

## Reach Out & Touch: Strategies for Infants & Toddlers with Visual Impairments & Additional Disabilities

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### How do these similarities & differences affect early learning?

Vision	Hearing	Touch
Distance sense	Distance sense	Near sense
Can be reduced or eliminated	Can be reduced or eliminated	Impossible to eliminate
Immediate holistic information	Sequential information	Information on one feature or restricted area
Provides stable concrete image	Requires immediate processing of auditory input	Requires synthesis of tactile impressions

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### Significance of Touch

- Touch is the first sensory system to develop
- Essential for early physical, social-emotional development
- The skin is our largest sensory organ

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### Benefits of Kangaroo Care for Premature Babies

- Increases vagal tone and state organization
- Increases autonomic and neurobiological maturation

(Feldman & Eidelman, 2003)

Follow up @ 10 years

Enhances child's physiological organization and cognitive control

(Feldman, Rosenthal & Eidelman, 2014)

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### Primary Forms of Touch

- **Social** touch for interactions with others
- **Passive** touch: no control
- **Active** or haptic touch: control over movement for exploration and manipulation

(Chen & Downing, 2006)

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### Benefits of Infant Massage

- Helps caregivers interpret infant states and respond to signals

(Storm & Reese, 2005)

- Increases physical contact, social interactions, responsiveness, and feelings of confidence

(Lappin, 2005; Lappin & Kreschmer, 2005)

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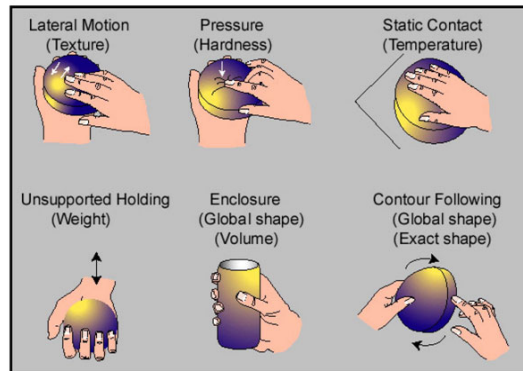
### Passive vs Active Touch Activity # 1

1. Lightly rest finger pads of one hand on surface of clothing
2. Keep still for ~ 10 seconds
3. What sensations do you experience?
4. Lightly rub finger pads across surface of clothing.
5. What additional information do you receive?

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### Tactile Exploratory Strategies

(Lederman & Klatsky, 1987)



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### Manipulation of Objects Activity # 2

1. Without looking, reach into your bag and select small object (# 1) that you can hold and manipulate in one or both hands
2. Do not look at object
3. Explore features of object with one hand for 20 seconds
4. Use both hands to examine object for 20 seconds
5. What additional movements were you able to make with two hands vs one hand?
6. What types of exploratory movements did you use?

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### Use of Social, Passive and Active Forms of Touch

- Greeting and leave taking
- Showing friendship and affection
- Providing security
- Getting attention
- Self care/daily living routines
- Play and recreation
- Other

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### Gathering Information

- How is tactile input/information provided to the child?
- What forms of touch does the child use?
- How does the child respond to tactile input/information

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### Touch Profile (SPARKLE, Utah State University)

- Importance of touch
- Tactile sensitivity (preferences and dislikes)
- Understanding how child uses hands
- Using touch as basis of conversation
- Mutual tactile attention
- Using touch to support other senses
- Touch and language

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### Responses to Tactile Information

- Awareness/reflexive behaviors
- Attention/alerting behaviors
- Discrimination and recognition behaviors
- Comprehension behaviors

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### Tactile Characteristics that Increase Exploratory Behaviors

- Objects that respond to actions
- Materials or **textures** with complex surfaces
- Novel or dissimilar objects or materials

(Dunst &amp; Gorman, 2011)

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### What Items Invite Tactile Exploration During the Child's Day?

#### Characteristics:

- Responds to actions
- Complex surfaces
- Novel or dissimilar

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### Sequence of Tactile Perception

- Awareness and attention to differences
- Discrimination of structure and shape
- Recognition of relationships of parts to whole
- Recognition of graphic representation
- Recognition of braille

(Barraga, 1986)

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### Importance of Preferences

- Motivates participation, interaction and communication
- Scaffolds participation in less liked activity
- Supports choice-making

(Bruce &amp; Babinski, 2017; Parker &amp; Ivy, 2014; Rowland, 2009)

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### Identifying Preferences

- Observation of child's interactions
- Conversations with family and caregivers
- Offer selected items to observe responses

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### Definitions: Touch and Object Cues

- Touch cue: A physical prompt made in a consistent manner on the body to communicate with a child
- Object cue: An object or part of an object used to represent a person, place, object or activity

(Chen & Downing, 2006)

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### Selecting Touch & Object Cues:

- Relationship with child
- Child preferences and responses
- Intended message

#### Touch cues

- Area of part of body to touch?
- Type and duration of touch/pressure?

#### Object Cues

- What objects?
- How and when are objects offered?
- How will child touch/grasp objects?

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### Tactile Interaction Strategies

- Tactile modeling
- Hand-under-hand guidance
- Hand-over-hand guidance
- Mutual tactile attention

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### Potential Benefits & Challenges of Tactile Strategies

- Hand-under-hand guidance
- Hand-over-hand guidance
- Mutual tactile attention
- Tactile Modeling

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### Adaptations to Manual Signs

- *Coactive signing* for expressive communication: Physical guidance of a child's hand or hands to produce a manual sign.
- *Signs on body* (body-based sign or body signs) for receptive communication: Signer produces a manual sign directly on the receiver's body.
- *Tactile signing* for receptive communication: The receiver's hand or hands are placed lightly upon the hand or hands of the signer to perceive the signs tactilely

(Chen & Downing, 2006)

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### Ineffective Tactile Representations for Children with Sensory & Multiple Disabilities

- Miniatures
- Raised line drawings
- Raised outlines (thermaform)
- Artificial replicas
- Other adaptations that are visually-based

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### Making Tactile Adaptations

1. Identify objective/concept of activity
2. Select materials to convey concept
3. Close eyes and tactilely explore materials
4. Decide how and what materials to present to the child

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### Effective Material Adaptations

- Use real objects
- Make objects easy to discriminate
- Develop tactile alternatives for visual activities
- Make materials easy to manipulate

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### Embedding Tactile Learning Opportunities

- Examine child’s daily routine
- Identify what’s going well
- Identify challenges or difficulties
- Consider what can be done to decrease difficulties
- Consider where to embed opportunities for different types of touch
- Select tactile strategies to facilitate learning
- Select tactile communication options
- Use an objectives-within-routines matrix

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Lucy is 30 months old and is blind because of Retinopathy of Prematurity. She has light perception, developmental delays, and hypertonia

Outcomes	Breakfast	Bath Time	Play Time
Lucy will recognize object cues for familiar activities	Offer L her bid while standing by highchair. Wait for her to grasp to bib to her chest.	Offer L her soft sponge before walking to the bathroom. Wait for her to hold and squeeze it and walk into the bathroom.	
Lucy will reach and grasp offered items that she wants	Use-hand-under-hand guidance to prompt L to finger feed herself bits of		Use mutual tactile attention to encourage L to play with her favorite sound toy

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