

# Abstract

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## Increased oxidative stress and altered activities of erythrocyte free radical scavenging enzymes in autism.

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**BACKGROUND:** There is great evidence in recent years that oxygen free radicals play an important role in the pathophysiology of many neuropsychiatric disorders.

**OBJECTIVE AND METHODS:** The present study was performed to assess the changes in red blood cells thiobarbituric acid-reactive substances (TBARS) levels, and superoxide dismutase (SOD), catalase (CAT), adenosine deaminase (ADA) and xanthine oxidase (XO) activities in patients with autism (n = 27) compared to age- and sex-matched normal controls (n = 26).

**RESULTS:** In the autistic group, increased TBARS levels ( $p < 0.001$ ) and XO ( $p < 0.001$ ) and SOD ( $p < 0.001$ ) activity, decreased CAT ( $p < 0.001$ ) activity and unchanged ADA activity were detected.

**CONCLUSION:** It is proposed that antioxidant status may be changed in autism and this new situation may induce lipid peroxidation. These findings indicated a possible role of increased oxidative stress and altered enzymatic antioxidants, both of which may be relevant to the pathophysiology of autism.

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