

# TREATMENT OF HYPERTENSION WITH MAGNESIUM CHLORIDE

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**Hypothesis:** Supplementation of the diet with magnesium chloride lowers blood pressure.

Forty one subjects aged 35 - 59 years with normal renal function and not on any medication were studied. They were not taking alcohol, were on a "prudent" diet, and were provided with 100 g potassium chloride salt each month to use in food.

The run-in and screening periods were combined and lasted 6 - 8 weeks. All the subjects received a placebo during this period. Those who seemed to comply and whose diastolic blood pressure ranged between 95 and 119 mm Hg were then randomly allocated to receive either the active drug or a placebo. The study period lasted six weeks. The total daily dose of magnesium was 15.78 mmol/l (6 tablets - each containing 535 mg magnesium chloride). Blood pressure was measured at two-weekly intervals. Urine and blood samples were tested twice during each period.

One subject complained of mild diarrhoea. There were no other side-effects. More than 80% of all tablets were taken. The ingestion of active tablets was associated with an increase in serum magnesium levels. Serum cholesterol and uric acid levels did not change throughout the study.

The blood pressure readings at the end of each period are tabulated (+/- 2SEM):

	Placebo Group		Active Group	
	run-in	study	run-in	study
Systolic BP	152 (4.4)	149 (5.8)	154 (5.8)	135 (4.2)
Diastolic BP	107 (2.2)	104 (3.0)	108 (2.2)	95 (2.8)

**Conclusion:** 3210 mg/day magnesium chloride safely and significantly lowered blood pressure.