

## **Learning About the World: An Infant's Perspective**

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**Learning about the world in the first year is influenced by rapidly emerging abilities. These developing skills in perceptual, social, motor, and language areas are interrelated.**

### **Perceptual Development**

- Babies hear mom's voice during last prenatal weeks. Newborns then prefer mother's voice to other voices.
- Newborns recognize odor of amniotic fluid & mom's odor by 6 days.
- Visual skills such as focusing on objects and seeing small objects develop rapidly during 1<sup>st</sup> year.
- Acuity development influences face perception. In the first 2 months, infants detect high contrast such as hairlines. After 2-3 months, infants can distinguish faces based on internal facial features.
- Experience with faces between 6 and 9 months "tunes" infants' face representations. Six-month-olds, but not 9-month-olds or adults, tell apart monkey faces and unfamiliar "other-race" human faces.
- Hearing is the best developed sense. Infants can distinguish voices and speech sounds (ba vs. pa).
- Between 6 & 10 months, infants also recognize language-specific sound combinations & make finer distinctions of the language they hear. By 10 months, they no longer distinguish sounds of languages to which they are not exposed as well as they did when younger.

### **Social Development**

- Facial expressions that signal emotions (happy, sad, fear, disgust) are distinguished between 6 & 10 months.
- From birth, infants prefer "infant-directed" speech, with higher pitch and exaggerated intonation.
- Between 4 and 6 months, infants begin telling apart "infant-directed" speech patterns that convey different messages, such as comforting vs. approving utterances.
- Babies begin using others' emotional signals (e.g., facial expressions) to guide behavior at 10-12 months.
- Face-to-face interaction between caregiver and infant is crucially important for social-emotional and communicative development. These emotional dialogues foster the infant's sense of shared emotion with others, learning social games, learning that she affects others' behavior, and conversational turn-taking and language acquisition.

### **Motor Development**

- Each new motor skill allows babies to learn new information about the world.
- Perceptual knowledge must be reorganized within each new motor skill. Each motor skill (e.g., crawling, walking) has different balance system & employs different muscle groups.

- Independent locomotion (crawling) affects skills in perceptual, cognitive, communicative, and social development. New goals and new emotions emerge for infants as they explore their environments and initiate social contacts. Spatial coding & memory are enhanced, and attention to caregiver facial & vocal signals becomes more important.

### **Ways to foster healthy development during the infancy period:**

- Learn to read and respond to “your” baby’s cues; babies differ in the amount of stimulation they tolerate and their responses to new events and people.
- Babies learn best by one-on-one responsive interactions with adults.
  - Incorporate interaction and play into daily routines.
- Talk, read books, sing, and narrate to your baby; babies learn language and learn about their surroundings from live interactions with people.
  - Recent studies have found that babies do not learn language from TV or DVDs.
- Be aware that new gross motor skills present new hazards to infants, even in familiar environments.
- If parents choose to expose infants to media such as DVDs and TV, don’t use at the expense of time spent interacting with your baby.
- Provide a variety of different experiences and developmentally appropriate activities; “more” and “earlier” stimulation is not always better for the baby.
- Parents’ relationship with their child lays the foundation for their child’s healthy development. Infants are sensitive to and learn from the responsiveness of caregivers in the first months.

### **Helpful Resources:**

*Center for Children & Families Infant Development Program:* <http://infantdp.utdallas.edu/>

Parents concerned about their infant’s development can contact the Infant Development Program for a professional developmental screening. Emily Touchstone, Ph.D., CCC, [etouchstone@utdallas.edu](mailto:etouchstone@utdallas.edu)

*Zero to Three:* <http://www.zerotothree.org>

Science-based information & tools designed to help parents nurture young children’s development

*Center for Disease Control Parent Site:* <http://www.cdc.gov/parents/infants/>

*March of Dimes Pregnancy and Newborn Health Education Center:*

<http://www.marchofdimes.com/pnhec/pnhec.asp>

Fogel, A. (2011). *Infant Development: A Topical Approach*. Cornwall-on-Hudson, NY: Sloan Publishing, LLC.

Spidell, K. (Producer) & Thalenberg, E. (Writer and Director) (2004). *The Baby Human: Geniuses in Diapers*. (DVD). Canada: An Ellis Vision Production in Association with Discovery Health Channel.

*Charlie Rose Brain Series Episode Five: The Developing Brain*

[http://www.charlierose.com/view/interview/10877?sponsor\\_id=1](http://www.charlierose.com/view/interview/10877?sponsor_id=1)

Discussion of the developing brain with developmental scientists Patricia Kuhl, Elizabeth Spelke, Stephen Warren, Huda Zoghbi, & Eric Kandel.

Press releases on recent research in child development and numerous other topics:

<http://www.sciencenews.org/view/interest/id/2364/topic/Humansa>