

Relationship of examination stress to serum lipid profile

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Abstract

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Abstract

Although mental stress as well as hypercholesterolaemia have been individually linked with atherosclerosis, the relationship between mental stress and hypercholesterolaemia is poorly understood. Serum lipid profile was studied in eight male medical student volunteers before, near and after examinations. Identical observations were also made on seven well-matched control volunteers. As compared to pre-exam levels, total serum cholesterol (T-C) increased significantly (P less than 0.05) near exams, and so did low density lipoprotein cholesterol (LDL-C) and high density lipoprotein cholesterol (HDL-C). The HDL-C/T-C and HDL-C/LDL-C ratios remained essentially constant throughout the study. Control subjects did not show any significant change in serum lipid profile. Further serial measurement in five of the subjects revealed that examination-related changes were transient. Moreover, a second examination after about 40 days did not evoke any change in the lipid profile. The response to examination stress may be related to the enhanced utilisation of cholesterol in the adrenal cortex for steroidogenesis.