

AREAS OF DEVELOPMENT AND STAGES OF DEVELOPMENT:

Q. Growth and Development

Growth refers to physical increase in the size of the body. Increase in weight, height and the size of internal organs. Growth refers to a quantitative change that is a change that can be measured.

Development refers to changes in a person's physical and behavioural traits that emerge in orderly way and last for a reasonable period of time. Child development focuses on the quantitative and qualitative changes that take place in children.

(Example of qualitative changes: Thinking ability, social skills, function skills etc/ Intellectual growth, development of creativity, sociability and morality are qualitative changes- Development continues even when physical changes are not visible)

The human life span has been divided into the following stages:

- **Prenatal stage:** Prenatal development refers to the development from conception to birth. Before birth, development is extremely rapid and it is mostly physiological.
- **Neonate or the newborn:** It refers to the period from birth to two weeks or so.
- **Babyhood or infancy:** It extends from the first month to two years. This is a very significant period. After birth, this is the period of most rapid growth and development.
- **Childhood:** The period of childhood is from two to twelve years of age. Development at this stage is not a rapid as during infancy.
The stage of childhood is further divided into early childhood (2 to 6yrs) and late childhood (6yrs to 12 yrs)
- **Adolescence:** The next stage is referred to as the period of adolescence (12-18yrs). The beginning of this period is marked by puberty. Like infancy, there is rapid development at this stage.

AREAS OF DEVELOPMENT

The various developments that take place during the life span of an individual can be classified thus: physical and motor development, social development and language development.

Physical Development: It refers to the physical changes in the size, structure, and proportion of the parts of the body that take place from the moment of conception.

Motor Development: It means the development of control over body movements. This results in increasing coordination between various parts of the body. Eg: A helpless newborn gradually learns to clothe herself, draw, skip, ride a cycle etc

1 month: Hold head erect for few seconds

2 months: Holds head up when prone,

3 Months: Kicks well, Holds head up at 45 degree when in prone

(Reflex dominated)

4 Months: Lifts head and chest in prone position with forearm support, Holds head up at 90 degree prone looks directly and lowered with control, diminishing primitive reflexes, Head control in relation to eye, Hand Coordination, hands to midline, looking at hands

5 Months: Holds head erect with no lag

6 months: Turns from supine to sideways, Rolls to Prone from Supine, Sits by propping on both hands

7 months: Rises on the wrists, creeps on belly for short distance

8 months: Crawls on belly

9 months: Turns around the floor

10 Months: Creeps on hands and knees, Pulls up to sitting position, Sits without hand support and turns body to look sideways, shuffles on bottom, stands when held up

11 months: Pulls up to stand, crawls reciprocally forward i.e. on hands and knees, stands holding furniture

12 months: Maintain kneeling balance, walks sideways while holding onto furniture, walks with hand support.

13 months: walks with one hand support, stands alone

14 months: walks alone for a few steps

15 months: walks independently, climbs up stairs, catches self when falls

16 months: Pushes pram, toy etc.

17 months: climbs onto chair

18 months: seats self in small chairs, picks up toys without falling

19 months: climbs up and down stairs

20 months: jumps

21 months: Runs, walks upstairs

24 months: walks downstairs holding one rail, Two feet per stairs

24 months-36 months (2-3Years)

- Holds rail and descends stairs using alternate feet
- Ascends stairs using alternate feet without holding
- Descends stairs using alternate feet without holding

36-48 months (3-4 Years)

- Stands on one foot for 8-10seconds
- catches and throw ball
- Kicks large ball when rolled to him
- Walks backward easily

48-60 months (4-5 Years)

- Hops on one foot

Language Development:

It refers to those changes that make it possible for an infant who in the early months uses crying for communication, to learn words and then sentences to speak fluently or clearly.

0-3 Months: startled by sudden noises, blinks, screws up eyes, extend limbs, fans out fingers and toes, and may cry, coos, turns head towards sounds, Makes gurgling noises, cries to get food when hungry or when uncomfortable

3-6 Months: Coos when spoken to, Oos and ahhs, Babbles with expression, copies sounds in environment, makes sounds to show joy and displeasure, Strings vowels together when babbling (ah, eh,oh), Takes turn with caregiver making sounds of approaching voices, footsteps, running bath water etc.

6-9 months: makes a lot of different sounds, mamamama babababa, copies sound of others, points at things, understand spoken words.

9-12 months: Attentive to sound, particularly voice. Understands no-no and bye-bye, responds to simple requests, uses simple gestures (shake hands, wave bye -bye) changes tone when making sounds, says mama dada and uh oh, tries to copy words

12-15 months: knows and immediately turns to own name. Comprehends simple instructions associated with gestures (eg: give it to daddy, come to mummy, where are your shoes? Clap hands etc)

15-18 Months: Understands many things said, Points to what she wants, understands and obey

Simple instructions (eg: don't touch, Give me the ball, Kiss Daddy goodnight)

18-24 months: Points to things or pictures when named, uses 50 or more recognisable words and obviously understands many more, joins in nursery rhymes and songs

Social Development:

It refers to the development of those abilities that enable the individual to behave in accordance with the expectation of the society. It is concerned with the child's relationship with people and her ways of interaction with them.

0-2 months: Attempts to look at parents, observes environment, smiles, prefers faces over all else, calms when held, responds to touch,

2-4 months: smiles and may laugh, copies some movements and facial expressions, may cry when playing stops, shows excitement with arm and leg movement

4-6 months: Knows familiar faces, Responds to other people's emotions, often happy, likes to look at self in mirror

6-9 months: may be afraid of stranger, Recognizes family members, has favourite toys, loves songs and rhymes

9-12 months: shy with strangers, cries when parent leaves, show some fear, repeats sounds to get attention, plays simple games

12-18 months: Recognizes self in mirror, may have tempered, tantrums, Plays simple pretend, points to show others something

18-24 months: Laugh at unusual things, is excited with other children, shows defiant behaviour, plays begins to involve other children

24-27 months: May develop a fear of new things such as the doctor and haircuts, needs about 12 hours of sleep and 1 nap, has many strong feelings but trouble expressing them, has trouble sharing

27-30 months: starts to play with other children, refers to self by name, begins to share, practicing taking turns

30-33 months: has friends, refuses to listen

33-36 months: understands concept of mine and his, shows affection for friends, takes turns in games, has empathy

Cognitive Development:

It means the emergence of thinking capabilities in the individual. The infant is not born with the thinking abilities of adults. The child's thinking abilities

0-3 months: Attends to voice, Follows moving person, look at spoon or objects, inspects fingers

3-6 months: Reaches for objects, inspects a toy, transfer objects from hand to hand

6-9 months: Bangs spoon, rings bell when given, imitates sound and actions,

9-12 months: copies actions, uses 2/3 words. Plays with paper and explore it etc

12-15 months: places small objects in a cup after demonstration, uses 4/6 words, scribbles in imitation

15-18 months: imitate simple actions, eg: reading book, washing clothes etc, watches rolling, builds tower of 3 cubes, using preferred hands

18 months-2 years: identifies objects by name, builds tower of 6 blocks, ask name of objects

2 years -2 ½ years: continuously ask questions, what? Where? Recognise self in picture/photograph, builds tower of 7/8 blocks

2 ½ years-3 years: questions who, what, where? Builds tower of 9 blocks, matches 2 or 3 primary colours, Demands favourite stories over and over,

3-4 years: Always asking questions, Why, when, How and meaning of words. Name objects from memory, discrimination of forms, can answer simple questions, draws a man with head, legs, trunk and features, and matches four primary colours correctly

Developmental Screening

Only 20% of the children with developmental delay in the United States receive early intervention before three years. Early intervention is useful in high-risk children to improve their cognitive and academic performance. Less than 50 % of clinicians are only using standardized screening tools in practice. Time constraints, lack of training are essential barriers in using the developmental screening tool. The Ages and Stages Questionnaire (ASQ), the Parents' Evaluation of Developmental Status, and the Child Development Inventory are standard screening tools used in practice. ASQ tool can be used for up to 66 months. The PEDS tool can be used up to eight years of age. Gross and fine motor milestones are assessed at every well-child visit in the first four years. Standardized developmental assessments using ASQ are mandatory at 9, 18, and 24 or 30 months.[18]

The clinician may screen more frequently if there are risk factors like prematurity, lead exposure, or low birth weight. Autism screening needs to be done at 18 and 24 months of age. If the screening tool reveals developmental delay, the child needs referrals to developmental pediatricians. Children up to three years with developmental delay are referred to early intervention programs, and children above three years of age are referred to special education services.

Red Flags in Growth and Development

- Red flag signs in motor development are persistent fistling for more than three months, the persistence of primitive reflexes and rolling before two months, and hand dominance before 18 months.
- No babbling by twelve months, no single words by sixteen months, no two-word sentences by two years, and loss of language skills are red flags.
- Children whose height or weight readings below the 5th percentile, above the 95th percentile, or cross two major centile lines need further evaluation.

Reference:

[https://www.ncbi.nlm.nih.gov/books/NBK567767/#:~:text=Infancy%20\(neonate%20and%20up%20to,12%20to%2018%20years%20old\)](https://www.ncbi.nlm.nih.gov/books/NBK567767/#:~:text=Infancy%20(neonate%20and%20up%20to,12%20to%2018%20years%20old))