



# HerbClip™

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**FILE: ■Hibiscus (*Hibiscus sabdariffa*)**  
**■Hypertension**  
**■Lisinopril**

**HC 020571-323**

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**RE: Study Finds Hibiscus Extract May Help Control Hypertension**

Herrera-Arellano A, Miranda-Sanchez J, Avila-Castro P, et al. Clinical effects produced by a standardized herbal medicinal product of *Hibiscus sabdariffa* on patients with hypertension. A randomized, double-blind, lisinopril-controlled clinical trial. *Planta Med.* 2007; 73:6-12.

*Hibiscus (Hibiscus sabdariffa)*, commonly known as *jamaica* or *flor de jamaica* in Mexico, is used in drinks and as medicine. The active constituents are anthocyanins, which have antioxidative, antitumor, and anticarcinogenic activity. Studies indicate that hibiscus also acts on the cardiovascular system. It has been shown to have a natriuretic effect (eliminates extra sodium) and can inhibit angiotensin-converting enzyme (ACE) (which causes an elevation of blood pressure). The purpose of this study was to evaluate the efficacy and safety of an herbal medicinal product prepared from hibiscus extract and to compare it with lisinopril, an ACE inhibitor used to treat hypertension.

Outpatients (n=193) of the Regional General Hospital No 1 (HGR 1) of the Mexican Institute of Social Security (IMSS) in Cuernavaca, Morelos, Mexico with stage 1 or 2 hypertension participated in this randomized, controlled, double-blind study. Patients received either lisinopril 10 mg/day or hibiscus dried calyx extract standardized to 250 mg of total anthocyanins per day for 4 weeks (the authors performed the extraction). Blood pressure and urine were monitored.

At baseline, there were no significant differences in blood pressure between groups. Both treatments reduced blood pressure, but the effects were not immediately evident. After 4 weeks of treatment, the hibiscus extract lowered the systolic blood pressure by 11.58% and diastolic blood pressure by 12.21%. Lisinopril had a greater effect, lowering systolic blood pressure by 15.79% and diastolic blood pressure by 15.68%. Both treatments were well tolerated. Two cases of nervousness were reported in the hibiscus extract-treated patients. Patients treated with hibiscus extract had a significant increase in serum chloride, a decrease in plasma sodium, and no effect on the potassium level. In contrast, lisinopril only caused a

significant decrease in plasma chloride levels. The ACE inhibitory effect was significantly higher in the lisinopril-treated patients ( $P < 0.004$ ).

This confirms previous findings that hibiscus increases sodium excretion without modifying potassium. The authors conclude that hibiscus extract has two of the properties of commonly prescribed antihypertension drugs; namely, ACE inhibition and diuretic actions. This study would be even more convincing if there were a placebo-control group in addition to the positive control group. Dose-response studies are needed.

—*Heather S. Oliff, PhD*

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