



# Texas School for the Blind and Visually Impaired

## Instructional Resources Library

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■ *The following article was published in 1996, and may contain outdated language and terminology.*

### Fine Motor Development

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*Editor's note: These materials were prepared by the Early Childhood Unit of the Overbrook School for the Blind, especially for use by parents in the home with young children who are blind or visually impaired.*

Your baby's fine motor development is crucial. He/she needs to learn to use his/her hands well in order to manipulate toys and to acquire self-help skills such as feeding and dressing.

Babies who have good vision explore their environments from the very beginning by using their sight. They learn to coordinate their eye and hand movements so that they can soon manipulate a variety of toys and use their hands well. The beginning of "reaching" occurs with a baby's eyes. Babies who are blind or visually impaired must learn to coordinate the movements of their hands and arms with their hearing. They need to learn to use their hands in ways that will be functional, motivating, and enjoyable. Your baby will need extra practice and many, many opportunities to learn to use his/her hands. Babies who do not use their hands for motivating and useful activities may begin to develop behaviors such as hand or finger flicking or tapping on a surface. Hands that are "busy" playing with toys are less likely to be used for self-stimulatory behaviors.

Play is a child's "work." Babies and young children need to have plenty of opportunities to play. Those who are blind or visually impaired need to be shown how to play with toys; they need to get satisfaction from their play so that they will be motivated to continue to explore and play. The goal is for them to get as much information as possible through their hands and to take that information and use it in meaningful ways.

All fine motor activities (i.e., braille, writing, handwriting, eating, dressing, etc.) are built upon four important skills. These four skills must be learned before a child can go on to more complicated tasks. They are:

- Grasping objects
- Reaching out to objects
- Releasing objects deliberately
- Turning the wrist in various directions

The connection between weight bearing and learning to use one's hands is very important. Weight-bearing gives the kind of feedback that makes the baby aware of his/her arms and hands and shows him/her how he/she can use them. Weight-bearing causes a baby to open his/her hands, straighten out his/her arms, and raise his/her head and trunk.

## Reaching and Grasping

Grasping is the ability to hold onto objects and use them for specific purposes. Young babies have a reflexive grasp; their hands automatically close tightly when pressure or stimulation is applied to their palms. As a baby becomes more aware of his/her hands, he/she is able to open them voluntarily and develop a "true" grasp. The reflexive grasp is inhibited as a baby takes more and more weight on his/her hands. It is replaced by a series of different holding methods which, over time, involve more thumb participation. You cannot teach your child to grasp, but by observing the type of grasp your child shows, you can provide toys and activities that will help him/her move along to the next developmental step.

### Some Ideas

- Give your child lots of opportunities for weight bearing on his/her hands (i.e., lying on his/her tummy and pushing up on his/her hands, rocking on hands and knees, crawling).
- Place various objects in his/her hands. Choose items that are about the size of his/her hands - the reflexive grasp will force him/her to hold the object, but his/her hands will be more open and less fistled. Examples are rattles, foam hair curlers, and pegs. Use a variety of textures, sizes, shapes and weights.
- Provide lots of dangling objects in the crib, in front of your baby's infant seat, from a hanger over the changing table, etc. Your baby will, at first, find them by accident and respond to them reflexively; when he/she is ready for deliberate grasping, he/she will expect to find dangling objects.
- Portable "bars" that can be placed in front of your baby's infant seat or on a blanket overhead are excellent for holding "dangling toys." Century makes "crib bars" (available at Best's Kiddie City, and maybe other toy stores.) Sears has a similar toy in the "Disney Babies" line.
- Encourage your baby to bring his/her hands together and grasp his/her own hands. Gently stroke his/her hands, rub or pat them together, or pat his/her hand on yours.

## Bilateral Coordination

Bilateral coordination is the ability to use both hands together to manipulate an object. This begins at an early age when an infant is observed to hold objects using two hands (in the midline), progressing through transferring objects from hand to hand to where each hand is used for different functions.

It is very important that children who are visually impaired or blind learn to manipulate toys well with their hands. When their hands are "busy" playing appropriately with toys, they are taking in a lot of information and learning from their environment. They are also less likely to use their hands for self-stimulatory behaviors such as eye poking or tapping. Following are some suggestions to help your child to use his/her two hands in a coordinated fashion:

- Clapping hands is often a good motivator for children who need practice with bilateral coordination. It stimulates the muscles in the hands and arms and can be practiced during songs, listening to music, and clapping games. When the child is able to hold a toy in each hand for a good period of time, begin banging games (using hand over hand if necessary).

- Use tactile exploration activities where two hands can work together:
  - shaving cream
  - water
  - sand
  - rice or macaroni
  - finger paint
- Make sure he/she gets both hands into the materials, and help him/her to use two hands to pick up lot of sand or to smear fingerpaint over the entire page.
- Try two-handed activities, where one hand holds, the other hand manipulates:
  - hold container in one hand and put objects in other
  - hold container in one hand and take objects out with other
  - hold stick in one hand and put rings on with other
  - hold stick in one hand and take rings off with other
  - hold pegboard down when pulling pegs out
  - stabilize ring stack to put rings on
  - hold down paper with one hand and scribble with other
  - thread toys using wooden dowel as needle
  - wind jack-in-the-box
  - pour water from one cup into another
- Try two-handed activities, where both hands move actively:
  - putting "jack" in the box
  - tinker toys
  - putting pop beads together
  - stringing large beads
  - screw kegs