

Vitamin D and Its Importance to Children

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Introduction:

Vitamin D helps your child build strong bones and prevent rickets. Rickets is a condition of softening of the bones that can occur in growing children. Vitamin D is a group of fat-soluble secosteroids responsible for increasing intestinal absorption of calcium, magnesium, and phosphate, and many other biological effects. In humans, the most important compounds in this group are vitamin D₃ (cholecalciferol) and vitamin D₂ (ergocalciferol).

The major natural source of the vitamin is synthesis of cholecalciferol in the lower layers of epidermis of the skin through a chemical reaction that is dependent on sun exposure (specifically UVB radiation). Cholecalciferol and ergocalciferol can be ingested from the diet and supplements.

Only a few foods, such as the flesh of fatty fish, naturally contain significant amounts of vitamin D. In the U.S. and other countries, cow's milk and plant-derived milk substitutes are fortified with vitamin D, as are many breakfast cereals.

Mushrooms exposed to ultraviolet light contribute useful amounts of vitamin D₂. Dietary recommendations typically assume that all of a person's vitamin D is taken by mouth, because sun exposure in the population is variable and recommendations about the amount of sun exposure that is safe are uncertain in view of the skin cancer risk.

Importance:

Vitamin D has a significant role in calcium homeostasis and metabolism. Its discovery was due to effort to find the dietary substance lacking in children with rickets (the childhood form of osteomalacia). Vitamin D supplements are given to treat or to prevent osteomalacia and rickets.

The evidence for other health effects of vitamin D supplementation in vitamin D-replete individuals is inconsistent. The effect of vitamin D supplementation on mortality is not clear, with one meta-analysis finding a small decrease in mortality in elderly people.

Except for the prevention of rickets and osteomalacia in high-risk groups, any benefit of vitamin D supplements to musculoskeletal or general health may be small.

For babies who are fed only breast milk or who receive both breast milk and infant formula:

- Breast milk usually does not provide all the vitamin D a baby needs, so breastfed babies will need a supplement of 400 IU of vitamin D per day beginning shortly after birth.

For babies who are receiving only infant formula:

- Vitamin D supplementation is not needed.
- Infant formulas are fortified with vitamin D.
- Learn more about how to choose an infant formula.

For children who have started eating solid foods:

Make sure the child's diet has foods with vitamin D. Some examples of foods with vitamin D include:

- Some fish (for example, salmon or light canned tuna).
- Eggs.
- Vitamin D-fortified alert icon products like plain whole cow's milk (for children 12 months and older), yogurt, cereals, and some 100% juices.



Vitamin D supplements are another way to help children get enough vitamin D every day. Talk with your doctor or nurse about vitamin D at his/her child's next check-up if person have questions.

Conclusion:

Vitamin D is both a nutrient which individual eat and a hormone to human bodies make. It is a fat-soluble vitamin that has long been known to help the body absorb and retain calcium and phosphorus; both are critical for building bone. Also, laboratory studies show that vitamin D can reduce cancer cell growth, help control infections and reduce inflammation. Many of the body's organs and tissues have receptors for vitamin D, which suggest important roles beyond bone health, and scientists are actively investigating other possible functions.



Sunlight is essential to the body's ability to absorb calcium from the food you are eating. Make sure you receive adequate vitamin D every day through sunlight. About fifteen to twenty minutes of sun on the face and hands is usually enough for most of us.

— Sharon Gannon —

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