

## **P102. TBARS, SH AND NITRIC OXIDE LEVELS IN MALE WORKERS WITH OCCUPATIONAL LEAD EXPOSURE**

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To determine TBARS (thiobarbituric acid reactive substances), SH (thiols) and NO<sub>x</sub> (Nitric Oxide metabolites) levels as indicators of oxidative stress, to discuss the correlation of oxidative stress with blood lead (Pb) concentrations and discuss the interactions between NO<sub>x</sub> and oxidative stress in workers with occupational lead exposure.

104 battery workers with lead exposure and 50 healthy controls without a lead exposure were included in the study. Pb exposed workers were divided into two subgroups according to their Pb concentration; Group A: Pb ≤ 30 µg/dL (n= 52) and Group B: Pb > 30 µg/dL (n= 52).

TBARS levels were significantly higher, SH levels were significantly lower in both of the exposed groups when compared with controls. TBARS levels were found to be significantly higher and SH levels were found to be significantly lower in Group B when compared with Group A indicating that the oxidative stress increases with the increasing blood lead levels. There was not a significant difference in NO<sub>x</sub> levels.

The results of the study showed that the prooxidant-antioxidant balance in Pb exposure is disturbed by inducing over-production of TBARS and depleting the antioxidant capacity in a Pb concentration dependent manner. Oxidative stress has been proposed to be a principle mechanism involved in Pb toxicity.

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