

## Experimental Lead Toxicity in Lohi Sheep: Risks and Impact on Edible Tissues

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**Abstract :** The present study was conducted to investigate the hazardous effects of lead on health and edible organs of Lohi sheep. The adult Lohi sheep (n=48) were randomly divided into two equal groups. The first group was administered lead acetate at dose of 70 mg/kg live body weight daily as 10% solution by oral route for a period of 90 days and the second group served as a negative control. Blood and tissue samples were collected at day 0, 30, 60 and 90 and analyzed for lead concentration by atomic absorption spectrophotometry. The kidney showed the highest lead concentration ( $p < 0.05$ ) followed by liver and then muscle. Lead acetate treated sheep showed structural and behavioral changes during the last month of trial. Liver showed necrosis, hemorrhages and hyperactivation of macrophages. Kidney showed degenerative and necrotic changes in glomeruli and tubules and the characteristic intranuclear inclusion bodies in tubular epithelial cells on H and E staining. It was concluded that Lohi sheep is affected by lead intoxication at low dose for longer period and hence exhibits lead accumulation in edible tissues.

**Keywords :** Lohi sheep, lead acetate, edible tissue, histopathology

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