

## **Blood homocysteine and fasting insulin levels are reduced and erythrocyte sedimentation rates increased with a glycopospholipid-vitamin formulation: a retrospective study in older subjects**

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### **Abstract**

**Background:** Elevations in Homocysteine (Hcys) levels in the blood have been correlated with increased risk for coronary heart disease and stroke, loss of cognition and memory, and other chronic medical conditions.

**Objective:** A retrospective study was initiated to determine if Hcys levels and other blood markers were altered in subjects taking an oral functional food supplement containing a mixture of phosphoglycolipids (NT Factor®) and vitamins.

**Methods:** Thirty-five patients (28 females, 7 males, Av. Age=60.7±9.6 years) who had used the functional food Advanced Physician's Formula™ with NTFactor® in tablet form each day were enrolled in a retrospective study on blood chemistry. This retrospective study followed a prospective study on the use of the same supplement to reduce fatigue in patients with chronic fatigue. Participants were patients with chronic fatigue syndrome (myalgic encephalomyelitis) or other fatiguing illnesses. Subjects had blood drawn over a 6-month period, and routine blood testing was performed. In this laboratory study the results were analyzed for differences, and statistical analyses were performed.

**Results:** All participants responded in the study and showed an average reduction of 31.8% in Hcys levels (from 10.85±0.42 to 7.40±0.42 µmol/L; t-test, p<0.001; Wilcoxon, p<0.001). Women responded better than men: women (from 11.06±0.50 to 8.67±0.82 µmol/L, 34.4% reduction, t-test, p< 0.001; Wilcoxon, p<0.001) versus men (from 10.80±0.51 to 7.01±0.47 µmol/L, 21.6% reduction, t-test, p< 0.0862). Differences were also found in fasting insulin levels (from 12.80±3.11 to 5.30±1.77 µIU/mL, 58.6% reduction, t-test, p<0.005) and erythrocyte sedimentation rate (ESR). ESR increased from 10.5±2.21 to 20.19±3.20 mm/hr (92.2% increase, t-test, p<0.0314; Wilcoxon, p<0.0154). Other tests were not significantly different after 6

months of supplement, there were no side effects from the test supplement, and none of the participants had any cardiovascular events during the study.

**Conclusions:** The test formulation was an effective method to reduce Hcys and fasting insulin blood levels and increase ESR rates in older subjects without adverse effects.

**Keywords:** Lipid Replacement Therapy, NT Factor®, fatigue, homocysteine, blood insulin, erythrocyte sedimentation rate, vitamin B complex