



**VITAMINS** 

Nutrition is always a major focus as we discuss your child's health and development during regular check-ups. We will make recommendations about how to optimize nutrition. If you have questions or concerns, please discuss them with us. The following are guidelines for vitamins and minerals.

## BREAST FED INFANTS

An important way to insure that a breast fed infant gets the necessary vitamins is to make certain that the mother is well nourished. Although breast milk contains less iron than iron-fortified formula, the infant more easily absorbs the iron in breast milk than the iron in formula. Additional iron in vitamin drops, then, is generally not necessary for healthy full-term babies. Since breast milk may be low in vitamin D, we recommend a vitamin supplement such as D-Vi-Sol or Tri-Vi-Sol, starting at about age two weeks. The dose is one milliliter (ml) daily. Breast-fed infants who receive formula supplements totaling at least 32 ounces daily do not need the vitamin supplement.

# FORMULA-FED INFANTS

Infants consuming commercial formulas do not need vitamin or mineral supplementation for the first six months. We strongly recommend that an iron-fortified formula be given. Some parents feel that the iron in the formula causes symptoms such as gas and constipation. This has been scientifically disproven. If you have concerns about this, please speak to one of us before taking your infant off an iron-fortified formula.

# TODDLERS, OLDER CHILDREN AND ADOLESCENTS

A child consuming a well-balanced diet consisting of fruits, vegetables, meats, grains and dairy products is unlikely to require supplemental vitamins. Many children, though, are inconsistent in their intake and supplemental vitamins can help assure that minimum allowances are met.

#### VITAMIN D

Most people think of healthy teeth and bones when thinking about vitamin D. Research shows, however, that vitamin D is involved in many body functions and plays a role in immune defenses and cancer prevention. Recently, the minimum recommended amounts for vitamin D have been increased from 200 units per day to 400-600 units per day for children. Teens and adults are thought to need 600-800 units per day. Deficiency of Vitamin D is now recognized as a common health problem. Bone pain, irritability, delayed gross motor development, rickets (widening of the wrists and ankles, bowing of the legs), seizures, muscle weakness, abnormal reflexes and weak dental enamel are some of the symptoms of vitamin D deficiency. Few foods (oily fish such as salmon mackerel, sardines and tuna) contain vitamin D.

Fruits, vegetables and nuts are sources of many vitamins, but do not contain vitamin D. While not a natural source, milk (and infant formula) has been fortified with vitamin D for many years. Some juices and other foods are now fortified too. Breast milk is often low in vitamin D, so we recommend supplements for all breastfed infants.

Humans make vitamin D in the sunshine. Arm and leg exposure for 15-30 minutes between 10am and 3pm without sunscreen allows for production of enough vitamin D. Of course, in New Jersey, this is not possible for many months of the year. We continue to advocate for the use of sunscreen to prevent skin cancer even though it blocks the rays necessary to produce vitamin D. Blood tests can help determine if a child or teen is suffering from vitamin D deficiency. Levels of at least 20ng/ml are considered sufficient in children and adolescents. Vitamin D supplements are widely available for children who do not have enough sun exposure or consume enough fortified food. (Milk contains 100 units per cup.) Multivitamins contain variable amounts of vitamin D, usually 200-400 units. Both liquid and tablet forms of plain vitamin D are available, all sold overthe-counter.

## **IRON**

Most vitamin preparations for children are available with or without iron. Daily requirements vary between 10 and 18 mg/day depending upon age. Foods rich in iron include green vegetables, red meat, dried beans, prunes, raisins, eggs, strawberries, sweet potatoes, tomato juice and iron-fortified cereals. Iron deficiency results in anemia (low blood count) as well as behavior and learning difficulties. If your child's iron intake is low or variable, supplemental iron should be considered. At Hunterdon Pediatrics, periodic blood tests to screen for anemia are part of regular check-ups. See our Iron handout.

# **CALCIUM**

The most common sources of calcium in children's diets are dairy products and leafy green vegetables. Beans (navy or soy), sunflower seeds, almonds and fish eaten with bones (sardines or canned salmon) are also rich sources. Orange juice, cereal and other products are now available with added calcium as well. Children require at least 800 mg of calcium per day; adolescents require more (1200 mg per day). 8 ounces of milk or 6 ounces of yogurt contain approximately 300 mg of calcium. One ounce of cheese contains 150-250 mg calcium depending on the type. Leafy green vegetables contain 150 mg per cup. If your child does not consume adequate calcium in his diet, calcium supplements may be necessary. Please see our handout about calcium.