

Beyond Bones

Vitamin D and Its Impact Beyond Bones

Vitamin D isn't just important for strong bones—it also plays a role in reducing the risk of autoimmune, infectious, and allergic diseases in children. Studies show that children with higher vitamin D levels tend to have a lower risk of developing these conditions.

Vitamin D is also essential for brain development and function. It has been shown to support the synthesis of neurotransmitters and the growth of nerve cells in the brain.

Keeping your child's vitamin D levels in check supports both physical and mental well-being.



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Vitamin D Deficiency



What is Vitamin D Deficiency?

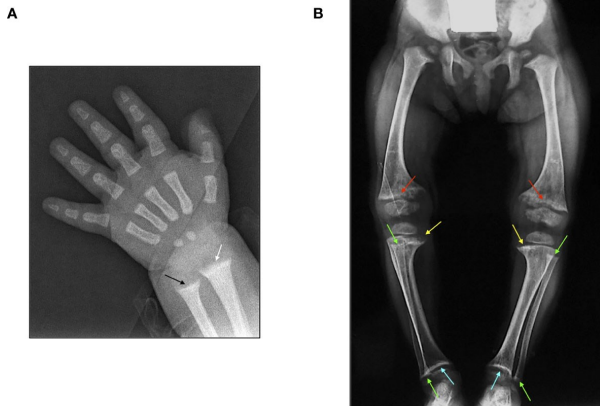
What is Vitamin D?

Vitamin D, often called the "sunshine vitamin," is made in the skin when it's exposed to sunlight. It plays a key role in your child's bone health and affects many functions in the body. Vitamin D helps regulate calcium and phosphate levels, which are essential for building and maintaining strong bones. It also supports muscle growth, the immune system, and helps manage inflammation.

Beyond bones and muscles, vitamin D is important for the heart, lungs, and overall health. It can also help with healing after an injury and lower the risk of infections by supporting the body's natural defense system.

Vitamin D Deficiency: What You Should Know

Around 1 billion people worldwide are affected by vitamin D deficiency, and about 50% of the global population has insufficient levels of this important vitamin. Certain groups are more likely to experience vitamin D deficiency, particularly those with darker skin or those who cover most of their skin. In the United States, about 47% of African American infants, 56% of Caucasian infants, 35% of adults, and 61% of older adults have low vitamin D levels.



What are risk factors for Vitamin D Deficiency?

In children, several factors can increase the risk of vitamin D deficiency, including:

- Exclusively breastfed without vitamin D supplementation
- Having darker skin
- Limited exposure to sunlight
- Taking medications that affect vitamin D metabolism (e.g., anticonvulsants, glucocorticoids)
- Being overweight or obese (BMI over 30 kg/m²)
- Leading a sedentary lifestyle

It's also important to note that about one-third of individuals with vitamin D deficiency have no obvious risk factors.

How does Vitamin D Deficiency affect a child's bones?

When children don't get enough vitamin D, it can lead to conditions including nutritional rickets and an increased risk of fractures (broken bones).

Nutritional rickets happens because vitamin D helps with bone mineralization, and without it, the bones don't form properly. The growth plate (physis) and surrounding bone structures can become misshapen, making bones weaker and more prone to deformities. Nutritional rickets is the most common cause of bone disease in children worldwide, but the good news is that it's completely preventable with proper vitamin D intake.

Children with low vitamin D levels are more likely to experience fractures, even from everyday activities. In fact, studies have shown that kids with lower-than-normal vitamin D levels are more than twice as likely to have a fracture compared to those with normal levels.

How is Vitamin D Deficiency treated?

Your healthcare provider will determine the best treatment plan and may also involve your child's pediatrician or other specialists in this process.

Vitamin D supplementation is often recommended to prevent deficiency, especially for those with limited sun exposure. It's also important for maintaining healthy vitamin D levels in everyone, to support strong bones and overall health.

In addition to supplements, vitamin D can be found in certain foods and, of course, sunlight. If you're heading outside to get some sun, just be sure to wear sunscreen to protect your skin while still benefiting from the sun's vitamin D-boosting effects.



Getting the right nutrients and care to support bone health during childhood and adolescence is key to building a strong foundation for lifelong skeletal health. Ensuring healthy bone mineral density early on helps set the stage for strong, resilient bones in the future.