

**Endotoxin (*Proteus mirabilis* 014)-induced changes in human red blood cell membrane properties**

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Endotoxin (lipopolysaccharide, LPS) isolated from *Proteus mirabilis* (serogroup 014) strain induced alteration in red blood cell membrane properties. Using spin labeling method, lipid membrane fluidity and physical state of membrane protein were examined. The osmotic fragility of red blood cells was also studied. A slight increase in lipid membrane fluidity was indicated by 5-doxyloleic acid after LPS treatment. Higher concentrations of endotoxin induced an increase in fluidity measured with 12-doxyloleic derivatives of fatty acids. As significant dose-dependent increase in  $h_w/h_s$  ratio of 4-maleimido-2,2,6,6-tetramethylpiperidine-1-oxyl (MSL) suggested conformational changes in membrane proteins or increase of their mobility. These results indicate a dissociation of membrane cytoskeleton and changes mainly in the spectrin-actin complex. A no significant increase in osmotic fragility of red blood cells due to LPS treatment was found. These results suggest that endotoxin induces alterations in membrane components mainly in protein structure.