

Objective for Today's Class:

- What are reflexes and why are they important?
- How do our motor skills develop and change?



	Reflexes
	• Are
*	- These movements are automatic and beyond the newborn's control

Reflex	Stimulation	Infant's Response
Blinking	Flash of light; Puff of air	Closes both eyes
Babinski	Sole of foot stroked	Fans out toes, twists foot in
Grasping	Palms touched	Grasps tightly
Moro (startle)	Sudden stimulation (such as hearing a loud noise or being dropped)	Arches back, throws head back, flings out arms and legs and then rapidly closes them to center of body
Rooting	Cheek stroked or side of mouth touched	Turns head, opens mouth, begins sucking
Stepping	Infant held above surface and feet lowered to touch surface	Moves feet as if to walk
Sucking	Object touching mouth	Sucks automatically
Tonic Neck	Infant placed on back	Forms fists with both hands and usually turns head to the right

Why Do We Care About Reflexes? Some reflexes persist throughout the life Coughing, blinking, and yawning Some reflexes disappear several months Often the movements of some reflexes become incorporated into more complex, voluntary movements



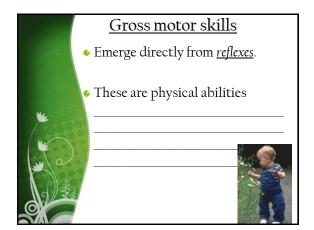
Riley rolled over today!

Jonathan just started

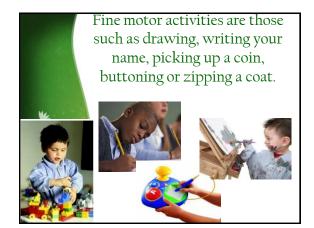
crawling!
Olivia took her first steps last

week!

Parents of young children often are eager to
announce these developmental milestones,
that reflect the infant's ability to interact
socially with the family!







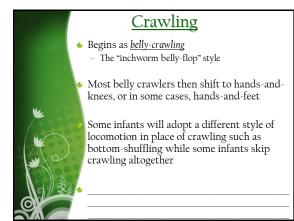
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Head Control

- At birth infants can turn their heads from
- By 2-3 months they can lift their heads while lying on their stomachs
- By ______ infants can keep heads erect while being held or supported in a sitting position

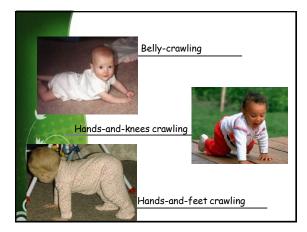
Before you walk, you must learn to.... At around 6-8 months, infants become capable of _____ To master walking (around 13-14 months), infants must acquire distinct skills Standing upright Maintaining balance

Using perceptual information to evaluate



Stepping alternately

surfaces



Walking - Stepping

- Children do not step spontaneously until approximately 10 months because they must
 - Maintaining balance when transferring weight from foot to foot seems to be key

Thelen and Ulrich (1991) found that 6- and 7month-olds, if held upright by an adult, could demonstrate the mature pattern of walking of alternating steps on a treadmill



Gross Motor Skills

- Childhood
 - As children age they gain greater control over their bodies
 - Boys usually outperform girls
- Organized sports are one way of



Gross Motor Skills

- Adolescence and Adulthood
 - Gross motor skills improve during adolescence with
- No matter how well individuals take care of themselves, aging eventually produces declines in biological functions.

Infants hardly have any control over their fine motor skills at birth, but they have many components of what will become finely coordinated arm, hand and finger movements

Newborns make poorly coordinated swipes or swings toward an object in front of them - Usually drops out around 7 weeks of age At 3 months The arms become more independent

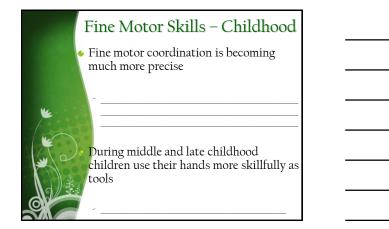
Fine Motor Development

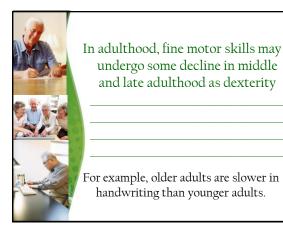
and gradually starts to improve Infants have developed the necessary head and shoulder control

Infants can reach for objects with one arm rather than extending both



Fine Motor – Grasping Palmar grasp 3 months: can adjust the grasp to the size and shape of the object 5 months: can hold object in one hand while exploring it with the other hand Using the thumb and forefinger in a well-coordinated movement 12 months: can pick up raisins and blades of grass, turn knobs, and open/close small boxes





Handedness

 Young babies reach for objects without a preference for one hand over the other

The preference for one hand over the other becomes stronger and more consistent during

By the time children are ready to enter kindergarten, handedness is well established and very difficult to reverse

Handedness is determined by heredity and environmental factors

- Approximately 10% of children write left-handed



Approximately 85-95% of right-handed people primarily process speech in the brain's left hemisphere

However, approximately 10% of lefthanders process speech in their right hemisphere and about 15% of lefthanders process speech equally in both hemispheres

Next	
How does our thinking change with age?	