

Vitamin D helps build strong bones and is vitally important for a tennis player's health, training and performance.

VITAMIN D

Why Do We Need Vitamin D?

- Vitamin D is a fat-soluble vitamin that is required for calcium regulation and bone health. It also has a role in immune function, protein synthesis, cellular growth, inflammatory response, hormone synthesis, optimal muscle performance, and injury prevention.
- There are several different forms of vitamin D. Two types are important in humans: Vitamin D2, which is made by plants, and Vitamin D3, which is made by human skin when exposed to sunlight. Foods and supplements may be fortified with Vitamin D2 or D3.



Where Does Vitamin D Come From?

1. Ultraviolet-B-radiation (UVB): UVB is delivered to humans via the sun's rays. Vitamin D is unique in that the human body's needs can be met entirely through skin exposure to UVB.
2. Dietary intake of vitamin D includes D3 (animal form) and D2 (Plant form, such as fungi and yeast) derived from UVB exposure.
3. Ingestion of supplemental vitamin D: Includes vitamin D supplements (e.g., USANA Vitamin D) intended to aid players in meeting their recommended vitamin D requirements (600IU per day). Players should consult a sports dietitian, physician, or other qualified medical professional before beginning vitamin D supplementation.



Risk Factors For Vitamin D Deficiency

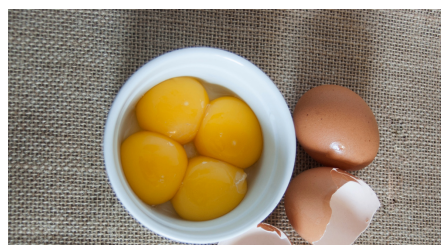
- Indoor training such as gym work and practicing on indoor tennis courts.
- Dark (e.g., Africans) or extremely fair skin (e.g., Caucasians).
- Living and training at northern latitudes (greater than 35° - 37°).
- Effective sunscreen use that blocks UVB rays.
- Low dietary vitamin D intake.

Daily Recommendations For Vitamin D

- Tennis players 14-50 years of age are recommended to obtain 600IU of vitamin D per day.
- Regardless of dietary intake, 15 mins of unprotected sun exposure on 3-4 major body parts between the hours of 10 am to 3 pm provides approximately 10,000 to 20,000 IU for light-skinned (e.g., Caucasian) individuals.
- This would take approximately 60 minutes for the tennis players with darker pigment in their skin (e.g., African). Production of vitamin D from the sun is, however, affected by cloud cover, pollution, sunblock, skin pigment UV blocking clothes, and age. Generally, a very SMALL amount of sun exposure on the skin which is not covered by clothing or sunblock is required to get your daily dose of vitamin D.

Foods containing significant levels of Vitamin D naturally include:

- Salmon, sardines, tuna – 3oz/100g = 200-300IU
- Egg yolks – 2 = 50-80IU
- Fortified milk, soymilk & orange juice – 1 cup = 100IU
- Fortified cereals = 40-100IU



Supplements

- The appropriate vitamin D supplementation regime for tennis players depends on current 25(OH)D levels (determined by a blood test), the season, and sun exposure.
- See a sports dietitian and/or physician to discuss your vitamin D requirements. They can also guide your performance nutrition needs and the appropriate time for repeat blood tests.