foods allowed
- Breast or bottle four times per day

## INTRODUCING SOLID FOODS

- At age 6 to 12 months, solid food becomes appropriate because of the infant's developmental readiness (e.g. the infant can assume an upright position, the extrusion reflex lessens, and the digestive tract matures)
- Solid food should be introduced progressively: first, cereal with iron, followed by pureed fruits, then vegetables, then meats. Each new food should be added to the infant's diet separately at intervals of 4 to 7 days each to determine allergies.

# SLEEPING PATTERNS OF INFANTS

**Sleep patterns vary among infants, Generally by 3 months of age, most infants sleep is 15 total hours with a nocturnal pattern of sleep that lasts from 9 to 11 hours and approximately three 1- to 2-hour naps during the day.**

# COMMON INFANTS ACCIDENTS AND INJURIES

Accidental injuries are a major cause of death during infancy; common causes include:

- **a) Falls:** off beds and down stairs
- **b) Aspiration:** of small objects
- **c) Poisoning:** from overdose of medications or ingestion of toxic household substances
- **d) Suffocation:** due to unintentional covering of the nose and mouth, pressure on the throat or chest, or prolonged lack of air such as in a closed parked car
- **e) Burns:** from hot liquids or foods, scalding bath water, excessive sun exposure, or electrical injury
- **f) Motor vehicle accidents:** most commonly linked to improper use or non-use of an infant car seat.



# TOY SELECTION

## Infant toys serve several purposes, including:

- a) Stimulation for psychosocial development
- b) Diversion for relieving boredom, pain, and discomfort
- c) A means of communicating and expressing feelings
- d) Aid in the development of sensor motor skills

## Toy safety considerations include.

- a) No sharp part edges
- b) No detachable parts (e.g. wheel tops)

## Examples of safe, age-appropriate infant toys include:

### ○ a) Age 1 to 3 months:

mobile, music box, stuffed animal with no detachable parts, and rattle

### ○ b) Age 4 to 6 months:

squeeze toys, busy box, and play gym

### ○ c) Age 7 to 9 months:

splashing bath toys, blocks; and balls

### ○ d) Age 10 to 12 months:

durable books with large pictures, building blocks, nesting cups, large puzzles and push-pull toys.

# DENTAL HEALTH

- 1. An infant's primary (deciduous) teeth erupt at about age 6 months. Assessment guide: age of child in months minus 6 months equals' number of primary teeth.
- 2. Clean an infant's teeth with a damp cloth; brushing is too harsh for the infant's tender gums.

- 3. Assess the need for a fluoride supplement; consult with the physician.
- 4. Despite a widespread belief to the contrary, fever, vomiting, and diarrhea usually are not associated with teething but rather indicate illness.

# SUMMARY OF NURSING INTERVENTIONS

- ❖ Encourage parents to hold and stay with infant.
- ❖ Provide opportunities for sucking.
- ❖ Provide infant with toys that give comfort or stimulate interest

# HAVE A NICE DAY

