

## Tissue Specificity of Lipid Peroxidation under Emotional Stress

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We studied intensity of lipid peroxidation and activity of enzymes from anti-oxidant system in blood plasma, brain and myocardium tissues among laboratory rats under 40 days of isolation and violation of diurnal cycle( table1). The received data show that at the background of quantitative changes in NO there also take place changes in the intensity of lipid peroxidation process, indicated by quantitative change in the concentration of malone dialdehyde and diene conjugates.

*table1*

*activity of enzymes from anti-oxidant system in blood plasma, brain and myocardium tissues among laboratory rats under 40 days of isolation and violation of diurnal cycle.*

tissue	enzyme	control	stress
brain	Mitochondrial SOD ( <i>mkatU/ 1mg protein</i> )	15,79 ± 1,03	10,42 ± 2,08**
	Cytozolia SOD სოც ( <i>mkatU/ 1mg protein</i> )	6,44 ± 1,14	2,72 ± 0,79**
	Katalaza( <i>mkmol/min/1mg protein</i> )	0,104 ± 0,05	0,054 ± 0,01*
myocardium	Mitochondrial SOD ( <i>mkatU/ 1mg protein</i> )	16,79 ± 1,09	8,42 ± 3,43**
	Cytozolia SOD ( <i>mkatU/ 1mg protein</i> )	5,41 ± 0,59	2,72 ± 0,26**
	Katalaza( <i>mkmol/min/1mg protein</i> )	12,9 ± 3,0	4,8 ± 0,8**
blood plasma	SOD ( <i>mkatU/ 1mg protein</i> )	16,25 ± 0,56	56 9,08 ± 0,21*
	Katalaza( <i>mkmol/min/1mg protein</i> )	21,8 ± 1,9	14,67 ± 0,15*

We studied the changes taking place in the activity of superoxidedismuthase, catalase, succinatdehydrogenase, creatine kinase and aldolase under stress

The resulting data show that isolation of animals and violation of diurnal cycle are the factors causing a significant reduction in the energy metabolism in brain and myocardium cells and resulting in oxidative stress that, in its turn, may become the reason for development of toxic radicals.

Furthermore, prolonged stress may result in irreversible processes that are considered to be the reasons for significant pathologies on the cardiovascular and other systems.