

Plasma coagulation factor VII activity and its correlates in healthy men

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Background - Previous studies have provided evidence showing that increased coagulation factors and impaired fibrinolysis system are important predictors of cardiovascular disease. Elevated plasma coagulation factor VII activity (VII) have been claimed to be an important independent risk factor for occlusive vascular disease.

Objective - To investigate the relationship between plasma VII and individual fatty acid concentration in plasma phospholipid (PL).

Design - Cross-sectional study, consisting of 139 aged 20-55 years healthy men were recruited from Melbourne, each volunteer completed semi-FFQ and gave a blood sample. According to their habitual dietary intake, they were divided into four groups: vegan (n=18), ovo-lacto vegetarians (n=43), moderate-meat-eaters (n=60) and high-meat-eaters (n=18).

Outcomes – Both vegans and ovo-lacto vegetarians had lower plasma VII than omnivores. In the stepwise regression, plasma VII was used as a dependent variable, and 20 factors that were significantly correlated with plasma VII in age-adjusted bivariate analysis ($P < 0.01$) were used as independent variables. The two most important variables of plasma VII were selected in the model with $R^2 = 0.465$ and $P < 0.0001$; these were prothrombin time and plasma PL 18:0 concentration, standard coefficient were -0.603 and $+0.191$, respectively.

Conclusions - The present results indicate that both ovo-lacto vegetarians and vegans have a lower plasma VII compared with omnivores. Despite the correlation between plasma PL 18:0 concentration and VII is not a causal relation, previous studies have implicated diet total fat intake is a contributor to raised plasma VII.