

# INTRODUCTION TO HUMAN DEVELOPMENT II

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**UNIT 3**

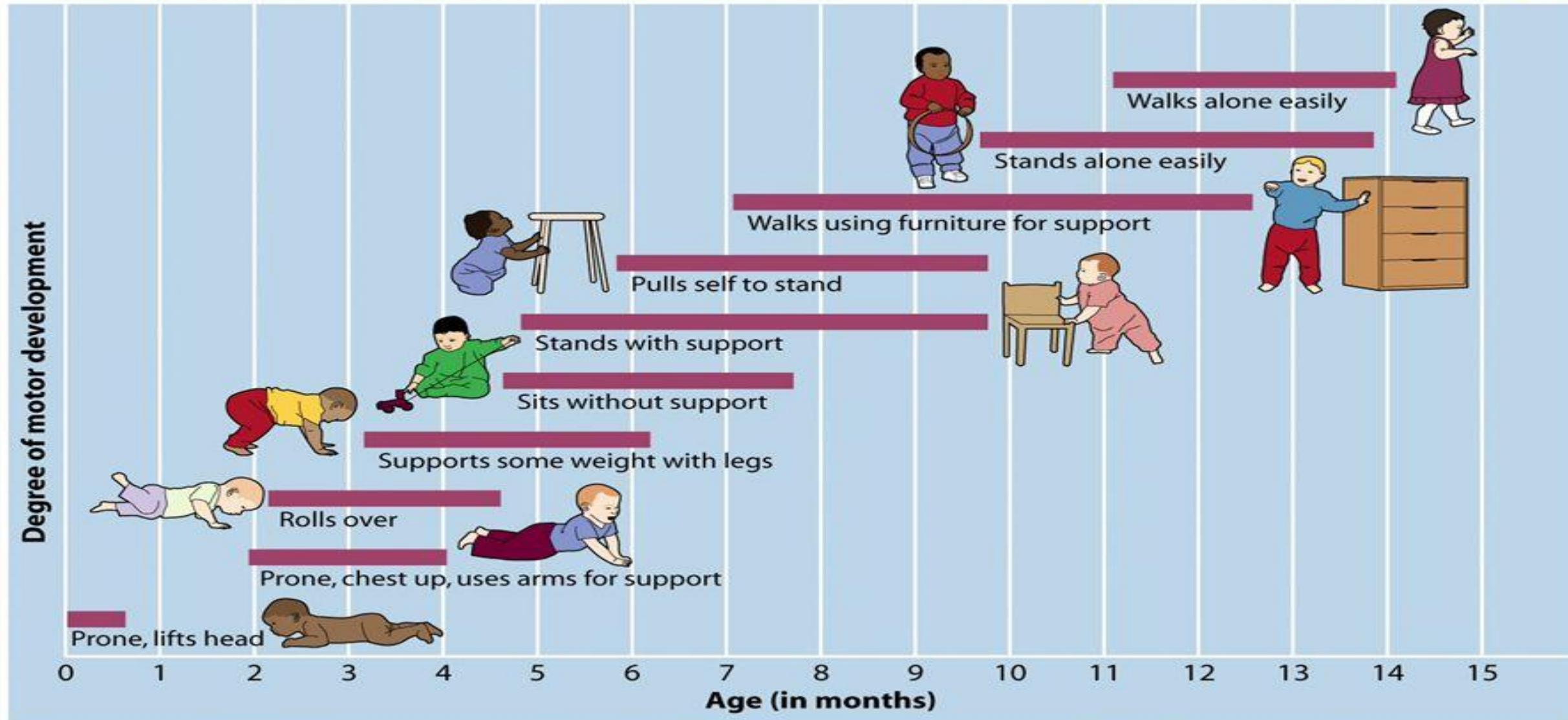
**LESSON 6 – MILESTONES OF MOTOR DEVELOPMENT FROM 0-2 YEARS**

# **MILESTONES OF MOTOR DEVELOPMENT FROM 0-2 YEARS**

- Developmental milestones are a set of functional skills or age-specific tasks that most children can do at a certain age range.
- Children develop in certain predictable ways, referred to as developmental milestones. Milestones cover four areas of a child's development -- cognitive, communication and language, social and emotional, and motor. Milestones help you understand how your child learns and grows.
- Motor development means the physical growth and strengthening of a child's bones, muscles and ability to move and touch his/her surroundings.

- Motor skill development follows a predictable sequence. It starts from the inner body, including the head, neck, arms and legs, and then moves to the outer body such as hands, feet, fingers and toes (Proximodistal Development)
- Motor development is important throughout a child's early life, because physical development is tied to other development areas. For example, if a child is able to crawl or walk (gross motor skills), he/she can more easily explore their physical environment, which affects cognitive development. Social and emotional development progresses when a child can speak, eat and drink (fine motor skills).

# The major milestones of motor development in infancy



# Reflexes of Infants

Reflexes are unlearned , organized, involuntary responses that occur automatically, in the presence of certain stimuli. They are the inborn behavioral patterns that develop during uterine life. They should be fully present at birth and are gradually inhibited by higher centers in the brain during the first three to 12 months of postnatal life. These reflexes, which are essential for a newborn's survival immediately after birth, include sucking, swallowing, blinking, urinating, hiccupping, and defecating. These typical reflexes are not learned; they are involuntary and necessary for survival.



**FIGURE 9.2 Some Infant Reflexes** Infants are born with a number of reflexes to get them through life, and they are incredibly cute when they perform them. These reflexes disappear as infants mature.



# Motor development in Infancy

- Initially, babies' movements are simply the uncontrolled, reflexive movements they are born with. Over time, they learn to move their body parts voluntarily to perform both gross (large) and fine (small) motor skills. In general, babies begin developing motor skills from the center of the body outward and from head to tail. They learn to control their head and neck before they learn to maneuver their arms; they learn to maneuver their arms before they learn to manipulate their fingers. Babies learn to move their torso before they learn how to move their arms and legs.



# GROSS MOTOR SKILLS

- Infant reflexes begin to fade as babies use their senses to learn to interact with the environment around them and as their bodies grow stronger and mature.
- One way babies learn to use their bodies is by learning to achieve large physical tasks, or gross motor skills, such as crawling and walking.
- Children will develop at their own speed and pace, and there is a wide range of healthy ages at which they can achieve these milestones. Milestones help organize and summarize this information easily and clearly.

- By around age 2 months, infants' backs continue to strengthen, and they are able to raise their head and chest up off the ground and rest their body on their elbows when they're lying on their stomachs.



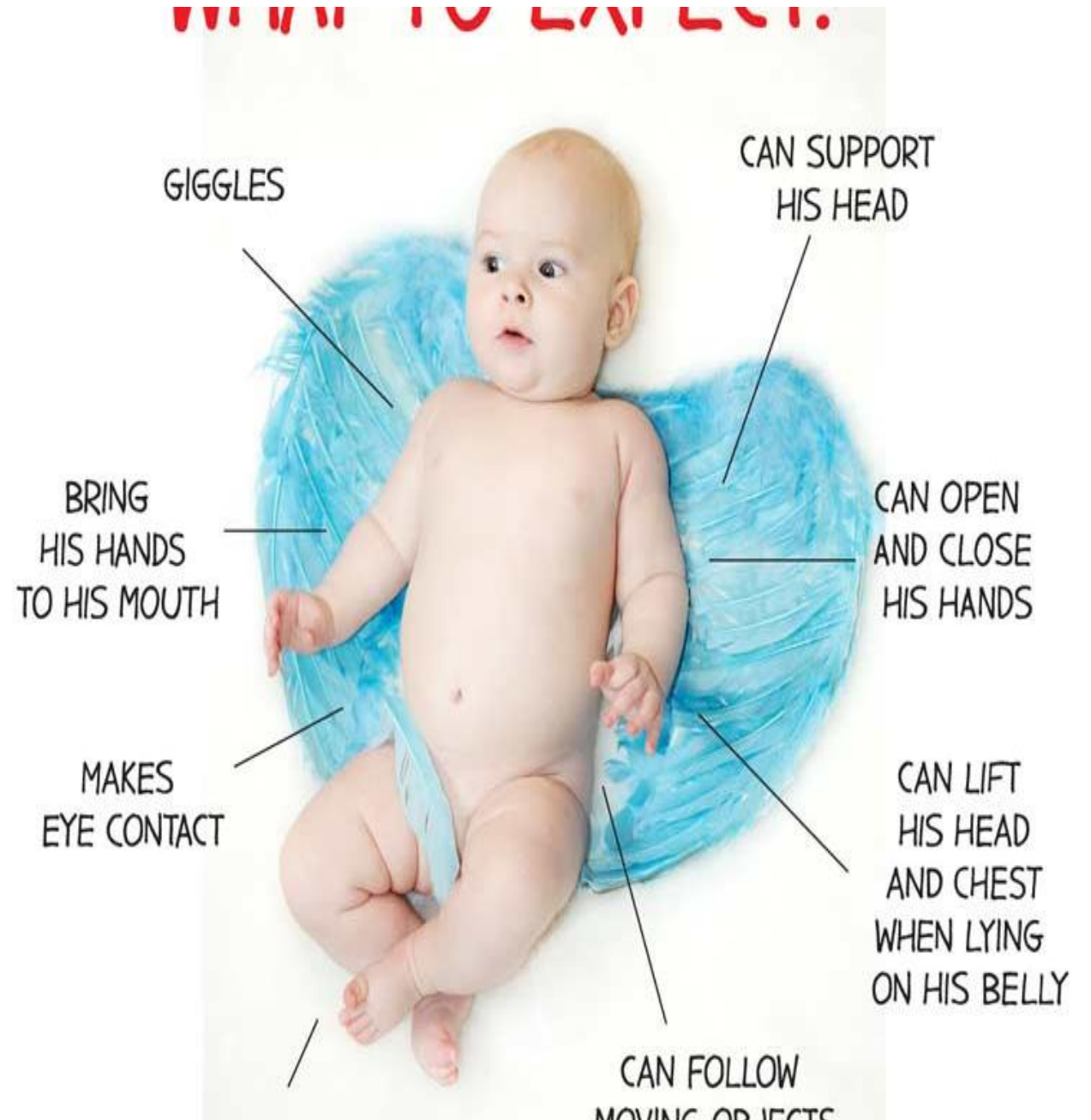
- Around this time, they will also kick and bend their legs while lying on their stomachs; this helps prepare babies for crawling later.





## What to expect at 3 months

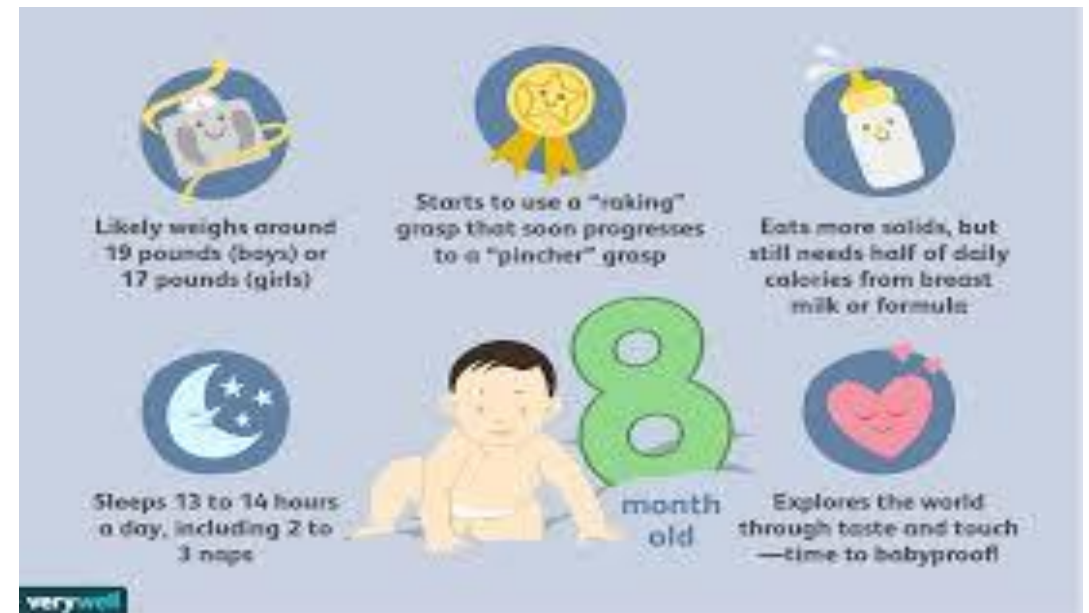
By around 3 months, babies continue to mature as they can hold themselves up for longer periods, up to several minutes, and begin to hold their bodies in symmetry. That means that the tonic neck reflex disappears, and they are able to hold each arm in the same position on both sides of their body while on their backs.



- Babies continue to strengthen their muscles and improve control of their body parts as they grow. Around age 4 months, they can maintain control of their head and hold it steady while they're sitting up with help or lying on their belly. They begin to roll their body from their belly to their back on their own.
- About a month later, they will then be able to roll from their back to their belly.
- Also around age 5 months, babies will wiggle all their limbs while they lie on their belly; this strengthens their crawling muscles.
- As with all physical development, skills build one on top of another.
- Around age 6 months, most infants can sit up by themselves for brief periods and can begin to put some weight on their legs as they're held upright with some support.



- As babies enter the second half of their first year, they become more mobile and can move themselves around their environment on their own.
- Caregivers need to be prepared to be more active as they follow the babies and to [baby proof](#) their home so that dangerous situations and substances can be avoided.
- Babies are eager to explore their newly expanded environment. Babies may begin to crawl around age 7 months.
- At around 8 months, babies can sit up by themselves for extended periods and can pull themselves to their feet while they hold onto something for leverage and support, such as a table or the edge of a couch.
- By the next month, age 9 months, babies can not only sit independently for a long time, but also reach and play with toys while maintaining their balance. At this time, babies can pull themselves up into a stand without support.





- Babies continue to build on their physical abilities, and around age 10 months, they can stand on their own for extended periods.
- They are making progress toward walking, picking up and putting down their feet while they stand.
- They may make their first hesitant steps as they walk while holding onto something such as a crib rail.
- The ability to walk improves as infants walk while holding onto caregivers' hands around age 11 months, and begin making their own first toddling steps around age 12 months.



- In the second year of life, toddlers continue to become more mobile and more agile.
- Around age 15 months, babies begin to climb stairs, high chairs, and furniture, but they will not yet be able to get back down once they reach the top.
- They begin to transition more smoothly from one position to another, such as from lying down to sitting up and from sitting up to standing up.
- By age 18 months, toddlers' balance becomes more stable as they can move more easily on their feet around objects and begin walking backwards, sideways, in circles, and even running.
- At this point, they can also begin walking up stairs using their feet and using their hands to hold onto a handrail.





- Near the end of their second year, toddlers begin to develop complex gross motor skills such as throwing objects for distance and kicking.
- They continue to refine and to become more fluid in their movements. Their walking and running gaits become more natural and mature and less toddler-like as their feet turn inward while they move.
- By age 24 months, they can jump in place and balance on one foot for a short period and may begin peddling their first tricycle. They can go up stairs easily on their own, even though they may need some help climbing back down.
- At the end of the second year, toddlers are very mobile and can run and walk quickly from one place to another; however, they are still refining their ability to stop themselves once they get started

