

# Changes in the visceral functions of *Plasmodium berghei*-infected and-uninfected rats following administration of artemether.

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## Abstract

The effects of artemether (12.5, 25.0 and 50.0 mg/kg per day, i.m.), administered to different groups of *Plasmodium berghei*-infected and -uninfected adult Wistar rats for 1 week, were investigated.

The parameters evaluated were the feeding, drinking and urinating patterns of the rats and these were compared with those of rats that received normal saline.

Artemether caused a significant dose-dependent reduction in food consumption of both *P. berghei*-infected and -uninfected rats ( $P < 0.05$ ). Food intake in infected rats was reduced by approximately 7 g/24 h. This reduction in food intake was further reduced during drug treatment with artemether. Artemether also reduced food intake in uninfected rats. The food consumption of rats that received 12.5 and 25.0 mg/kg artemether was restored after stopping treatment, in contrast with rats that received 50.0 mg/kg, in which the significant reduction in food consumption persisted 1 week after drug administration.

During treatment with artemether, the water intake of infected rats was significantly lower than that of uninfected rats in the 12.5 mg/kg artemether-treated group, but was significantly higher in infected rats than in uninfected rats dosed with 25.0 and 50.0 mg/kg artemether.

For all doses of artemether tested, a significant increase in urine output was observed in infected rats during treatment and 1 week after treatment, whereas in uninfected rats a significant increase in urine output was observed only following 25.0 and 50.0 mg/kg artemether 1 week after drug administration.

The present study confirms the anorexic activity of a high dose of artemether in both *P. berghei*-infected and -uninfected rats. It also indicates that high doses of the drug could cause impaired renal function in rats and that the significant increase in urine output could also be due to other effects of artemether, namely those on thirst, anti-diuretic hormone output and the osmotic pressure of the blood.

**Keywords:** [Artemether](#), [Food Consumption](#), [Neurotoxicity](#), [Plasmodium Berghei-Infected And -Uninfected Rats](#), [Plasmodium Berghei](#), [Urine Output](#), [Water Intake](#)

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