

*Working with Infants and Toddlers with Visual Impairments and Their Families*  
*April 25, 2006 – Roanoke, Virginia*

**GENERAL CONSIDERATIONS IN WORKING  
WITH YOUNG CHILDREN WITH VISUAL IMPAIRMENTS**

**ACTIVE ENGAGEMENT...DEVELOPING MOTIVATION AND INDEPENDENCE**

As with all children, intervention approaches should focus on active participation of the child in all activities. Because children with visual impairments may not be able to learn by watching what is going on around them, they must learn "by doing" and interacting with their environment.

Early interventions should focus on the development of **contingency awareness** and the intrinsic motivation and drive of the very young infant. This includes social contingency awareness (i.e., playing peek-a-boo) and non-social contingency awareness, (i.e., hitting a toy or switch to make something happen). Children with visual impairments should be given the **opportunities to participate** in all of the activities that they encounter. If a child cannot participate independently, explore ways that he can be assisted through the activity, allowing him to complete the steps that he can do independently

Active engagement can be:

- Reading the non-verbal communication and cues of your infant and reinforcing them, for example, when your infant quiets (if that is an indicator you have learned to mean that he is ready to play), reinforce him by interacting with him in a favorite way;
- Repeating an action, noise that the child makes to get an turn-taking game going;
- Playing social games ("so big", pat-a-cake, "gonna get you") and allowing the child to "tell" you that he wants to play again;
- Allowing a child to reach for his bottle instead of putting it in his hand providing increasing level of prompts if needed...visual, auditory, tactual;
- Positioning a child so that any movement activates a toy or creates sensory feedback;
- Providing stability at a child's shoulder so that he can scoop his food independently versus moving his hand for him;
- Use hand-under-hand guidance for new experiences that need prompting and decrease prompts as soon;
- Providing opportunities to make choices;
- Following predictable routines that allows a child to know what will happen next and allow him to initiate the next step;
- Demonstrating and expecting a child to take care of self-needs and to participate in daily routines.

**TEACHING THROUGH ROUTINES**

A child who is visually impaired may not learn through observation of daily activities so skills and concepts need to be taught. For example, a young child who watches her mother comb her hair will visually imitate that skill by picking up the comb and holding it to her hair. For a

child who is visually impaired, they may not see their mother or the comb and will need to learn what this object is and what you can do with it. Routines provide a framework for learning. Often thought of as just “maintenance” activities, everyday actions provide repeated opportunities to support development across all developmental domains. Routines are like instructions; they guide steps toward a specific goal and allow the child to be more independent by knowing what the next step is in a routine.

Routines also serve as emotional regulators. Consistent routines provide comfort for a young child; knowing what will happen next gives them stability and consistency which allows them to feel safe and secure which frees them to play, explore, and learn. Routines can ease transitions which is sometimes difficult for a child who is visually impaired due to the lack of visual cues.

Routines can also be a guide to social behavior such as greetings, good-byes, and provide opportunities for turn-taking, sharing toys, waiting and helping others. Many of the social skills are learned visually so repeated practice during routines help teach these skills but they can also provide a concrete beginning and end to activities.

Vision loss restricts a child's perception of an object or activity and they may not develop a “big picture” in understanding specific concepts. For examples, mealtime is the best time to teach an infant who is visually impaired about the size, smell, texture and shape of different fruits. If you only give the infant pieces of banana, how will he learn about the shape, peel, and size of a banana? Routines are opportunities to help the child understand the “whole” of a concept.

## **DEMONSTRATING SKILLS THAT ARE USUALLY LEARNED VISUALLY**

For a totally blind child or a child who cannot see to imitate you, you may need to move the child through an activity to demonstrate what you want him to do. When demonstrating a new skill, it is easier to be behind the child so that your body is in the same orientation as his. If touching the child's hands, let him know what you are doing and “ask permission”. For a more active approach, use hand-under-hand technique instead of hand-over-hand technique. As quickly as possible, you will need to decrease prompts and let the child do the actively independently. Some children will need more time and encouragement to interact with objects or perform new activities and if a child removes his hands from yours, don't force the contact.

## **HANDS-ON INTERACTION WITH REAL OBJECTS**

In order to learn about the world, a child with visual impairments needs experience with real objects. Use real objects if possible, especially when a child is learning a new concept. Teaching through daily routines allows the real objects to be used for a specific routine ( i.e., participating in shopping routine allows the child to handle can goods, packages, fruits and vegetables, etc. which helps in his understanding of the “kitchen area” of the preschool). Children who are blind can “undergeneralize” the concepts of objects therefore provide experiences with many different types of the same object (i.e., different size, shape and color of cups).

## FACILITATING THE DEVELOPMENT OF SENSORY SKILLS

Young children who are visually impaired need play and intervention to help develop and use all of their senses. Opportunities to elicit sensory stimulation through their own actions and functional activities are very important versus having sensory input imposed on them. It is important (especially for those infants who were premature or those with multiple needs) to be aware of the amount and types of sensory stimuli being provided or what is occurring in the environment.

- **Vision**

Looking at a parent's face is very motivating to young infant. Encourage looking at his own hands and feet and favorite objects and toys. Pay attention to environmental conditions such as lighting and glare, color, contrast, size, etc. Allow the child to hold materials at whatever angle or distance that is best for them and encourage them to move close to you at story time or circle time. If using pictures or books, select pictures that have colorful and simple pictures rather than pictures that are visually cluttered. Also, if using photographs, use matted finishes instead of glossy finishes to reduce glare.

- **Touch**

For infants, provide opportunity for hand-to-hand play and hand-to-foot play. Reaching for the parent's face, games such as patty-cake provide input into the hands and help develop tactual abilities. Provide toys that have a variety of textures, shapes, sizes, and weight, not just toys that are plastic and smooth. Look for toys that have many different ways to activate them such as pushing, pulling, sliding, pinching, etc.

- **Hearing**

Provide experiences that focus on the auditory discrimination of people's voices and sounds related to activities. Encourage listening and the use of auditory clues to locate people or places. Recite nursery rhymes and social games, read books together. Provide toys that produce auditory feedback when manipulated, such as musical instruments and cause-and-effect toys (but avoid *only* providing these types of toys). Watch for auditory clutter that will make it more difficult for the child to attend to pertinent sounds.

- **Sensory "match"**

Each child is individual in their needs for sensory input. Besides being aware of the sensory components of materials and activities, remember that you are also a source of sensory stimuli and may need to adjust your behavior according to the child's individual needs. If a child has difficulty processing and using sensory information, a consultation from an occupational therapist may be helpful.

## SUPPORTING EARLY RELATIONSHIPS

One of the primary goals when working with a family of a young child who is visually impaired is to support the family's relationship with that child. Providing suggestions on how to create an environment that provides security for the infant and to foster positive early parent-infant

interactions is very important. This includes developing a responsive care giving environment, opportunities for the infant to develop a sense of competence, and developing the caregiver's feeling of self-esteem and competence.

Early relationships (attachment) are influenced by both what the infant who is visually impaired brings to the relationship and what the family brings to the relationship. Support may be needed to assist the family in identifying and interpreting the infant's unique cues in order to identify when the infant is active and alert and ready for interaction and to help the parents to develop sensory responses that can be perceived by the infant. Visual contact is a strong elicitor of attachment. An infant who is visually impaired lacks visual attention or in the case of an infant with low vision, the parent is unclear if the infant is seeing him. Also, infants who are visually impaired demonstrate a decrease of vocalizations; having a "neutral" face and appearing to be listening. The parent may need to enhance the visual responses or use other sensory responses (voice, touch) to respond to the infant's cues.

Families with infants who are premature or who have multiple needs may need additional support to help the infant become self-regulated. The early intervention team may need to assist the family in understanding behavior states and to explore strategies to assist in the baby's regulation.

To facilitate early relationships,

- Help caregivers recognize, interpret and respond to their infants behaviors in ways the infant can perceive (i.e., talk for the infant, identify positive infant response to the caregiver, acknowledge effective strategies of the parent);
- Assist caregivers in developing sensory strategies to assist in their infant's behavioral state regulation;
- Help caregivers develop predictable care giving routines and interactions that fit the infant's individual characteristics;
- Assist caregiver in developing strategies to enhance the infant's recognition of them (i.e., particular scent, familiar greeting, vocalizations, etc.);
- Assist caregiver to use consistent greeting and leave-taking rituals to assist in the infant's understanding of separation and reunion;
- Encourage the infant's active participation in daily activities;
- Support the infant's movement and exploration;
- Provide ways for the infant to check in with caregivers when not physically close.

## **FACILITATING THE DEVELOPMENT OF MOVEMENT AND BODY AWARENESS**

Movement can be encouraged early. Independent movement is crucial in having the child with visual impairments explore and learn about the world.

To help facilitate motor development and movement:

- The parent or caregiver can carry the young infant in an over-the-shoulder sling. This provides not only a safe and comfortable place for the child, but allows the child to experience different movements in different planes.

- Provide the infant with opportunities to experience different ACTIVE positions. Many infants with visual impairments demonstrate low postural and a paucity of movement and are sometimes happy to stay on their back. These infants need encouragement and experience to play in different positions. For older children, allow children to be in a variety of positions instead of seated in a chair at a table. Include side sitting, on their stomach on the floor, kneeling at different size tables, etc.
- Provide input into the child's body during routines (such as firm input with washcloth during bath time) while labeling body parts. Use massage while putting baby lotion on the child's body.
- Present and position materials to encourage upright head posture. Make sure the tables and chairs are the right height, work on slanted surfaces or easels, or work with materials on the wall, pegboard, or chalkboard.
- Provide movement activities that enhance the child's protective and equilibrium responses and encourage movement transitions from one position to another.
- Don't always position yourself or materials at midline, but allow the child to orient and reach in different directions to encourage weight-shift and trunk rotation.
- Play in positions that use body rotation such as side-sitting. Encourage games with rolling to promote rotation.
- When a child is learning to walk, you can begin by having him push a heavy cart or push toy. Allow your child to be barefoot when appropriate so that he can get additional information about his surroundings.
- Allow the child to move and explore the environment. Spaces can be defined to provide for safety and boundaries for exploration.

## **FACILITATING HAND-USE**

Children who are visually impaired and blind rely on their hands to learn about their world. It is important to enhance fine motor development, helping a child learn to use his hands. This includes playing with toys as well as getting information about objects, textures, people, sizes, letters, and eventually, learning to read and write print or braille.

To promote the development of hand-use:

- Encourage the infant to hold his bottle to promote midline orientation of the hands. A bottle with handles may be helpful at first. A high-contrast patterned cover on the infant's bottle may help a child with low vision to visually attend to the bottle;
- Assist the infant in knowing where their hands are by using wrist rattles;
- Play with the infant in positions that reinforce hand-to-hand, hand-to-knee, and hand-to-feet contact;
- Provide opportunities to play in all positions especially in the prone position which assists in the development of the hands and fine motor skills;
- Provide toys and materials that have a variety of textures, shapes, sizes, and weight.
- Have toys and materials in a consistent location and accessible to the child;
- Provide toys and materials that have many different ways to be activated such as pinching, pulling, pushing, sliding, etc. and help the child to use a variety of hand and arm movements (rotating at forearm, poking with index finger, resistive play, etc.);

- Provide opportunities to use bilateral skills (i.e., one hand stabilizes while the other does the action, activities that cross midline);
- Play and provide materials that provide firm input into the hands (squeezing play-doh or putty, play in water or beans, pulling on elastic bands, etc.)
- Provide opportunities for “messy” play. You may need to start with something like finding toys in a bowl of beans before playing with something “gooier”.
- Allow the child time to get familiar with new toys. Sometimes it is helpful for the child to “discover” the toy on its own.
- While some children who are blind are “protective” of their hands, some may have tactual defensiveness. Consult with an occupational therapist to determine strategies to help normalize tactual input.

## **FACILITATING CONCEPT AND COGNITIVE DEVELOPMENT**

A child who is visually impaired may not be able to get accurate or any visual information from their world and therefore miss opportunities to incidentally learn from observation. He must rely on other sensory information (sound, verbal description, touch) and exploration to gain knowledge about his world. For some concepts, just allowing extra time to tactually explore will help the child learn about a specific object or concept. Some things, though, are not accessible or are too abstract for the child to explore tactilely or auditorily so more specific strategies to learn concepts will be needed.

To help facilitate concept and cognitive development:

Object Permanence (objects exists even when you cannot still see or hear them)

- Help your infant know that you still in the room by talking to him as you move in the room.
- Help your infant learn to reach for an object by sound or touch. Start with touching the infants hand with the object while making a sound with the object to see if he will grasp the object. Next, once the infant is holding the object, take it out of his grasp but keep it very close to his hand and make a noise with the object to motivate him to find it again.
- Try not to automatically place objects in your infant’s hands, touch the object to chest or leg while sounding or put it on their tray while sounding.
- Help you child look for dropped objects. You may have to physically guide your child at first or “drop” the object so that it is touching your child to provide a tactual cue. You can add a sound cue to help him look.
- Reinforce reaching and searching for toys, looking in a box for a cookie, in a drawer for his spoon, toy box for toys, etc. Use visual, tactual, and auditory cuing if necessary.
- Encourage and demonstrate persistence in searching.

Spatial concepts (understanding your own body, the relationship of your body to the environment and the relationship of objects in the environment to each other):

- Body awareness is the foundation of understanding spatial relationships for the infant who is blind;
- Don’t always present bottle or toys in the same orientation;
- Use “defined” spaces for play;

- Have predictable locations for objects, toys and encourage searching for toys;
- Carry your infant to different areas of the house and point out the sounds. Use sounds to help your infant understand space and distance, for example, turn on the bath water before carrying your child to the bathroom so that you can point out the sound as you walk toward it.
- If your child notices a sound, label the sound for him and then go to it (if possible) to explore what is making the sound.
- Teach spatial concepts (up, down, in, on) through active manipulation of objects in daily routines and use spatial terms during those routines, i.e., “your shoes are under the bed”, put your hat on top of your head”, etc.;
- Use toys and materials that teach size and shape;
- Point out and use landmarks in the house, i.e., your shoes are by your dresser.

Environmental concepts: (understanding objects and activities in the home and community):

- Expose your young child to household activities with the child as close to the activity as possible (i.e., holding your infant in a front carrier while doing a household chore, placing his infant chair close to the activity, having him sit in his high chair close to the activity). Give your child an object associated with the activity to hold and explore, provide simple descriptions of the activity.
- Take your child on activities and errands in the community; provide levels of participation appropriate for the age and skills of your child. (See “Everyday Times”)
- Take your child on a bus or public transportation to go on an errand.

## **FACILITATING FUNCTIONAL AND MEANINGFUL LANGUAGE**

It is not meaningful to provide a non-stop verbal description of everything that is happening all of the time to your child who is visually impaired. For the young child, it is most important to provide critical information that the child can understand and about what is happening at the moment.

To help facilitate meaningful language:

- Early social games facilitate the infant’s understanding that they can make something happen. Reinforce turn-taking routines of sounds, actions and words depending on the child’s developmental level;
- Reinforce vocalizations of the infant;
- Try varieties of food for snacks; the same muscles are used for eating and speaking;
- Provide plenty of hands-on experiences using real objects, talk about an object that your child is touching or interacting with at the moment (this is the beginning of understanding a “joint focus”);
- Concentrate on commenting rather than questioning your child. Comment on your child’s action or activity, i.e., “you splash the water”, “drink juice” and talk about your own actions;
- Expand your child’s language by adding descriptions;
- Acknowledge any attempts to communicate and respond;
- Imitate and expand on child's expressive utterances.

- Model and encourage appropriate responses;
- Describe the world and include demonstration and exploration with the description, fill in the gaps as necessary;
- Describe what other children are doing and encourage the child to ask them to show them what you are doing;

## **FACILITATING SOCIAL AND PLAY SKILLS**

The early relationship with his family (attachment) provides the base of security that supports the young child to move out and interact with other people and the environment. Having opportunities to be actively engaged and to be an active participant in daily routines also impacts on the social-emotional development of the child. For a child who is visually impaired, some social skills need to be taught due to their visual nature.

To facilitate and reinforce social and play skills:

- Provide plenty of opportunities for interaction with other people that include greetings and good-byes and manners;
- Reinforce your child keeping their head up and teach them to face person who is talking to them or to whom they are talking;
- Let your child know who is in the room or who is sitting next to them;
- Teach appropriate ways to interact with friends (not using hands to explore them, strategies to ask about what they cannot see, keeping in their own space and recognizing other's space);
- Provide feedback on what other children are doing and about the emotions of others;
- Restrict the number of materials or create different "jobs" for the same activity to encourage sharing and interaction;
- Use toys socially in turn-taking games;
- Create opportunities for passing out materials to other children;
- Address mannerisms early by providing verbal feedback and analyzing sensory needs through more socially appropriate means;
- Address any fears (animals, loud noises) calmly and provide a sense of security;
- Give parents and teachers strategies to deal with questions and comments about the child's visual impairment.

## **FACILITATE EARLY LITERACY SKILLS**

Literacy skills start in infancy. All of the activities outlined in this resource are part of the young child's understanding of the world and contribute to the development of literacy skills including active, concrete experiences, visual, auditory, and tactual skills, spatial concepts, hand skills, language and cognitive skills. A learning media assessment is an important process during a child's early years and objective information on how the child uses sensory information during functional activities and near academic and literacy tasks should be collected.

To facilitate literacy skills:

- Read aloud to your child;
- Demonstrate reading by allowing the child to hold and manipulate the books, visually point to words as you read print, or “read” jointly in braille by having your child hold their hands over yours as you touch the braille;
- Select books that have tactual components, add tactual components or Braille to books, make “object books” and/or purchase print-braille books;
- For the child who is blind; select books that the meaning is conveyed through the text rather than pictures (nursery rhymes, stories containing interesting language, and stories that have repeating parts);
- For the child who has low vision, select books with pictures that are large, simple and with limited visual complexity and clutter on the pages;
- Create “book bags” or “story boxes” that have real objects to substitute for pictures in a book;
- Expose your child to the written language in the home and community; print and Braille (immersion) (i.e., use tactile markers or Braille labels for possessions);
- Make literacy materials in the environment accessible (larger print, tactual and Braille);
- Work with other specialist to create appropriate visual or tactile symbols that are meaningful for children with additional disabilities and who require alternate communication devices;
- Use tools for writing and drawing;
- Reinforce literacy throughout daily routines (i.e., following a recipe, writing notes or letters, finding items in grocery store);
- Teach prebraille skills.

## WEB RESOURCES:

### Texas School for the Blind and Visually Impaired

[www.tsbvi.edu](http://www.tsbvi.edu)

- Infants and Toddlers with Visual Impairments [www.tsbvi.edu/Education/infant/index.htm](http://www.tsbvi.edu/Education/infant/index.htm)
- Importance of Touch in Parent-Infant Bonding [www.tsbvi.edu/Outreach/seehear/fall00/infantbonding.htm](http://www.tsbvi.edu/Outreach/seehear/fall00/infantbonding.htm)
- Make it Routine! [www.tsbvi.edu/Outreach/seehear/archive/routine.html](http://www.tsbvi.edu/Outreach/seehear/archive/routine.html)
- Hando-over-hand Guidance: What lesson do we learn? [www.tsbvi.edu/Outreach/seehear/fall98/hand.htm](http://www.tsbvi.edu/Outreach/seehear/fall98/hand.htm)
- Fine Motor Development [www.tsbvi.edu/Outreach/seehear/spring99/finemotor.htm](http://www.tsbvi.edu/Outreach/seehear/spring99/finemotor.htm)
- Feelin’ Groovy! Functional Tactual Skills [www.tsbvi.edu/Education/vmi/groovy.htm](http://www.tsbvi.edu/Education/vmi/groovy.htm)
- Early Concept Development [www.tsbvi.edu/technology/tech-institute/concept.htm](http://www.tsbvi.edu/technology/tech-institute/concept.htm)
- Helping Your Customers Choose Toys for Children who are Blind or Visually Impaired [www.tsbvi.edu/Outreach/seehear/fall05/toys.htm](http://www.tsbvi.edu/Outreach/seehear/fall05/toys.htm)
- Essential Literacy Experiences for Visually Impaired Children [www.tsbvi.edu/Outreach/seehear/fall05/essential.htm](http://www.tsbvi.edu/Outreach/seehear/fall05/essential.htm)

### Linda Burkhart

[www.lburkhart.com](http://www.lburkhart.com)

- Getting Past Learned Helplessness [http://www.lburkhart.com/learned\\_helplessness.pdf](http://www.lburkhart.com/learned_helplessness.pdf)

## Deaf-Blind Perspectives Newsletter

[www.tr.wou.edu/tr/dbp](http://www.tr.wou.edu/tr/dbp)

- Learning from Children who are Deaf/Blind: "Throw Away the Toys"  
<http://www.tr.wou.edu/tr/dbp/sep2004.htm>

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