

## Erythrocyte Superoxide Dismutase Activity is Higher in Younger Than in Older Schizophrenics

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**Introduction:** Superoxide dismutase (SOD) is the critical enzyme in the detoxification of superoxide radicals because those are the first species produced in the majority of biological free radical producing reactions. Inconsistent data are present about SOD activity in patients with schizophrenia.

**Aims:** To compare erythrocyte SOD activity in schizophrenic patients who were randomly selected, and separately in the subgroup of patients younger than 34 years.

**Methods:** This study included 68 consecutive patients with schizophrenia (29 males and 39 females) mean age 32.7±9.4 years. The results of whole group were tested with 59 healthy controls and with the subgroup of patients younger than 34 years. SOD activity was measured in erythrocyte hemolysates by Ransod commercially available test.

**Results:** When we tested the whole patient group SOD activity was not significantly different between the healthy controls and schizophrenics. In the subgroup of patients younger than 34 years SOD levels were significantly higher (1525±279 U/gHb, p<0.01) compared to corresponding control values (1349±191 U/gHb). In younger patients SOD activity was significantly higher in those suffering up to five years (1617±286 U/gHb, p<0.001), in those who had more than one episode (1588±435 U/gHb, p<0.001), as well as in heredity positive (1581±324 U/gHb, p<0.01), and heredity negative patients (1532±262 U/gHb, p<0.05) in comparison with controls. A significant negative correlation was found between the duration of the disease and SOD activity ( $r=-0.511$ , p<0.01).

**Conclusion:** Our results showed that SOD activity is significantly increased in the early phase of the disease, and then declined to control values.