Abstract

Effects of Oral Vitamin C Supplementation on Anxiety in Students: A Double-Blind, Randomized, Placebo-Controlled Trial.

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BACKGROUND: Vitamin C (ascorbic acid) is a well-known antioxidant that is involved in anxiety, stress, depression, fatigue and mood state in humans. Studies have suggested that oxidative stress may trigger neuropsychological disorders. Antioxidants may play an important therapeutic role in combating the damage caused by oxidative stress in individuals that suffer from anxiety.

OBJECTIVE: In this context, it was hypothesized that oral vitamin C supplementation would reduce anxiety. However, few up to date studies have evaluated the consequences of oral vitamin C supplementation on anxiety in humans.

METHODS: The present study examined the effects of oral vitamin C supplements in 42 high school students, in a randomized, double-blind, placebo-controlled trial. The students were given either vitamin C (500 mg day⁻¹) or placebo. Plasma concentrations of vitamin C and blood pressure were measured before the intervention and then one day after the intervention. Anxiety levels were evaluated for each student before and after 14 days following supplementation with the Beck Anxiety Inventory.

RESULTS: Results showed that vitamin C reduced anxiety levels and led to higher plasma vitamin C concentration compared to the placebo. The mean heart rates were also significantly different between vitamin C group and placebo control group.

CONCLUSIONS: Present study results not only provide evidence that vitamin C plays an important therapeutic role for anxiety but also point a possible use for antioxidants in the prevention or reduction of anxiety. This suggests that a diet rich in vitamin C may be an effective adjunct to medical and psychological treatment of anxiety and improve academic performance.

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