

VITAMIN D SUPPLEMENTATION IN ATHLETES FOR IMPROVEMENT IN MUSCLE STRENGTH

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ABSTRACT:

Vitamin D is a liposoluble vitamin, has two primary forms, D2, (ergocalciferol) and D3 (cholecalciferol). Both vitamin D that is absorbed from food and supplements as well as that produced by the skin is biologically inert. It should be hydroxylated 2 times in the body - first in 25(OH) vitamin D (calcidiol) by the liver, and then in 1.25(OH)² vitamin D (calcitriol) by the kidneys. This study was carried out with the objective of analyzing the efficiency of vitamin D supplementation to increase muscle strength in athletes. The search of the articles was performed virtually, in journals registered in the databases Scielo, Pubmed, and Google Scholar, using the following descriptors, in isolation or combined: vitamin D, supplementation, athlete, benefits of vitamin D in sports practice, and muscle strength. It was found that vitamin D has secondary biological actions that include immunological regulation and protein synthesis. Concretely, in elite soccer players, it was observed that year-round supplementation with high doses of vitamin D seems to be a reasonable solution to increase high 25(OH)D concentration in blood and physical performance. It was observed that they obtained better results in the 5 m velocity test and higher testosterone concentrations. The results obtained confirm that vitamin D is very important for the muscular and hormonal system. However, more studies need to be conducted to conclude on time about the direct influence of vitamin D on muscle strength.

KEYWORDS: vitamin D; supplementation; Benefits; sports practice; muscle strength.

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