

Nutrition focus

Patient Summary

Vitamin B-12–Fortified Toothpaste Improves Vitamin Status in Vegans

Background

Vitamin B-12 deficiency is common in vegans who do not consume any animal products. Even though awareness of B-12 deficiency has increased among vegans, many still do not use supplements or have reported irregular use. The introduction of vitamin B-12 to the mouth with toothpaste may be an effective alternative route for administration.

Purpose

The purpose of this study was to test whether brushing teeth with vitamin B-12 fortified toothpaste is an effective alternative to oral vitamin supplements for preventing deficiency of vitamin B-12 in people who eat a vegan diet.

Population

Study participants were healthy men and women between ages 18 – 50 years who have been vegan for ≥ 5 years or have followed a vegan diet for the past 2 years, following a vegetarian diet.

Procedure

The subjects were randomized in a double-blind manner to either plain or vitamin B-12 toothpaste. During visit 1, either plain toothpaste or vitamin B-12 toothpaste was given to the study subjects. Blood samples were also collected at this visit. For 12 weeks, the study subjects maintained their usual lifestyle and did not take any new supplements or eat fortified foods. The toothpaste was used twice/day for 2 minutes each time. After 12 weeks, blood samples were collected and analyzed again.

Results

The blood test results showed that the vitamin B-12 biomarkers in the subjects who used the B-12-fortified toothpaste (n=42) were significantly higher than the subject who used plain toothpaste (n=34).

Limitations

Some of the study subjects took vitamin B-12 supplements before and during the study. However, this difference was taken into account when the study data were analyzed.

Vegans, the elderly and other people who are B-12 deficient can help ensure they get enough vitamin B-12 by brushing their teeth twice/day with a toothpaste that is fortified with B-12.

Conclusion

Toothpaste that is fortified with vitamin B-12 and is applied to the mouth by brushing the teeth twice/day is an effective way to increase the blood levels of B-12 biomarkers in vegans, elderly and other people who are B-12 deficient.

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