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# **ECI: Gross Motor Movement**

Movement in space provides infants with Stimulation. Movement promotes increased interaction with and understanding of their environment. Physical movement promotes interactions with others and with their environment, as well as intrinsic pleasure. Children with visual impairment may need extra guidance to promote coordinated and fluid movements, as they often lack the appropriate motivation to move and to explore.

Many things affect movement:

**primitive reflexes** (automatic reactions to external stimuli)

**posture**(body alignment that promotes optimal movement)

**tone**(muscles that are in a balanced resting state of tension)

**balance**(adjusting position when the body's center of gravity is not within the base of support)

**strength** (muscle power to perform activity and maintain stability)

**advanced reflex reactions** (automatic postural adjustments and righting movements)

**rotational skills (moving one portion of the trunk while keeping the rest stationary) coordination**(smooth transitions from one position to another)

**sensory integration** (organizing input from various sensory systems before making a response)

**motor planning** (logically carrying out a sequence of actions resulting in the successful completion of a motor task)

**locomotion**(moving from place to place independently)

**conceptual understanding**(understanding of body parts, body position in space objects, and objects in space).

# **Concerns for Children with Visual Impairment**

* Vision is a strong motivator for infants to lift their heads and go after' something they see. Children with VI will need extra encouragement to move and explore.
* Infants with VI often dislike the prone (on their tummy) position. Prone positioning and the rotational movements into and out of prone (and into and out of hands-knees) are important for building strength and stability. Therefore, it is important that infants experience the prone position (tummy time') in positive ways from early infancy.
* All children, but esp. children with VI learn through *experiences*. Provide lots of movement *experiences*. Do activities *with* your child, not *to* your child. Provide a large variety of these experiences. Include crawling through tunnels and onto couches, stepping in and out of boxes or buckets, crawling or walking on uneven surfaces. Help them see' their changing and varied environment.
* Attach language to motor play. When crawling up (or down) on the couch, say "we're going *up*," "we're going *down*."
* Provide REAL objects when talking about them (give him a real orange to play with, not a plastic one)
* Children learn many motor skills by imitating others. Children with VI do not have this opportunity to observe and imitate. They will need to be taken through new experiences in a hand-over-hand fashion.
* Lack of vision may lead to reduced interest in repetitive motor play. Attaching bracelets with bells to wrists or ankles can provide additional interesting stimuli for the infant.
* Children need predictability in their surroundings. Items in their environment should be kept constant, and children should be encouraged to learn where things are located. Children should never be picked up and carried and placed in new surroundings, they should assisted in moving into a new area, so they can understand how the new area is set up. If they learn to be confident in familiar areas, they will be more secure in unfamiliar environments.
* Children with VI are lacking the ability of "seeing" anticipatory cues in their environment. It is important to give them cues before moving them, placing something in their hands, or when feeding them. These cues can be verbal or tactual.
* Play all the singsong handclap games with your child. This type of fun, movement, game is important for learning concepts of where is a head, shoulders, knees, toes (song); hands clap together (patty-cake); objects are permanent (peek-a-boo). They also encourage sitting balance as they are using their hands for play, not for balance propping. They also encourage using hands together, and reaching.

## **Developmental Sequence**

* Lift head while lying on their belly (prone) by 3 months
* Sit with support by 6 months
* Play with feet by 6 months
* Roll over by 6-8 months
* Sit without support by 8 months
* Start trying to crawl by 8 months
* Reach in all directions from sitting without falling over by 9 months
* Pull to standing by 9-12 months
* Walk alone by 12-18 months
* Crawl upstairs by 12 months
* Kneel alone by 15 months
* Crawl (backwards) downstairs by 18 months
* Run well by 2 years
* Squat to play by 2 years
* Kick a ball by 3 years

Taken from:

Sensory Motor Activities for Early Development by Hong, Gabriel, & St. John, l996

Developmental Guidelines for Infants w/ Visual Impairments by Lueck, Chen, & Kekelis, l997