

Bioavailability and Antioxidant Effects of the Vemma Formula in Humans

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ABSTRACT

OBJECTIVES: To determine the overall bioavailability of the Vemma formula found in the Vemma Nutrition Program in the human body. This program is a multivitamin/antioxidant liquid supplement containing a full spectrum of vitamins, plant-sourced minerals, mangosteen fruit and pericarp, aloe vera and green tea.

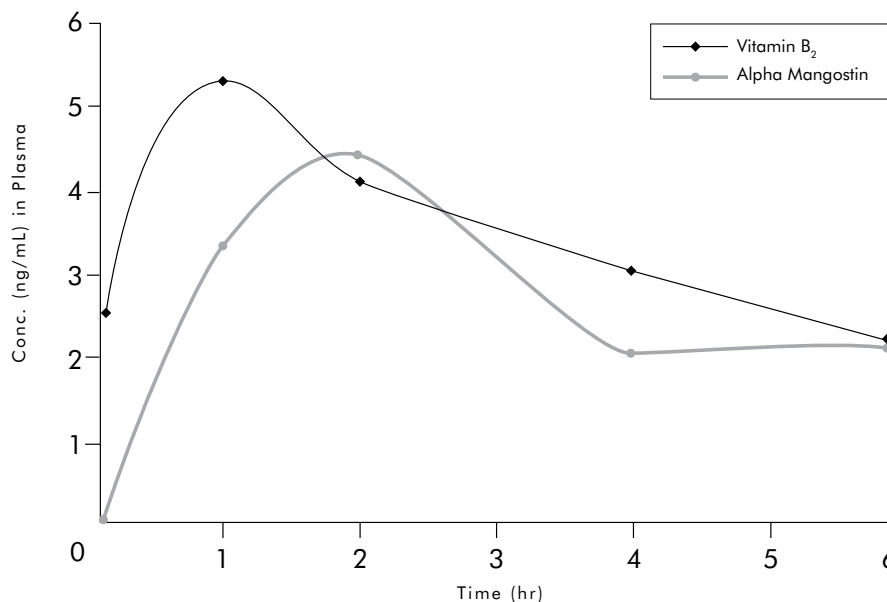
DESIGN, SETTINGS, AND PATIENTS: A randomized, double-blind, placebo controlled clinical trial was conducted using 20 participants, 10 men and 10 women age 40 to 65. Participants were randomly divided into two groups, placebo and the Vemma formula, with the same number of male and female participants in each group. The trial duration was 24 hours.

INTERVENTION MEASURES: After the baseline tests were completed, participants received either a single dose (2 ounces/59ml) of the Vemma formula or a placebo (a liquid that looks and tastes like Vemma, but with no active ingredients) before breakfast on one morning. Trial participants stayed onsite for the duration of the study (24 hours) to ensure total compliance. Blood samples were collected from each subject before and after consumption of the Vemma formula or the placebo to determine the indices of interest.

BIOAVAILABILITY

RESULTS: Bioavailability was seen in Vitamins B₂, B₃, B₅, D₃, xanthone α -Mangostin and antioxidant capacity. Bioavailability is defined as the proportion in a substance that is absorbed and utilized by the body. Until a nutrient is absorbed from the gastrointestinal tract and enters the systemic circulation, it is not available for use by the body. In the experiment group, within two hours after consumption of the Vemma formula, Vitamins B₂, B₃, B₅, ORAC (antioxidant levels) and alpha-mangostin reached their maximum concentrations in these patients.

Concentration of Markers in Human Plasma after 60mL of Vemma

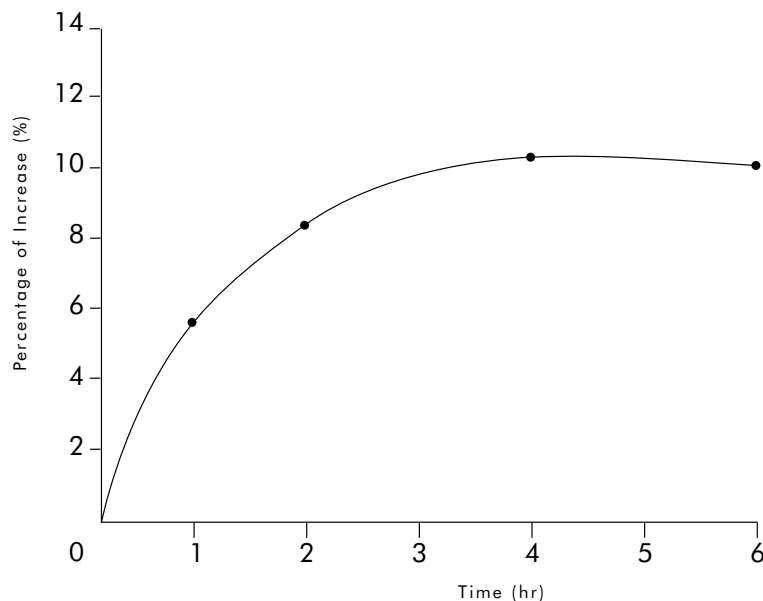


ANTIOXIDANT CAPACITY

Antioxidants are thought to help because they can neutralize free radicals, which are toxic byproducts of natural cell metabolism. The human body naturally produces antioxidants but the process isn't 100 percent effective and that effectiveness declines with age. The ORAC score (Oxygen Radical Absorbance Capacity) is a method of measuring the antioxidant potency. Antioxidants help prevent oxidation by counteracting free radicals. They do this by binding to them and transforming them into non-damaging compounds. Xanthones, a particular class of plant nutrients, are highly, biologically active and are unique because they possess very potent antioxidant properties. The xanthone source of the Vemma formula consists of whole fruit mangosteen and pericarp (rind) extract. Vitamins as we all know serve many functions and purposes in a healthy body.

The human serum antioxidant capacity increased by approximately 10 percent by hour 4 and stayed elevated through hour 6, the last blood draw in the trial. In the placebo group, which did not receive the Vemma formula, no change was observed on Vitamins B₂, B₃, B₅ and D₃. In addition, alpha-mangostin was not detected in the placebo group.

Plasma Antioxidant Capacity after Vemma



CONCLUSIONS: Consumption of a single 2 ounce dose of Vemma resulted in a statistically significant increase in Vitamins B₂, B₃, B₅, D₃, xanthone α -Mangostin and antioxidant capacity in the blood plasma. The elevated level of human serum antioxidant capacity was sustained through hour 6 of the study after the intake of the Vemma formula. In the placebo group, no change was observed.