

Child Development

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Heredity & Environment

- A child's development represents the interaction of heredity and the environment on the developing brain.
- Heredity determines the potential of the child, while the environment influences the extent to which that potential is achieved.

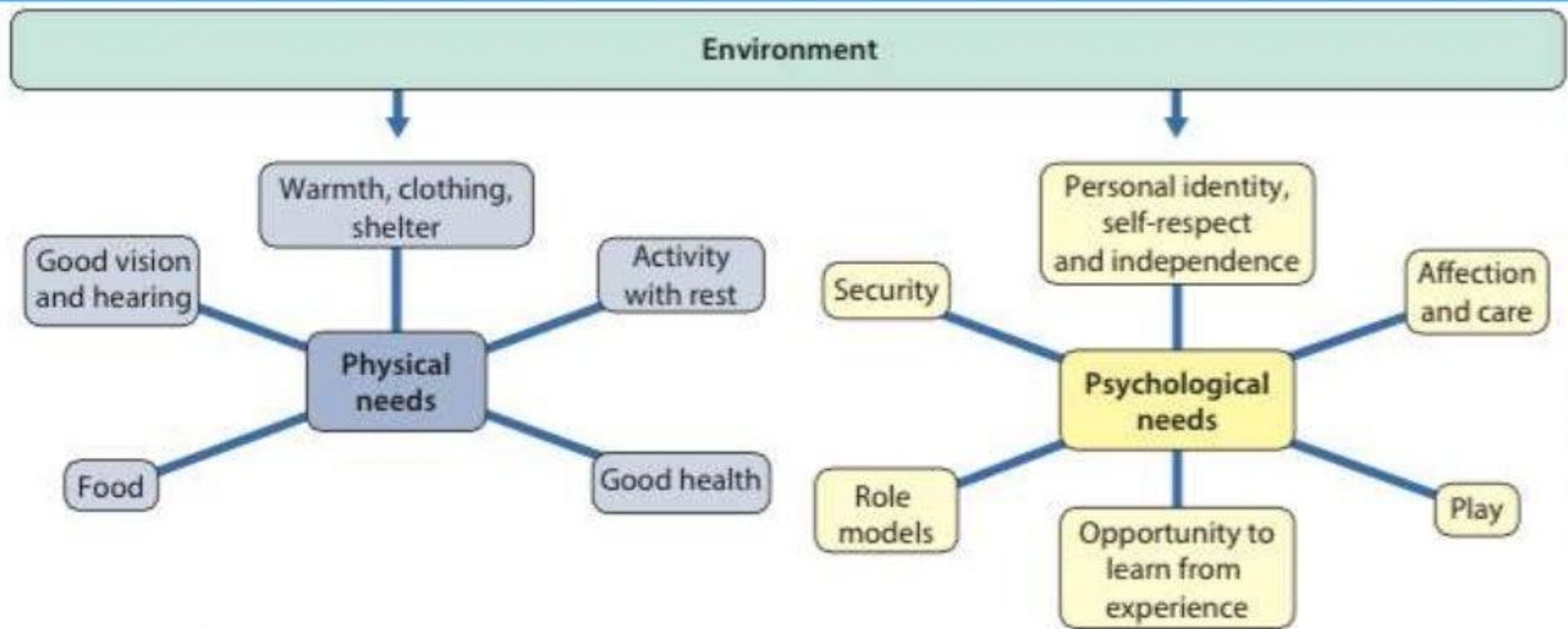
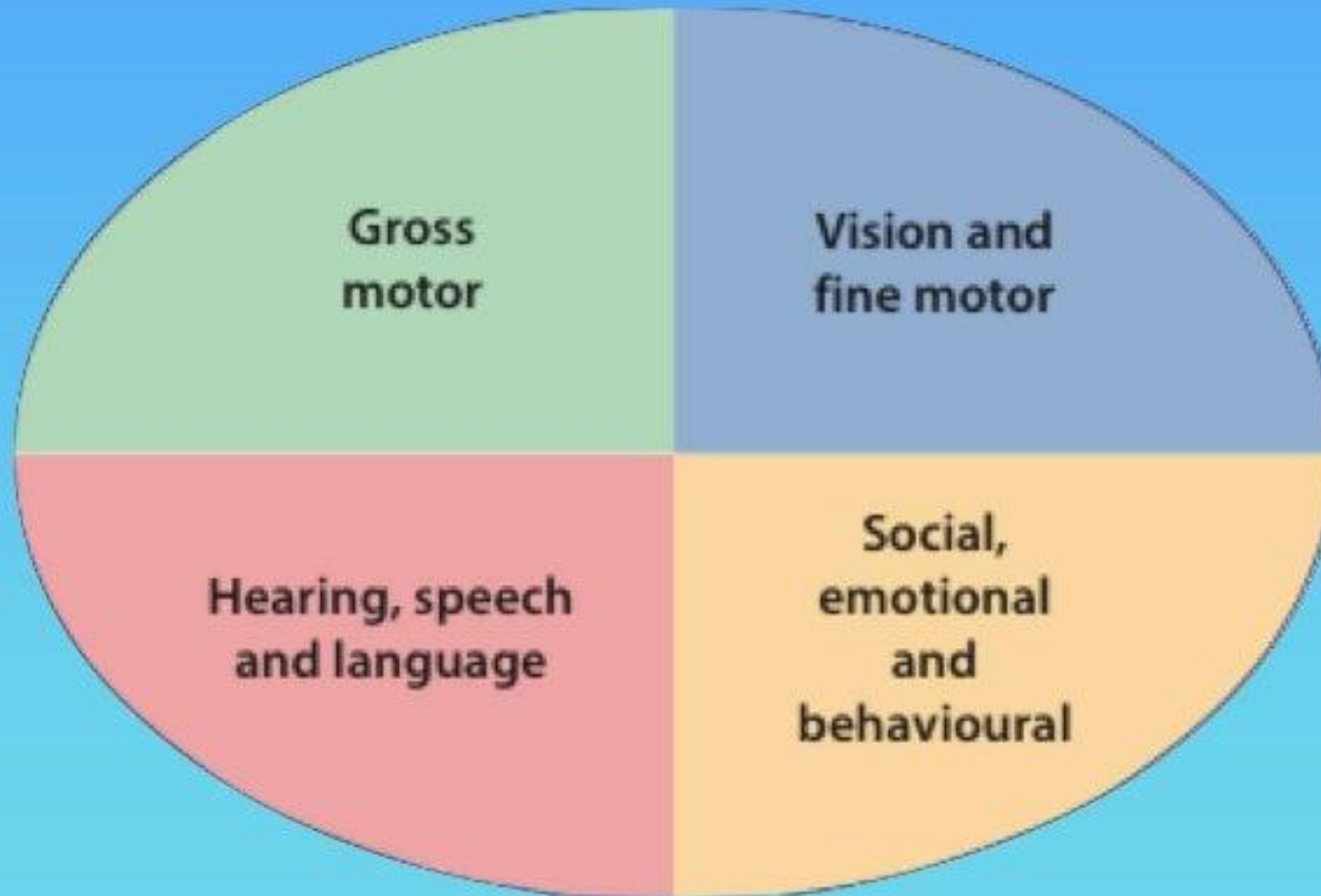


Figure 3.1 Development can be impaired if the environment fails to meet the child's physical or psychological needs.

Fields of Development



Developmental Milestones

- Median Age
- Limit Age

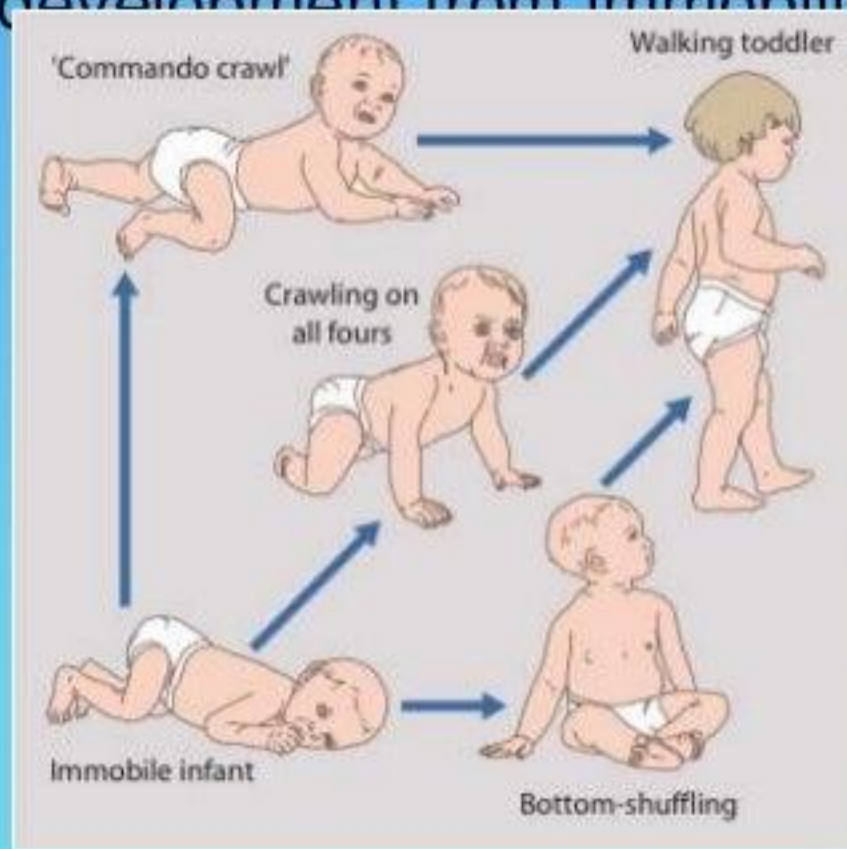
- **Developmental milestone of walking unsupported:**

- 25% by 11 months
- 50% by 12 months
- 75% by 13 months
- 90% by 15 months
- 97.5% by 18 months

Median= 12 months
Limit= 18 months

Variation in the Pattern of Development

- e.g. Motor development from immobility to walking



Adjusting for Prematurity

- When assessing development age you calculate it from expected date of delivery.
- Correction isn't required after 2 years of age.

Is Development Normal?

- Concentrate on each field of development; separately
- Consider the developmental pattern; sequence of skills achieved & anticipated ones
- Determine level reached in each field
- Relate progress of each developmental field to the others; similar rate or lagging behind?
- Relate child's developmental achievements to age; chronological or corrected

- Normal development implies steady progress in all four developmental fields with acquisition of skills occurring before limit ages are reached.
- If there is developmental delay, does it affect all four developmental fields (global delay), or one or more developmental field only (specific developmental delay)?

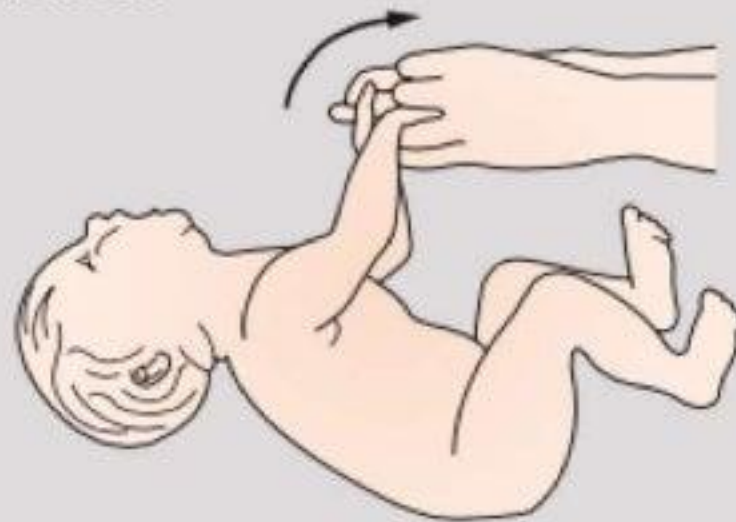
Gross Motor Development

newborn



Limbs flexed, symmetrical posture

newborn



Marked head lag on pulling up

6–8 weeks



Raises head to 45° in prone

6–8 months



Sits without support
– at 6 months: with round back
– at 8 months: with straight back (shown)

8-9 months



Crawling

10 months



Cruises around furniture

12 months



Walks unsteadily,
broad gait, hands apart

15 months



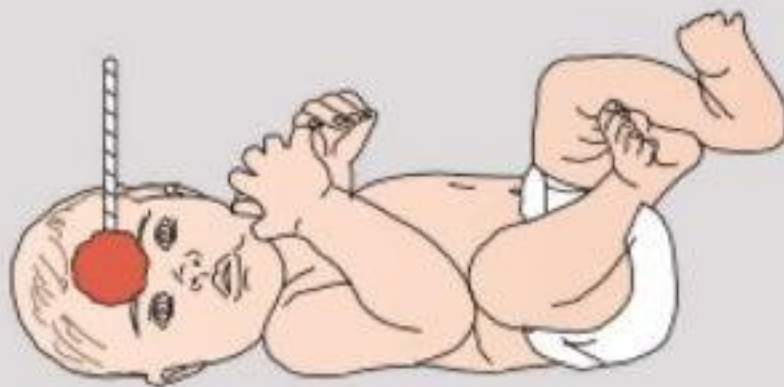
Walks steadily

The primitive reflexes present at birth gradually disappear as postural reflexes develop, which are essential for independent sitting and walking

Primitive reflexes	Postural reflexes
Moro – sudden extension of the head causes symmetrical extension, then flexion of the arms	Labyrinthine righting – head moves in opposite direction to which the body is tilted
Grasp – flexion of fingers when an object is placed in the palm	Postural support – when held upright, legs take weight and may push up (bounce)
Rooting – head turns to the stimulus when touched near the mouth	Lateral propping – in sitting, the arm extends on the side to which the child falls as a saving mechanism
Stepping response – stepping movements when held vertically and dorsum of feet touch a surface	Parachute – when suspended face down, the arms extend as though to save themselves
Asymmetrical tonic neck reflex – lying supine, the infant adopts an outstretched arm to the side to which the head is turned	

Vision & Fine Motor

6 weeks



Follows moving object or face by turning the head (illustrated).

4 months



Reaches out for toys

4-6 months



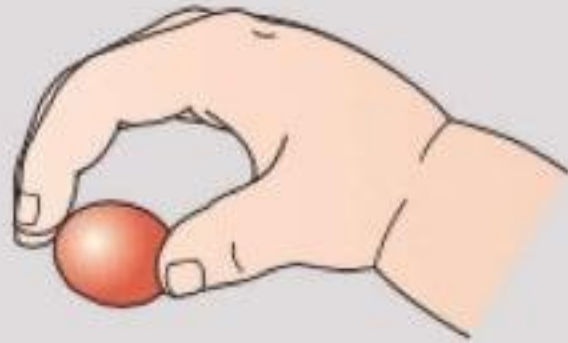
Palmar grasp

7 months



Transfers toys from one hand to another

10 months



Mature pincer grip

16-18 months



Makes marks with a crayon

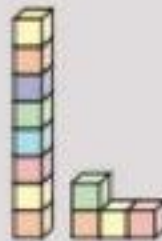
14 months-4 years



Tower of three
(18 months)



Tower of six
(2 years)



Tower of eight or
a train with four bricks
(2½ years)



Bridge (from a
model) 3 years



Steps (after
demonstration) 4 years

2-5 years



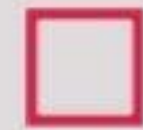
Line (2 years)



Circle (3 years)



Cross (3½ years)



Square (4 years)



Triangle (5 years)

Ability to draw without seeing how it is done.
Can copy (draw after seeing it done) 6 months
earlier.

Hearing, Speech & Language