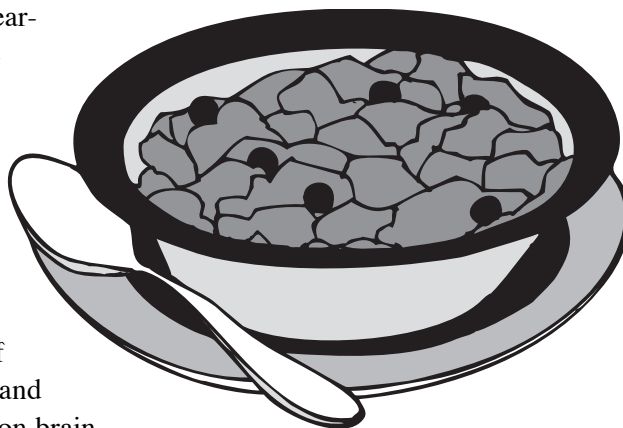


## Nutrition and Cognitive Development

The relationship between nutrition and learning is important for people who care for children. Cognitive development is a term that covers human perception, thinking, and learning. Nutrition, genes, and environment are three major factors impacting cognitive development. Because there are many factors that impact learning, scientists cannot say, “If you eat this, you will be smarter.” However, the role of good nutrition in child development and learning is important. Nutrition during the early years of a child’s life is linked to performance in later years. Many research studies focus on the relationships between breakfast and learning in school-age children; other researchers identified the importance of nutrition at earlier ages. Let’s review some major research findings linking good nutrition and cognitive development.

### Research

- The effect of nutrition on the brain begins before birth—with the nutrition of the mother. Undernutrition and the resulting negative effects on brain development during pregnancy and the first two years of life may be permanent and irreversible.
- Breast-feeding appears to lead to higher IQ/cognitive development. Breast-feeding leads to fewer cases and less severe cases of diarrhea, ear infections, skin rashes, and bacterial meningitis.



- Iron is a necessary part of brain tissue. Nerve impulses move slower when iron deficiency is present. Iron deficiency during infancy may cause permanent damage to the child’s brain; however, too much iron can also cause problems. Iron deficiency during the first two years of a child’s life is associated with behavior changes and delayed psychomotor development. Enough, but not too much, is the key to appropriate iron intake.
- Iodine deficiency during early years is associated with reduced cognition and achievement in school-age children.

- Poorly nourished children have more problems fighting infections. Therefore, they may be sick more often, miss more school, and fail to keep up with classmates.

- Undernutrition results in decreased activity levels, decreased social interactions, decreased curiosity, and decreased cognitive functioning.

- School-age children who ate breakfast did better on performance tests than children with no breakfast. Similar and even more dramatic effects among infants and toddlers are expected if studies on breakfast and performance are completed.

## Parent's role

Proper nutrition is important before and during pregnancy. The Dietary Guidelines for Americans and the Food Guide Pyramid are guides to use in planning what to eat. Once the child has arrived, the infant must receive adequate nutrition. When a child begins to form food likes and dislikes, accept preferences but continue to introduce small amounts of new foods. Ask your health care provider if you have nutrition questions. Be a good role model for healthy eating!



## Child care provider's role

As the number of children in child care increases, the child care provider's role becomes more significant. The Child and Adult Care Food Program (CACFP) meal patterns help menu planners plan well-balanced, nutritious meals and snacks. Nutrient and energy needs of children are supplied when the CACFP meal pattern is used in planning meals and snacks. The CACFP meal patterns are designed to meet different nutritional needs of different age groups.

Caregivers can encourage children to eat nutritious foods and to try new foods. Preparing fresh, attractive foods will help ensure that the children eat well while in child care. A variety of positive food experiences and activities can help develop good eating habits and food preferences. The child care provider should also be a good role model.

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