



[J Cardiovasc Pharmacol](#). 2006;47 Suppl 2:S103-9; discussion 119-21.

Hypertension, the Kuna, and the epidemiology of flavanols.

[McCullough ML](#), [Chevaux K](#), [Jackson L](#), [Preston M](#), [Martinez G](#), [Schmitz HH](#), [Coletti C](#), [Campos H](#), [Hollenberg NK](#).

Epidemiology and Surveillance Research, American Cancer Society, Atlanta, GA 30309-4251, USA. marji.mccullough@cancer.org

Abstract

A low sodium diet has often been implicated in the protection of low blood pressure populations from hypertension, but several other dietary factors, including those as yet unidentified, may also be involved. The Kuna Indians of Panama are free of hypertension and cardiovascular disease, but this is changing with migration to urban areas. We compared the indigenous diet of Kuna Indians living on remote islands in Panama (Ailigandi), whose lifestyle is largely hunter-gatherer, with those who have moved to a suburb of Panama City (Vera Cruz). Between April and October 1999, members of a Kuna research team administered a 118-item food frequency questionnaire to 133 adult Kuna from Ailigandi and 183 from Vera Cruz. Single 24-hour urine collections and nonfasting blood samples were obtained. The Kuna in Ailigandi reported consuming a 10-fold higher amount of cocoa-containing beverages, 4 times the amount of fish, and twice the amount of fruit as urban Kuna ($P < 0.05$ by t test). Salt added was ample among those living in Ailigandi and Vera Cruz according to both self-report (7.1 \pm 1.1 and 4.6 \pm 0.3 tsp weekly) and urinary sodium levels (177 \pm 9 and 160 \pm 7 mEq Na/g creatinine), respectively. The low blood pressure of island-dwelling Kuna does not seem to be related to a low salt diet. Among dietary factors that varied among migrating Kuna, the notably higher intake of flavanol-rich cocoa is a potential candidate for further study.

PMID: 16794446 [PubMed - indexed for MEDLINE]