

# **Health Indicators of Alpha 3 Concentrated Marine Phytoplankton Use Among Apparently Healthy Individuals: A Pilot Study**

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## **Executive Summary**

Marine phytoplankton is clearly the foundation of the human food chain. Logic dictates that the numerous species within marine phytoplankton would be the most reliable source for all essential macro and micronutrients necessary for human health. Until recently, it appears that the human consumption of marine phytoplankton could only be accomplished by eating animals higher up the food chain because human digestive systems could not break down the protective silicon shells. A product called Alpha 3 CMP is a concentrated form of marine phytoplankton that reportedly is harvested and processed in such a way as to make the product digestible by humans. Numerous case studies have reported human health benefits after consuming Alpha 3 CMP. The purpose of this initial pilot study was to identify dimensions of human health that may benefit by consuming Alpha 3 CMP.

### ***Study Design and Methods***

A randomized placebo-control pilot study was conducted with 41 volunteers (26 females, 15 males; ages between 20 and 58) in order to determine the effects of taking Alpha 3 CMP. Subjects were randomly assigned to one of four groups including a liquid Alpha 3 CMP group, a powder Alpha 3 CMP group, a placebo group taking either liquid or pills with no active ingredient, and a control group that did not take anything. The groups were clinically pretested before treatments, after 30 days, and again after 90 days. Psychometrics were taken at the beginning of the experiment, after 14 days, 30 days, 60 days, and after 90 days of taking Alpha 3 CMP. Clinical testing included blood analyses (immune system markers, lipid profiles, insulin levels, cellular inflammation, and glucose), blood pressure, body fat composition, and weight. Psychometrics included the SF36 Health Survey, the Spirituality Scale, and the Authentic Happiness Scale.

### ***Results***

Data analyses using a one-way repeated measures analysis of variance statistical test showed that all clinical and psychometric measurements were statistically similar across all groups with the following three significant exceptions. The immune system marker CD3 blood measurement in the combined Alpha 3 CMP groups was significantly higher ( $F(1,31) = 22.86, p < .01$ ) than the control and placebo groups. CD3 is an indicator of the presence of T-Lymphocytes. T-Lymphocytes are primarily responsible for the elimination of internally manufactured antigens (viruses, bacteria, etc.) in organic tissues.

Those that took Alpha 3 CMP showed a significant increase ( $p < .05$ ) in scores on the emotional subscale of the SF36. The SF36 is a health survey used by many in the medical community to determine functional health and well-being. The emotional items that showed significance were favorable responses to inquiries about how they felt in the previous four weeks. Some examples of the emotional indicators included feeling full of life, feeling lots of energy, and feeling calm and peaceful.

Those that took Alpha 3 CMP showed a significant ( $p < .05$ ) in scores on the Authentic Happiness Inventory. Representative indicators that showed improved scores included good moods, feeling successful, ability to focus, filled with joy, level of enthusiasm, and level of optimism.

### ***Discussion***

The findings of this pilot study indicate that the consumption of Alpha 3 CMP, which seems to have positive affects on T-Lymphocytes, may explain some physiological benefits reported in anecdotal reports. The significant emotional state improvement as evidenced with both the SF36 and Authentic Happiness scales also support perceived benefits reported by consumers. Future studies are necessary to validate these results.