CONCEPTS IN HYPERTENSION

A Journal Article-Based Approach to Understanding the Clinical Aspects of Hypertension

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Article of Interest

Mattes, R et al. Relative contributions of dietary sodium sources. Journal of the American College of Nutrition. 1991. (Click to Access)

Context and Study Objective

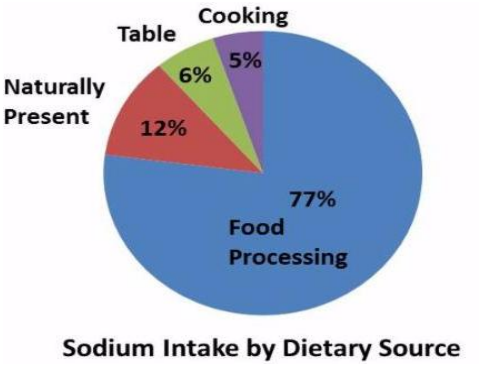
Despite patients often reporting not adding salt to their food, the average American ingests 3,400 mg (150 mEq) of sodium daily, well above the recommended 2,400 mg (100 mEq). Mattes et al sought to identify the primary sources of sodium in the U.S. diet including the amount added by patients.

Design, Setting, and Participants

Healthy normotensive U.S. subjects were recruited by public advertisement. Each was educated on how to record the sodium content of purchased/restaurant food; a pre-weighed salt shaker for cooking and another for table use (to be carried at all times) was also provided. Additional seasonings were permitted and noted. Patients were not allowed to eat out more than thrice weekly. After 7 days, daily sodium intake was calculated along with its sources.

Results

-62 subjects (75% women, 23% African American) with a mean age of 30 participated. BMI 24 kg/m2. Mean Pressure was 109/69 mm Hg. Socioeconomic information was not provided.
-Mean sodium intake was 3900 mg/d (170 mEq) with 77% derived from food processing/eating outside the home and 12% naturally present in the food (shellfish, eggs, milk) itself . Combined cooking and table salt use represented 11% of daily salt consumption.
-The correlation between 24hr urine sodium and the calculated sodium intake was excellent.



Sodium Intake by Dietary Source

Clinical Perspective

-While many studies have quantified total daily sodium intake, this paper was the first to do so by dietary source. This article allows the clinician to identify "hidden" sources of sodium that contribute to the patient's hypertension.
-Since processed and food eaten out of the home contain the vast majority of our sodium intake and cooking/table salt very little, asking patients how much they add to their food is of relatively little clinical value. Patients may indeed be adding nominal amounts of salt to their food but consuming large quantities found within processed products or cafeteria fare.
-I focus on how often the patient eats outside the home and what processed foods (cheeses, deli meats, canned/frozen items, sausage, nuts) are consumed at home.
-If patients can decrease their processed food intake, they are pleasantly surprised to learn that they need not not heavily restrict the amount of salt added during meal preparation or at the table.
-Short comings of this paper include a possible lack of generalizability given the young age and self-selected nature of the cohort.