



Shaklee Clinical Study Abstract

Effects of Long Term Vitamin-Mineral Supplementation on Immune Response in Older Adults.

Spiller G, Whittam J, Bruce B, Morse S, Chernoff M, Jensen C.
Journal of the American College of Nutrition 1998;17:511

Background: Specific micronutrients such as the vitamins A, B6, C, E, folic acid and the minerals zinc and iron, are known to affect immune function. A previous study reported significantly less infection-related illness in healthy, elderly men and women given a daily multiple vitamin and mineral supplement. This finding had not been independently confirmed by other investigators.

Objective: To determine whether a multiple vitamin and mineral supplement can impact immunocompetence in healthy, older individuals.

Design: 1 year, randomized, double-blind, placebo-controlled trial.

Subjects: 39 healthy men and women between the ages of 60 and 80 years.

Intervention: Subjects were randomly assigned to receive either a complete vitamin and mineral supplement, or a placebo consisting of calcium and vitamin D only. The subjects were asked to maintain their normal dietary exercise, and lifestyle habits. Illness reports were completed and evaluated every time illness occurred and subjects were seen quarterly to review compliance, physical activity, diet, medications and general health reports. Blood samples were drawn at the end of one year, and selected vitamin, mineral, and immune parameters were measured.

Results: Compared to placebo, those taking the supplement experienced a significant 65% fewer days of infection-related illness over the study period compared to placebo ($p < 0.01$). Serum levels of folate and zinc were negatively correlated with days of illness ($p < 0.05$), suggesting a salutary effect of the supplement on immune function. In addition, the percent of lymphocytes as well as levels of helper T-cells and suppressor-cytotoxic T-cells all were positively correlated with days of illness ($p < 0.005$; $p < 0.06$). The dietary composition of both groups remained unchanged.

Conclusions: These results confirm that adding a multiple vitamin and mineral supplement to the typical diets of healthy older individuals may lesson infection related illness and enhance immune function. These findings are in agreement with previous research (Chandra et al. JAMA 1992; 340:1124), and suggest that the addition of a multiple vitamin and mineral supplement to the typical diets of healthy older individuals may help maintain normal immune function.