

## **Investigation of antioxidant enzymes in children with autistic disorder.**

**Yorbik O, Sayal A, Akay C, Akbiyik DI, Sohmen T.**

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Impaired antioxidant mechanisms are unable to inactivate free radicals that may induce a number of pathophysiological processes and result in cell injury. Thus, any abnormality in antioxidant defence systems could affect neurodevelopmental processes and could have an important role in the etiology of autistic disorder. The plasma levels of glutathione peroxidase (GSH-Px) and superoxide dismutase (SOD), and erythrocyte levels of GSH-Px were investigated in 45 autistic children and compared with 41 normal controls. Levels of erythrocyte SOD, erythrocyte and plasma GSH-Px were assayed spectrophotometrically. Activities of erythrocyte SOD, erythrocyte and plasma GSH-Px in autistic children were significantly lower than normals. These results indicate that autistic children have low levels of activity of blood antioxidant enzyme systems; if similar abnormalities are present in brain, free radical accumulation could damage brain tissue.



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