

## **Key Nutrients for Children's Health**

The following key nutrients are needed to help ensure that children obtain nutrition for optimal health.

### **VITAMINS AND MINERALS**

A child's diet must provide the essential nutrients to support physical and cognitive development. For optimal health, children must obtain a balanced and healthy diet. Adding a vitamin and mineral supplement to a child's diet ensures that these important nutrients are not missed.

Pediatricians especially recommend a daily multiple vitamin and mineral supplement for children who may not eat regular, well-balanced meals made from fresh, whole foods; picky eaters who may not eat enough; children with high activity levels who play physically demanding sports; children who eat a lot of fast food and processed foods; and children eating a vegetarian, dairy-free or other restricted diet. A multiple vitamin and mineral supplement is also recommended for children who may drink a lot of carbonated sodas, which can leach vitamins and minerals from the body.<sup>1</sup>

### **CALCIUM**

Lifelong calcium intake is essential for maintaining healthy bones. Obtaining adequate calcium is especially important during childhood and adolescence, when bones are growing and developing. The American Academy of Pediatrics has stated that, "Most older children and adolescents in the United States currently do not achieve the recommended intake of calcium. Maintaining adequate calcium intake during childhood and adolescence is necessary for the development of peak bone mass, which may be important in reducing the risk of fractures and osteoporosis later in life. Optimal calcium intake is especially relevant during adolescence, when most bone mineral accretion occurs."<sup>2</sup>

### **VITAMIN D**

Vitamin D is most well-known for its role in helping the body maintain healthy levels of calcium and phosphorus. It is essential for building and maintaining healthy bones. Calcium can be absorbed by the body only when vitamin D is present. Vitamin D plays many important roles beyond bone health. In adults, recent scientific evidence suggests that vitamin D plays a vital role in maintaining innate immunity.

The American Academy of Pediatrics (AAP) has recently doubled its recommendation for the minimum amount of vitamin D that children should get daily. The new guidelines recommend at least 400 international units daily.<sup>3</sup> That's about four 8-ounce glasses of milk, but most children don't drink enough milk to provide adequate levels of vitamin D. The AAP states that the best way to ensure that children receive adequate vitamin D is through supplementation.

### **OMEGA-3 FATTY ACIDS**

Omega-3 fatty acids are essential to human health but cannot be manufactured by the body. For this reason, omega-3 fatty acids must be obtained through the diet. Scientific studies confirm the numerous benefits that omega-3 fatty acids can have on human health in terms of mental, visual, nervous system and cardiovascular benefits. Two long-chain forms of omega-3 fatty acids, DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid), are both found almost exclusively in deep, cold-water fish. These fatty acids are key building blocks in every cell in the body. DHA

and EPA are recognized for their health benefits in all life stages and are essential components as the body grows and develops.

DHA is critical for the optimal development and function of the brain, eyes and central nervous system during infancy and childhood. DHA is a major structural fat in the brain and eyes, representing approximately 97% of all omega-3 fats in the brain and 93% of all omega-3 fats in the retina.<sup>4</sup> Because DHA is a primary component of the brain and retina, a lack of sufficient DHA can negatively impact the development and function of these organs.

## **WHOLE FOOD ANTIOXIDANTS**

Modern diets often lack sufficient amounts of fruits, vegetables and other whole foods. Thus they are generally low in essential nutrients and antioxidants needed for optimum health. Research continues to show that a higher intake of antioxidant-rich fruits, vegetables and other whole foods is extremely important for good health.<sup>5</sup> The National Cancer Institute recommends eating at least 5 to 9 servings of fruits and vegetables per day.<sup>6</sup>

Fruits and vegetables are naturally rich in antioxidants and phytonutrients such as resveratrol, ellagic acid, flavonoids, carotenoids, anthocyanins and chlorophyll. Whole foods are also a natural source of essential nutrients, including vitamins, minerals and amino acids. Whole foods provide a broad spectrum of phytonutrients that work synergistically to promote overall health and wellness. Research indicates that combinations of nutrients and antioxidants found in whole foods may have greater protective effects than individual nutrients taken alone.<sup>5,7</sup>

## **DIGESTIVE ENZYMES**

Digestive enzymes are made by the body but are also obtained through the diet. Fruits and vegetables are good sources of dietary enzymes. Unfortunately, cooking food can destroy these enzymes. Like their parents, most children do not eat enough raw foods and can therefore benefit from digestive enzyme supplementation.<sup>8</sup>

Digestive issues are becoming more and more common in children. Even if a child eats a healthful diet, if his or her digestive system does not function optimally, the child may not get all of the nutrients needed.<sup>8</sup> Lack of optimal digestive function due to enzyme deficiency can lead to malabsorption of nutrients. Many children may not experience optimal health because of faulty digestion.<sup>8,9</sup>

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<sup>1</sup> "Vitamins for kids: Do healthy kids need vitamins?" *Health & Parenting*. Hoffman, M. 13 May 2008. WebMD. 26 March 2009. <<http://www.webmd.com/parenting/vitamins-for-kids-do-healthy-kids-need-vitamins>>.

<sup>2</sup> Greer, F. R., Krebs, N., F. (2006, February). Optimizing bone health and calcium intakes of infants, children, and adolescents. *Pediatrics*, 117(2), 578-585.

<sup>3</sup> Wagner, C., L., Greer, F., R. (2008, November). Prevention of rickets and vitamin D deficiency in infants, children, and adolescents. *Pediatrics*, 122(5), 1142-1152.

<sup>4</sup> James A Greenberg, J.A., Bell, S. J., & Van Ausdal, W. (2008, Fall). Omega-3 fatty acid supplementation during pregnancy. *Reviews in Obstetrics & Gynecology*, 1(4), 162-169.

<sup>5</sup> Lui RH. Health benefits of fruit and vegetables are from additive and synergistic combinations of phytochemicals. *Journal of Clinical Nutrition*. 2003 Sep;78(3 Suppl):517S-520S.

<sup>6</sup> "Fruits and Veggies Matter." 2009. Center for Disease Control. 16 April 2009. <[http://www.fruitsandveggiesmatter.gov/health\\_professionals/about.htm](http://www.fruitsandveggiesmatter.gov/health_professionals/about.htm)>.

<sup>7</sup> "Can Foods Forestall Aging?" 2007. US Department of Agriculture. 20 April 2009. <<http://www.ars.usda.gov/is/AR/archive/feb99/aging0299.htm>>.

<sup>8</sup> Lipski Elizabeth Ph.D, CCN. Digestive Wellness for Children: How to Strengthen the Immune System & Prevent Disease Through Healthy Digestion. California: Basic Health Publications;2006.

<sup>9</sup> Oelgoetz AW M.D., Oelgoetz PA B.A., Wittenkind J. RN. The treatment of food allergy and indigestion of pancreatic origin with pancreatic enzymes. *American Journal of Digestive Disorders and Nutrition*. 1935;2:422-6.