

Effectiveness of Vitamin D Treatments

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Vitamin D plays a crucial role within the body. Recent studies have shown that it not only aids with bone growth, but is also involved in immune and brain function. These studies have shown the strong correlation between low levels of vitamin D and cognitive illnesses, cardiovascular disease, autoimmune disease, and neuro-degenerative diseases, including all-case dementia. Over one billion people worldwide are vitamin D deficient. In the United States alone, 43% of Americans are vitamin D deficient, but despite this prevalence and the known importance of vitamin D, there is an insufficient amount of research investigating possible treatment options. The purpose of this study is to determine the most effective treatment method to improve vitamin D levels in active college students. The two vitamin D sources being investigated are supplementation and phototherapy UVB lamps. The eight-week study will consist of three randomly assigned groups of participants — control, daily vitamin D supplementation, and phototherapy UVB lamp exposure. During the study, vitamin D levels will be measured at three different points — pre-, mid-, and post-study. This will be done via human plasma analysis utilizing a 25-OH vitamin D ELISA Assay. It is expected that vitamin D levels will increase with both treatments but to a greater degree with UVB phototherapy. If the data supports this hypothesis, it would help show that these are viable treatment options for vitamin D insufficiency.