



Brain Development

When babies are born, their brains are ready to learn. The brain organizes what the child experiences. As a parent, you give your children chances to touch, taste, see, hear, and smell all they can. As children play with things, they learn about them.

The best ways to support brain development:

- Be caring and supportive.
- Pay attention to children and give them what they need.
- Provide a rich learning environment.

When used, brain cells connect:

- As babies grow, they need to use their muscles to make them stronger. The same is true with the brain. Children's brains become stronger when they can see, hear, touch, taste, and smell.
- After birth, brain cells are making many connections. Connections are made when a child has experiences.
- Experiences make children think. When a child thinks, brain cells are used. The connections get stronger the more the child uses them.

- These connections get more complicated as the child gets older.

To develop...

- **Healthy brain cells.** You can help children have healthy brains. Provide good health care and nutrition—before and after birth. Babies are born with one hundred billion brain cells. Brains grow and develop most before birth and in the first year of life.
- **Problem-solving and reasoning skills.** Help children learn to solve problems. Provide comfort and security. This helps children handle feelings. Living with fear and distress can interfere with higher brain development.
- **Number and math skills.** Children learn number and math skills many different ways. Provide music in the early years. Music exercises the part of the brain that learns to count, add, and multiply. Studies show that children's IQs improve after music instruction.

human development

- **Language skills.** Help children learn to talk and listen. Provide many chances to speak and listen in the first years. Children learn language quickly when they are young. Children can learn foreign languages quickly, too, at an early age.

Go to the Web and learn more:

<http://www.worldbank.org/children/braindev.html>

<http://nccic.org/hcca/nl/jan99/earlybra.html>

Prepared by:
Jandy Jeppson
Extension Graduate Research Assistant

Judith A. Myers-Walls, Ph.D., CFLE
Extension Specialist

Sources:

An Ounce of Prevention Fund. Understanding How the Brain Develops. <http://www.bcm.tmc.edu/cta/links/ounce1.html>

Bruce A. Epstein, M. D. The Importance of Early Brain Development. http://www.allkids.org/Epstein/Articles/Brain_Development.html

Early Child Development. Brain Development. <http://www.worldbank.org/children/braindev.html>

Healthy Child Care America. (1999). Early Brain Development and Child Care. <http://nccic.org/hcca/nl/jan99/earlybra.html>

Perry, B. D. et al. (1995). Childhood trauma, the neurobiology of adaptation, and "use-dependent" development of the brain: How "states" become "traits." *Infant Mental Health Journal*, 16: 271-291.

Rutter D. & Durkin. K. (1987). Turn-taking in mother-infant interaction: An examination of vocalization and gaze. *Developmental Psychology*, 23(1), 54-61.



School of Consumer and Family Sciences • Department of Child Development and Family Studies
Fowler Memorial House • 1200 W. State St. • West Lafayette, IN 47907-2055

It is the policy of the Purdue University Cooperative Extension Service, David C. Petritz, Director, that all persons shall have equal opportunity and access to the programs and facilities without regard to race, color, sex, religion, national origin, age, marital status, parental status, sexual orientation, or disability. Purdue University is an Affirmative Action employer. 1-888-EXT-INFO