

**Foodstate (Re-Natured®) vitamin C complex may beneficially affect haemostasis and fibrin network structure in hyperlipidaemic patients**

Loots, Deirdré; Oosthuizen, Welma; Pieters, Marlien; Spies, Christelle; Vorster, Hester H

**Abstract**

**This randomized, placebo-controlled, double-blind, crossover study on 25 free-living hyperlipidaemic volunteers aspired to prove the hypothesis that supplementation for 8 weeks with a Food-state (Re-Natured®) Vitamin C complex (500 mg vitamin C, 160 mg bioflavonoids, 600 mg magnesium and 900 mg vitamin B complex) may improve haemostatic factors and fibrin network structures. Of the haemostatic factors measured, only median plasmin-antiplasmin complex (PAP) and thrombin-antithrombin complex (TAT) concentrations were both significantly decreased with FoodState (Re-Natured®) Vitamin C complex compared with placebo [PAP, -4.05% (-23.39, -0.23) versus 1.81% (-8.95, 8.09); TAT, -5.81% (-18.47, 0.39) versus 0.12% (-8.03, 13.5)]. As for fibrin network structures, only compaction was significantly increased from baseline to end [49.95% (47.55, 53.70) to 51.85% (48.55, 56.65)] by Food-state (Re-Natured®) Vitamin C complex supplementation. No significant changes were found in plasma fibrinogen, plasminogen activator inhibitor 1 activity, tissue plasminogen activator antigen, D-dimer, serum lipids or lipoprotein (a) concentrations. In conclusion, the decreases in TAT and PAP are possibly an indication that the FoodState (Re-Natured®) Vitamin C complex decreased the initiation of haemostasis, which in turn led to a compensatory reduction in fibrinolysis. FoodState (Re-Natured®) Vitamin C complex may therefore be protective of cardiovascular disease by causing a new reduced steady state of haemostatic balance and less rigid clots (increased compaction).**