



Malnutrition in Children

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Malnutrition in Children

Malnutrition means more than feeling hungry or not having enough food to eat. Inadequate intake of protein (necessary to keep the body healthy and build muscle), calories (a measure of energy the body needs), iron (for proper blood cell function), and other nutrients make up different types of malnutrition. Poor nutrition occurs in developing countries, as well as in more prosperous areas of the world. As many as 800 million persons worldwide are affected by malnutrition. More than half the childhood deaths in developing countries are related to malnutrition. The August 4, 2004, issue of JAMA includes an article about surveys that measure acute malnutrition in residents of a developing country.

MALNUTRITION

If the body does not receive the energy it needs in the form of food, weight loss (mostly due to lack of muscle mass) will occur. Children with malnutrition have inadequate fat stores and very little muscle. Their bones are prominent and they often have disproportionately large abdomens. Brain development can be impaired, and these children have a high incidence of disease because their bodies cannot fight infection. Malnutrition contributes to the high death rate among children in developing countries.

MICRONUTRIENT MALNUTRITION

The body requires **micronutrients** (small amounts of essential nutrients) from diet because the body does not make all the products it needs for optimum function. Micronutrients include vitamins A, B, and C, folate, zinc, calcium, iodine, and iron. The 3 major micronutrient deficiencies in the developing world are iron (see below), iodine (deficiency can cause **goiter** [enlarged thyroid gland] and can lead to death or mental retardation for a developing fetus), and vitamin A. Vitamin A deficiency is a serious worldwide medical problem because it is the leading cause of preventable blindness in children. Breastfeeding is recommended to prevent vitamin A deficiency in infants because breast milk is rich in vitamin A. Food fortification and increasing the amounts of fruit and vegetables in the diet are also important ways to reduce vitamin A deficiency in adults. A pregnant woman is especially vulnerable to vitamin A deficiency because her developing fetus uses what vitamin A is available in her body.

IRON DEFICIENCY

Worldwide, iron deficiency is the most common form of malnutrition. As many as 4 billion individuals may lack enough iron in their diet. Malaria and parasitic infections are common contributing causes. Iron deficiency causes **anemia** (low red blood cell count). Anemia causes fatigue, may cause heart failure in severe cases, and may also affect brain function. Preventing iron deficiency requires an adequate diet including iron-rich foods such as leafy green vegetables, beans, and red meats. Treatment of iron deficiency may include increasing iron intake through fortified foods and iron supplements.



FOR MORE INFORMATION

- World Health Organization
www.who.int
- National Institute of Child Health and Human Development
800/370-2943
www.nichd.nih.gov

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Sources: World Health Organization, National Institute of Child Health and Human Development, Centers for Disease Control and Prevention

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