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AMERICAN
BOTANICAL
COUNCIL

File: ■ Hibiscus (*Hibiscus sabdariffa*)
■ Hypertension
■ Blood Pressure

HC 051062-408

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RE: Cochrane Review of Hibiscus Effects on Blood Pressure

Ngamjarus C, Pattanittum P, Somboonporn C. Roselle for hypertension in adults.
Cochrane Database Syst Rev. Jan 20, 2010;(1):CD007894.

Hibiscus (*Hibiscus sabdariffa*), also known as sour tea, red tea, red sorrel, flor de Jamaica, and roselle, is a popular herbal tea in many parts of the world. Animal studies have demonstrated that aqueous extracts of hibiscus flowers lower blood pressure in rats. Clinical trials have demonstrated antihypertensive effects in adults with type 2 diabetes and those with moderate or mild hypertension, but more research is needed for confirmation.^{1,2,3} The purpose of this review by the Cochrane Collaboration was to examine the effect of hibiscus on blood pressure.

The reviewers included randomized controlled trials (RCTs) with durations of 3-12 weeks that compared hibiscus to a placebo or no intervention. The inclusion criteria required that the RCTs include patients over the age of 18 with systolic blood pressures (SBP) and diastolic blood pressures (DBP) equal or greater to 140 mm Hg and 90 mm Hg, respectively. The primary outcome measures were changes in the trough and/or peak of SBP and DBP compared to the placebo group or no intervention.

In June 2009, the authors searched the following databases for relevant articles: the Database of Abstracts of Reviews of Effectiveness (DARE), Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE (2005-2009), EMBASE (2007-2009), Allied and Complementary Medicine Database (1985-May 2009), CINAHL (1982-2009), BIOSIS (1969-2008), AGRICOLA (1970-May 2009), Food Science and Technology Abstracts (1969-June 2009 week 1), International Pharmaceutical Abstracts (1970-May 2009), and International Bibliographic Information on Dietary Supplements (IBIDS). They also used other information resources, including www.clinicaltrials.gov, the System for Information on Grey Literature in Europe (OpenSIGLE), ISI Web of Knowledge, and hand searches of journals, conference proceedings, and reference sections of published articles. The final search was in September 2009.

Out of 159 records recovered in the literature search, 26 were retrieved for review. Of those 26, 17 were duplicates. The authors excluded two articles that did not include hypertensive patients, one report that was not an RCT, and one paper that was an initial report of another article. None of the remaining five articles met the inclusion criteria. Among these, one used black tea as the control in hypertensive diabetics,¹ two used ACE inhibitors as controls,^{2,3} and the other study used as a control "ordinary" tea and only lasted for 15 days.⁴ An abstract of a randomized, double-blind, placebo control study of 6 weeks duration with pre- and mildly hypertensive subjects was not included because the complete article had not yet been published, but it has become available in its final form in 2010.⁵ All five of these studies found significant reductions in SBP.

According to the authors, "No reliable conclusions can be drawn about the benefit of Roselle [hibiscus] for either controlling or lowering blood pressure in patients with hypertension compared to placebo or no treatment." Nonetheless, clinical studies comparing hibiscus tea with drug treatments and black (or "ordinary") tea (*Camellia sinensis*) have found beneficial effects in the treatment of hypertension. Well-designed, placebo-controlled RCTs on the effects of hibiscus tea on hypertension are needed.

—Marissa Oppel-Sutter, MS

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The American Botanical Council has chosen not to reprint the original article.

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