Letters to the Editor

Salt Sensitivity: Trophic Effect of Growth and Vasoactive Factors

To the Editor:

The nexus between salt (sodium chloride) intake and essential hypertension is not simple. For a recent review, see Reference 1. Population studies have demonstrated a positive correlation between increased dietary salt intake and the incidence of essential hypertension, whereas intrapopulation studies have not always shown this relation. Established essential hypertension is not simple. (For a recent review, see Reference 1). Population studies have demonstrated a positive correlation between increased dietary salt intake and the incidence of essential hypertension, whereas intrapopulation studies have not always shown this relation. Established essential hypertension is not simple. (For a recent review, see Reference 1).

The elevated blood pressure level but to the trophic influences of vasoactive and growth factors, or both. However, short periods of salt loading may identify individuals whose salt-sensitivity is expressed primarily by acute or subacute hemodynamic mechanisms. These individuals may represent a different group or only a segment of the population responding to a chronic increase in salt intake by increased growth of the VSM. In fact, subjects reacting to a chronic increase in sodium intake primarily by accelerated growth of the vascular media would not demonstrate a significant blood pressure response to short-term alterations in sodium intake inasmuch as changes in the vascular media are unlikely to occur over a short span. Nonetheless, these subjects must also be considered salt-sensitive.

As a group, blacks manifest more salt-sensitivity and a greater propensity to the development of essential hypertension than do whites. Thus, racial (black versus white) differences in cellular sodium and calcium regulation may shed light on the nature of salt-sensitivity. Such an idea is strengthened by our recent observations that skin fibroblasts from blacks show a higher elevation of cytosolic free calcium in concert with a greater stimulation of the sodium-proton exchange by factors in serum than do skin fibroblasts from whites. Similar tendencies in VSM cells would favor an increase in the propensity for VSM growth in blacks.

I propose that future research into the question of salt-sensitivity in essential hypertension will focus not only on the impact of a brief change of salt intake on blood pressure levels, but also on the influence of a long duration of altered dietary salt intake on the interplay of growth factors and vasoactive agents that can stimulate VSM growth.

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References


Single Versus Triplicate Measurements: A Commentary on Fagan et al

In an article published in this journal, Fagan et al concluded that duplicate or triplicate measurements of blood pressure are neither more accurate nor less variable than single measurements and that the additional measurements are of no value in evaluating the effects of antihypertensive medications or other interventions on blood pressure. This conclusion was based on a study of 40 patients who were withdrawn from antihypertensive medications.
Single versus triplicate measurements: a commentary on Fagan et al.
D Shapiro, L D Jamner, I B Goldstein and D Guthrie

Hypertension. 1990;16:103-106
doi: 10.1161/01.HYP.16.1.103-a

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