

TOTAL AND CARDIOVASCULAR MORTALITY AND PLASMA LIPIDS. CZECH PART OF THE HAPIEE STUDY

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Aim: The aim of our study was to analyse the association between the fasting triglyceride (TG) and cholesterol (TC) levels and all-cause/cardiovascular mortality.

Methods: We have examined 3,143 males and 3,650 females, aged 58.3 ± 7.1 years. 729 deaths (274 cardiovascular deaths) have been registered (11.8 years of follow-up).

Results: The lowest total and cardiovascular mortality ($P < 0.01$) were associated with TC between 5.15-6.18 mmol/L. For TC and LDL-cholesterol, the relationships exhibit the “U” shape curve. For TG values, both total and cardiovascular mortality are increasing through the categories 3.01-4.00 mmol/L ($P < 0.05$) and over 4.00 mmol/L ($P < 0.005$) in comparison with the reference group of 1.41-1.80 mmol/L. Age-sex adjusted all-cause mortality was higher in individuals with TG values 3.01-4.00 mmol/L ($P = 0.035$) and over 4.00 mmol/L ($P = 0.002$) when compared with a reference group. The results have been similar when cardiovascular mortality has been examined, however, results reached statistical significance only for the TG over 4.0 mmol/L ($P = 0.028$). Associations did not significantly change after exclusion of cases within two years after examinations, or adjustment for statin treatment, age and sex.

Conclusions: Our results confirmed that enhanced plasma levels of plasma triglycerides are dose dependently associated with increased risk of all-cause mortality, however, it seems that individuals with TG values 1.8-3.0 mmol/L are not in higher risk of death. The results do not support the assertion, that elevated levels of total and LDL-cholesterol levels are linearly associated with a higher total and cardiovascular mortality.

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