

Motor Development

Motor development is the development of movement. The ability to move is essential to human development. Many motor skills are necessary for everyday life activities, e.g. sitting, walking, running, climbing stairs, picking up objects, using cups knives and forks, spoon, pouring drinks, dressing, holding and using pencils, pens, scissors and using keyboards, etc. Motor development is considered very important when looking at child development, it is a prominent domain or developmental area.

Motor development refers to the development of a child's bones, muscles and ability to move around and manipulate his or her environment. Motor development can be divided into two sections :

1. **Gross motor skills:** These skills use the larger muscles of the skeleton or groups of larger muscles to maintain posture and balance and for activities such as throwing a ball, walking, running and hopping.
2. **Fine motor skills:** These skills use the smaller muscles of hand, feet and face for more precise activities such as eating, speaking, playing with toys and eventually writing.

Motor development also involves how well children's muscles work. This is referred to as muscle tone. Children need to balanced muscle tone in order to develop their muscles and use them with ease when standing, sitting, rolling, walking, running, swimming and all other postures and actions. Motor development also involves the child's vascular and proprioceptive systems. Both of these are part of the child's sensory system:

1. The vascular system is located in the inner ear and allows the body to maintain balance.
2. The proprioceptive system involves the inner ear, the muscles, joints and tendons. It allows the body to understand where it is located. Maintaining balance and posture and having coordinated movements are only possible if the proprioceptive system is functioning well.

Order or Sequence of Motor Development

The typical development of a child's motor skills usually follows to a predictable

1. **Inner to the outer** : Development occurs from the inner body to the outer body. This means that children usually develop or gain control over their arms before they develop or gain control over their fingers.

2. **Top to bottom:** Development also starts from top to bottom. Children need to control their head first, then they will gain control over their legs and feet.

STAGES OF MOTOR DEVELOPMENT

There are three stages of motor development in children:

Later Childhood

Early Childhood

Infanthood

The first stage is marked by extremely rapid growth and development, as is the second stage. By the age of 2 years old, this development has begun to level out somewhat. The final stage does not have any marked new developments, rather it is characterized by the mastering and development of the skills achieved in the first two stages.

Infanthood: 0-2 years

The average age at which gross motor skills are achieved during infancy may vary. Although the sequence of motor development is fairly uniform across children, differences may exist individually in the rate at which motor skills develop. A baby who is a late reacher may not necessarily be a late crawler/walker. Concern would arise if the child's development were delayed in many motor skills.

Age range may be seen in the following table :

	Motor skill	Average age achieved	Age range (90% infants)
1.	Head erect & steady when held upright	6 weeks	3 weeks-4 months
2.	Lifts self by arms when prone	2 months	3 weeks-4 months
3.	Rolls from side to back	2 months	3 weeks-5 months
4.	Grasp cube	3 months, 3 weeks	2-7 months
5.	Rolls from back to side	4 $\frac{1}{2}$ months	2-7 months
6.	Sits alone	7 months	5-9 months
7.	Crawls	7 months	5-11 months

8.	Pulls to stand	8 months	5-12 months
9.	Plays pat-a-cake	9 months, 3 weeks	7-15 months
10.	Stands alone	11 months	9-16 months
11.	Walks alone	11 months, 3 weeks	9-17 months
12.	Builds tower of 2 cubes	13 months, 3 weeks	10-19 months
13.	Scribbles vigorously	14 months	10-21 months
14.	Walks up stairs with help	16 months	12-23 months
15.	Jumps in place	23 months, 2 weeks	17-30 months

Motor control of the head comes before control of the legs.

Motor control of the head comes before control of the legs. This head sequence is called the cephalocaudal trend. Motor development proceeds from the centre of the body outward, i.e. the head, trunk and arm control is mastered before the coordination of the hands and fingers. This is the proximodistal trend. Physical growth follows these same trends throughout infancy and childhood.

Once the child has grasped these gross motor skills, they are then able to explore their environment further by grasping things, turning them over and seeing what happens when they are released. Infants are then able to learn a great deal about the shape and feel of objects.