Variations in plasma lipid concentration during examination stress

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Variations in plasma lipid concentration during examination stress
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Abstract

The effect of psychological stress on plasma lipids was studied in 40 law students (20 men and 20 women). Plasma cholesterol, triglyceride, and apolipoprotein concentrations were examined at the beginning of the quarter and during the week before final examinations. Cortisol, blood pressure, and heart rate, and self-reports of stress and workload were also measured to verify that examinations were associated with increased stress levels. Perceived stress, perceived workload, and cortisol increased before examinations. Low density lipoprotein cholesterol (LDL-C) increased 5.8 +/- 13.9 mg/dL, and apolipoprotein B (apo B) increased 2.9 +/- 4.0 mg/dL. High density lipoprotein cholesterol decreased in women only. These changes were not due to changes in dietary intake or indexes of plasma volume. However, changes in cortisol and changes in LDL-C and apo B were associated, suggesting a neuroendocrine component to the effects. These results suggest that episodic, stressful situations may lead to potentially atherogenic changes in lipid and lipoprotein concentrations.

Reference:

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