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## Chronic Effects of Enalapril on Blood Pressure, Stroke, Plasma Renin, Urinary Electrolytes and PGE<sub>2</sub> Excretion in Stroke-Prone Spontaneously Hypertensive Rats

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Antihypertensive effect of enalapril (MK-421), an orally active nonsulphydryl-containing converting enzyme inhibitor, was examined in stroke-prone spontaneously hypertensive (SHRSP) rats. The treatment was started at 14—15 weeks of age with tail blood pressure over 240 mmHg and was continued for 11 weeks. We used captopril as the reference drug. The dose of enalapril and captopril was 10 and 30 mg/kg per day, p. o., respectively. Enalapril showed a sustained antihypertensive effect from the 1st to the 11th week of the treatment. This antihypertensive effect was substantiated by the good increase in body weight; decrease in heart weight; decrease in incidences of vascular disease, nephrosclerosis, stroke and death. Enalapril treatment also prevented the increases in urine volume, and excretion of osmotically active solutes, Na, Cl and K with age. Captopril treatment showed about the same antihypertensive effect. No side effects were seen in the enalapril or captopril treated group. The antihypertensive potency of enalapril was about 3 times more than that of captopril. Enalapril and captopril slightly increased plasma renin concentration. Urinary excretion of PGE<sub>2</sub> was not changed by enalapril or captopril treatment. These results clearly demonstrate the efficacy of long-term treatment with enalapril to prevent development of malignant hypertensive cardiovascular disease in SHRSP rats.

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