

ADAMS COUNTY CHILD HEALTH NOTES:

Adams County Child Health Notes is distributed by Adams County Interagency Coordinating Council (ICC) and Adams County Health District. This newsletter provides primary health care providers with current information regarding identification and management of special health issues for children. Contributing agencies and programs include: Adams County Health District – Adams County ICC - State of Washington Department of Health and University of Washington - Center on Human Development and Disability. More information is available at http://depts.washington.edu/medhome/CHN/CHN_home.htm



Adams County Health District has informational brochures and books on Early Brain Development.

Please contact Callie Moore at 659-3317 or Karen Potts at 659-3320 for information on what's available.

There are several copies of the "I Am Your Child – The First Years Last Forever" video available for loan from the Health District. The video is available in English and Spanish. If you are interested in obtaining a copy of this video please contact Callie or Karen at the above numbers.

EARLY BRAIN DEVELOPMENT

WHAT'S ALL THE TALK?

New more powerful research tools have increased scientific knowledge about human brain development. These new tools confirm that genetic endowment, early experiences and the environment, including the quality of relationships with caregivers, directly impact early brain development. The brain is vulnerable to developmental problems if the environment is especially impoverished or non-nurturing.

WHAT IS HAPPENING IN THE BRAIN DURING THE EARLY YEARS?

A newborn baby's brain is still very much a work in progress.

- ✗ At birth, the infant's brain is the most undifferentiated organ in the body.
- ✗ Although almost all neurons in the cerebral cortex are produced before birth, they are poorly connected.
- ✗ A newborn's brain is only about one quarter the size of an adult's brain, and grows to 90% of an adult size by age 5 years. This growth is due primarily to the increase in the number of dendrites and synapses, as well as myelination.

Brain development is gene- and activity-dependent. Experience determines which genes become expressed, how, and when.

- ✗ Neural pathways that are used consistently are strengthened and those rarely used may be "pruned" away (a "use it or lose it" principle).
- ✗ The final number of synapses may increase or decrease by as much as 25 % depending on early childhood experiences.

Why is Environment Important to Optimize Early Brain Development?

Everyone who interacts with young children and infants can have a lasting impact, positive or negative, on the way a child's brain grows and thrives. Children's early attachments and relationships with adults have a vital influence on their brain development. **Experience actually changes the structure of the brain.** In experimental animals, enriched environments lead to an increased density of synaptic connections, and especially to an increased number of neurons and volume of the hippocampus, a region important for learning and memory. In addition, there are critical periods during which some elements of development must happen or impairment will occur.

Things to Consider in Your Office Practice:

- ? Make parents aware of the critical importance of early nurturing and interactive experiences that promote optimal brain development – including interaction with human faces, voices, touch, and dependable relationships.
- ? Make available copies of the Governor's Commission on Early Learning pamphlet: *Ten Simple Ways to Encourage a Child's Ability to Learn*

Ten Simple Messages for Families:

- 1) Be warm, loving, and responsive
- 2) Respond to the child's cues and clues
- 3) Talk, read, and sing to your child
- 4) Establish routines and rituals
- 5) Encourage safe exploration and play
- 6) Make TV watching selective
- 7) Use discipline as an opportunity to teach
- 8) Recognize that each child is unique
- 9) Choose quality child care and stay involved
- 10) Take care of yourself

From Ten Simple Ways to Encourage a Child's Ability to Learn

What Else is Important to Optimize Early Brain Development?

Nutrition affects brain development both prenatally and postnatally. Children who are truly malnourished between mid-gestation and two years of age often suffer lasting behavioral and cognitive deficits such as slower language and fine motor development, lower IQ, and poorer school performance.

In your office practice you can emphasize good nutrition for mothers and children:

- ✍ Folic acid supplementation prior to conception to prevent neural tube defects
- ✍ Good nutrition in pregnancy to support adequate fetal growth
- ✍ Breast milk to provide optimal nutrients for infant's brain growth
- ✍ Screening for and treatment of iron deficiency to prevent cognitive deficits
- ✍ Adequate fat intake in early childhood to support the rapid pace of myelination

Additional Resources on Early Learning:

Internet: Zero to Three; www.zerotothree.org – excellent resources on early brain development for primary care providers and parents

The Governor' Commission on Early Learning; www.earlylearningofwa.org/

Parent Pamphlet:

Ten Simple Ways to Encourage a Child's Ability to Learn, produced by Washington State Governor's Commission on Early Learning. Contact Children's Hospital and Regional Medical Center: (206) 528-2500 or 1-877-526-2500. Limited quantities available at no charge.

Books: *From Neurons to Neighborhoods: The Science of Early Childhood Development.* National Research Council and Institute of Medicine. 1999.

The Scientist in the Crib: Minds, Brains, and How Children Learn. A Gopnik, AN Meltzoff, and PK Kuhl. Wm Morrow and Co., Inc. New York. 1999.

ADAMS COUNTY RESOURCES FOR DEVELOPMENTAL SCREENING AND ASSESSMENT

- ✍ **For children under age three:** Contact: Adams County Lead Family Resources Coordinator (FRC)
Callie Moore, PHN/FRC Phone: 509-659-3317
- ✍ **For children age three and older:** Contact: Local school district

District:	Phone	Fax	District:	Phone	Fax
Othello	488-4682	488-4893	Lind	677-3481	677-3463
Ritzville	659-0232	659-4119	Washtucna	646-3237	646-3249

*Note: In the Othello area Melva Zavala is another FRC and contact source for assistance with developmental screening and assessment. You may contact Melva at 488-5256.

*Child Care Providers: If you have a concern about a child's development, please contact either Callie or Melva at the above numbers. For additional information on early brain development you may also contact Karen Potts, Child Care Nurse Consultant at 659-3320.