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Heritability of Some Important Parameters of the Antioxidant Defense System Like Glucose-6-Phosphate Dehydrogenase, Catalase, Glutathione Peroxidase and Lipid Peroxidation in Red Blood Cells by Twin Study

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KEY WORDS Heritability; red blood cell; enzymes; twin study

ABSTRACT Data on the important parameters of antioxidant defense system like glucose-6-phosphate dehydrogenase (G6PD), catalase, glutathione peroxidase (GSH-PX) and lipid peroxidation (Lpx) from 7 pairs of monozygotic (MZ) and 7 pairs of dizygotic (DZ) like-sexed male twin pairs were subjected to variance analysis to examine genetic significance of those biochemical traits. The results of variance analysis and F test show the involvement of significant component of genetic variability in case of G6PD and catalase. The estimates of heritability based on variances of MZ and DZ twins are 0.93 (G6PD), 0.72 (catalase), 0.60 (GSH-PX) and 0.50 (lipid peroxidation).

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