

# Turkish Journal of Medical Sciences

Turkish Journal

of

Medical Sciences

The Effect of Lead Inhalation on Rat Lung Morphology

Bilge ONARLIOĞLU 1

Turhan ONARLIOĞLU 2

Sena ERDAL 2

Departments of 1 Histology-Embryology, 2 Physiology, Cumhuriyet Universitesi, Sivas-Turkey



[Keywords](#)

[Authors](#)



[medsci@tubitak.gov.tr](mailto:medsci@tubitak.gov.tr)

[Scientific Journals Home Page](#)

**Abstract:** Lead may exert toxic effects on several organ systems, but those in the lung are the most insidious. Therefore the aim of the present study was to investigate the morphological alterations caused by lead intoxication in rat lungs. Twenty-five Wistar albino rats were divided into three groups: the control group consisted of five animals while the experimental groups contained ten animals each. The control group animals were not subjected to lead treatment, whereas the first experimental group animals were exposed to 500 µg /0.1 m<sup>3</sup> /day of lead for one week, and the second group had the same dosage of lead exposure for two weeks. All the animals were decapitated and the lung tissues were obtained from each animal. Tissue samples were processed for light microscopical examination. In the lung tissue of the first experimental group, lymphocyte and monocyte infiltration and collagen accumulation were evident in the interalveolar septa, whereas in the second experimental group the animals had pneumonia in addition to exhibiting the same features as the first group animals. In conclusion, the concentrations of lead, especially over a long period, may cause irreversible morphological alterations in the, rat lung tissue.

**Key Words:** Lead inhalation, lung, morphology, rat

---

Turk J Med Sci 1999; 29(6): 617-622.

Full text: [pdf](#)

Other articles published in the same issue: [Turk J Med Sci,vol.29,iss.6.](#)