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Obesity: an independent risk factor for systemic oxidative stress.

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Abstract

The role of obesity in diabetes mellitus, hyperlipidemia, colon cancer, sudden death and other cardiovascular diseases has confirmed in many recent research studies. In present study, it is hypothesized that obesity can serve as an independent risk factor for the decreased activities of cytoprotective **antioxidants** in humans and for the associated systemic oxidative stress. 150 age matched, female subjects with no history of smoking or biochemical evidence of diabetes mellitus, hypertension, hyperlipidemia, renal or liver disease or cancer were included in the study and were divided into different grades of obesity according to their body mass index (BMI). Hemoglobin and erythrocyte glutathione (GSH) concentrations were measured for each subject. The study suggests that increase BMI was found to be associated with a significant decrease in erythrocyte glutathione concentration. From these observations it is concluded that obesity even in the absence of smoking, diabetes mellitus, hyperlipidemia, renal or liver diseases can decrease the activities of body's protective **antioxidants**, and can enhance the systemic oxidative stress and should therefore receive the same attention as obesity with complications.

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MeSH Terms, Substances

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