

Renal effects of chronic exposure to malathion in *Octodon degus*

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We studied the effects of chronic exposure to malathion in the kidney of *Octodon degus*, a caviomorph whose habitat may be exposed to pesticides currently used in Chilean agriculture. A group of adult female animals received malathion (200 ppm) as sole drinking fluid for 90 days. Kidneys showed signs of histologic damage, marked by hyperplasia and hypertrophy of tubular cells. Exposed animals had unchanged glomerular filtration rates and renal handling of sodium and chloride, but a significant increase in fractional excretion of potassium resulted from this treatment. The activities of Na⁺/K⁺-ATPase and Mg²⁺-ATPase in renal cortex and outer medulla were not affected by malathion exposure. This study provides evidence of both morphologic and functional renal damage elicited by chronic exposure of *O. degus* to a low dose of malathion. Morphologic alterations in glomerulus were accompanied by either morphologic and functional impairments of the distal nephron.