

NORMAL DEVELOPMENT IN CHILDREN

Developmental milestones :

Defined according to 4 areas or domains of development.

- Gross motor (major motor activities).
- Fine motor (usage of small muscles of hands).
- Language (communication with others).
- Social (other modes of interactions).

Gross motor milestones

00:02:56

Rule : Development in a child always proceeds in cephalocaudal direction (head - foot).

3 months : Head control/neck holding (1st milestone).

4-6 months : Roll over (supine to prone). Trunk control present.

6 months : Sit with support (tripod position - leaning forward trunk in centre with two arms by the side).



Tripod position

8 months : Sit without support, crawling.



Crawling

Body is flat on the ground and uses both upper limbs and lower limbs to move from one place to another.

10 months : Standing with support, **creeping**.



Creeping

Creeping : uses all 4 limbs to move but chest and abdomen are lifted above the ground.

11 months : **Cruising**.



Cruising with support

Cruising : uses support to move sideways.

12 months : Standing without support, walking with support.

15 months : **walks without support/independently**.

18 months : Running.

2 years : Climbing stairs with 2 feet/step holding side rails.

3 years : Climbing stairs with 1 foot/step (upstairs), **rides tricycle**.

4 years : upstairs & downstairs - 1 foot/step, **hopping**.



Hopping (jumping on one leg)

Fine motor milestones

00:12:38

Small movements of hands like grasping objects, drawing skills, dressing skills and making tower of cubes.

0-3 months : No fine motor milestone (babies hands are always closed due to **neonatal palmar grasp reflex**) kumarankitindia1@gmail.com

4 months : Reaching out for objects with both hands
(**bidextrous grasp**).

6 months : **unidextrous grasping** (ulnar palmar grasping - immature) Child uses palm as support ; **transfer objects from one hand to another**.

8 months : **Radial palmar grasping** : mature.

9 months : Immature pincer grasp : Object held by sides of fingers.



Immature pincer grasp
(9 months)

@marrowedition6notes

12 months : mature pincer grasp : Object held by finger tips.



mature pincer grasp
(12 months)

15 months : Scribble.

18 months-2 years : Draw a vertical line.

2 - 2 $\frac{1}{2}$ years : Draw a horizontal line.

Best answer for drawing a line : **2 years** (if horizontal or vertical line is not mentioned).

Active space

2 years : Line (L).

3 years : Circle (O).

4 years : Cross/plus (X).

Mnemonic : LOX STD

4 1/2 years : Square (S).

5 years : Triangle (T).

6-7 years : Diamond/rhomboid (D).

Undressing : 2 years (easier task than dressing).

Dressing : 3 years.

Both these requires help of a parent.

Dresses and undresses without any help at 5 years.

Tower of cubes : Placing one cube on top of another.

Starts at 15 months : 2 cubes.

18 months : 3 cubes.

24 months (2 years) : 6 cubes.

36 months (3 years) : 9 cubes.

Language milestones

00:24:36

Comprises of tasks like making sounds, talking words/sentences, telling stories/rhymes etc.

Starts from 3 months.

3 months : musical sounds when child is happy : **Cooing sounds.**

4 months : Laughs aloud when happy.

6 months : monosyllables (ma, pa).

9 months : Bisyllables/repeating same syllable (mama, papa).

1 year : 1-2 words with meaning.

15 months : Jargon speech (words without meaning is **temporary milestone** for 1-2 months).

18 months : 8-10 words with meaning.

2 years : 100 words ; starts to speak in sentences.

3 years : Recognize and tell name, age and gender.

4 years : Story telling or singing rhymes.

Social milestones

00:30:00

2 months : Social smile.

3 months : **mother regard** (interacts with mother only).

6 months : Stranger anxiety (cries) ; smiles at mirror image.

9 months : Waves bye-bye.

12 months : Playing a simple ball game with others.

15 months : Points to object (asking for a ball far away).

18 months : **Domestic mimicry** (child imitates actions of adults).

2 $\frac{1}{2}$ - 3 years : (Non-interactive) **parallel play**.

4 years : (Interactive) **group play**.

5 years :

- Follow **3** step commands (go to room, take the ball, keep it here).
- Identify **4** colours and repeat 4 digits.

Miscellaneous milestones

00:35:36

- **mouth**ing : Starts 6 months ; Put objects/hand in mouth.
- **Casting** : Begins by 1 year of age (deliberate throwing of objects).

Both milestones are seen till 18 months-2 years.

- **Object permanence** : Around 9 months.

Feeling that a missing object is present around the child though not seen in the field of vision.

E.g : Looking and searching for a ball that fell off from a child's hand.

- **Handedness** : Preference of one hand over the other.
Starts by **3 years** & firmly established at **4 years**.
- **Hand regard** : Appears at 3 months and persists till 5 months.



Active space

Abnormally persisting hand regard for more than 5 months :
Developmental delay.

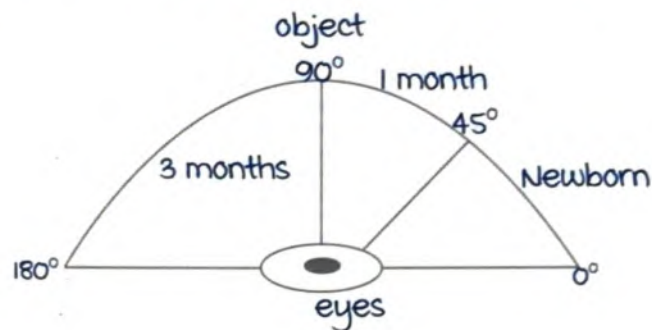
- Range of vision :

Newborn follow objects upto 45° .

1 month child follow objects upto 90° .

3 months old child follow objects upto 180° .

Binocular vision fully established by 4 months.



- Localization of sound : Turning head towards sound source

- Assessed using murphy's sequence.

kumarankitindia1@gmail.com

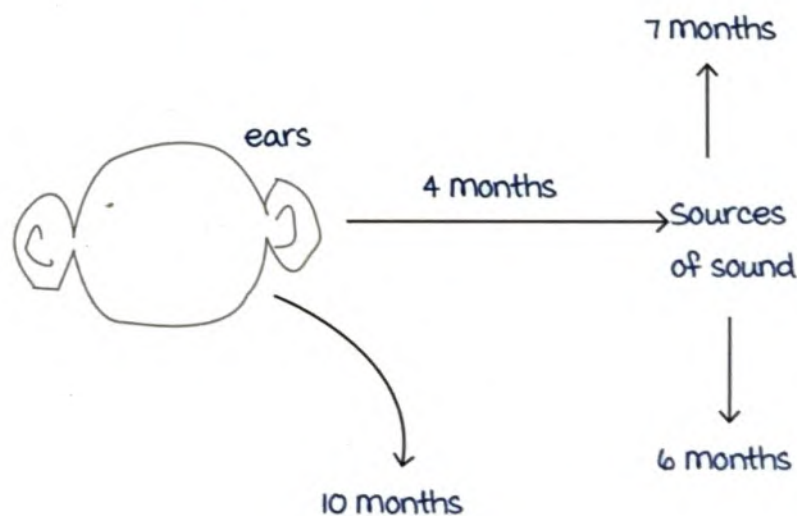
Newborn : Startle response to sound.

4 months : Horizontal localization of sound.

6 months : Downward localization of sound.

7 months : Upward localization of sound.

10 months : Diagonal localization of sound.



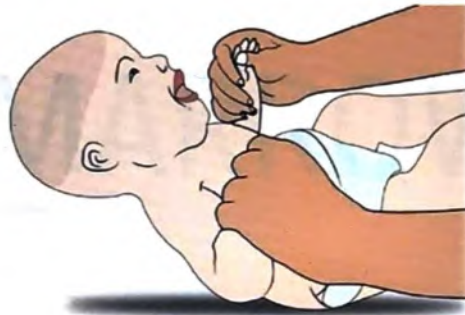
Assessment in development

00:46:50

Pull to sit maneuver :

Newborn : Complete head lag (no head control).

3 months : No head lag (head control attained).



@marrowedition6notes
Normal pull to sit

Ventral suspension :

Lift the child using palm of a hand & turn to prone position with palm still supporting the baby's trunk.

Newborn : Head and limbs drop down (no control).

2 months : Head at level with rest of body.

3 months : Head is lifted above the level of body.

Prone position :

Newborn : Same posture till 2 weeks of life.

- Legs folded and kept beneath abdomen.
- Pelvis : Lifted above the rest of body.



60c6b3eeaa8ded0e4e7e5ea7

Active space

4-6 weeks : Legs straighten and pelvis at level with rest of body (baby will lie flat).

3 months :

- Head lifted up.
- Elbow flexed/bent.
- Bears weight on forearm.



6 months :

- Head lifted up.
- Elbow straight (in extension).
- Bearing weight on extended limbs.



60c6b3eeaa8ded0e4e7e5ea7