

## Hepatotoxicity Induced by Arsenic Trioxide in Adult Mice and Their Progeny

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**Abstract :** In this investigation, we have evaluated the effects of arsenic trioxide on hepatic function in pregnant and lactating Swiss albino mice and their suckling pups. Experiments were carried out on female mice given 175 ppm As<sub>2</sub>O<sub>3</sub> in their drinking water from the 14th day of pregnancy until day 14 after delivery. Our results showed a significant decrease in plasma levels of total protein and albumin, cholesterol and triglyceride in As<sub>2</sub>O<sub>3</sub> treated mice and their pups. The hyperbilirubinemia and the increased plasma total alkaline phosphatase activity suggested the presence of cholestasis. Transaminase activities as well as lactate dehydrogenase activity in plasma, known as biomarkers of hepatocellular injury, were elevated indicating hepatic cells' damage after treatment with As<sub>2</sub>O<sub>3</sub>. Exposure to arsenic led to an increase of liver thiobarbituric acid reactive substances level along with a concomitant decrease in the activities of superoxide dismutase, catalase and glutathione peroxidase and in glutathione.

**Keywords :** antioxidant status, arsenic trioxide, hepatotoxicity, mice, oxidative stress

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