

# Most Reap No CV Health Benefits From Salt Restrictions - cardiovascular

[Family Practice News, April 15, 2000](#) by [Mary Ann Moon](#)

WASHINGTON -- The public health policy that still urges all Americans to limit their salt intake needs to be dismantled, according to panelists in a sodium symposium at the annual meeting of the American Association for the Advancement of Science.

Restricting sodium intake will not benefit most people's cardiovascular health. Standing policy was promulgated before adequate scientific evidence was available to back it up. The link between sodium and cardiovascular disease was based on the questionable results of observational studies that many researchers consider to be seriously flawed, the panelists said.

"We've seen a dramatic increase in our knowledge of nutritional science and particularly in our understanding of the role of sodium in blood pressure regulation," noted panel moderator Dr. David McCarron of Oregon Health Sciences University, Portland.

"Now that we have amassed good scientific evidence showing that salt restriction is not beneficial for most people, we must reverse this public policy. It is okay to tell the public that the science has changed and we need to take another look at the dietary recommendations," Dr. McCarron said.

"Sodium simply is not the sole and pervasive dietary villain it once was believed to be," he added.

Other panel members agreed, lamenting the fact that the U.S. government, particularly the National Heart, Lung, and Blood Institute, continues to advocate sodium restriction. The latest update of the federal recommended dietary guidelines, due to be released in June, still advises the public to "choose and prepare foods with less salt."

Dr. Alexander Logan said that the findings of numerous well-designed clinical trials "do not support the current recommendations for universal dietary salt restriction." Many showed that subjects had little change in blood pressure despite marked changes in their sodium intake. Other trials showed large changes in blood pressure despite only trivial alterations in sodium intake, said Dr. Logan of the University of Toronto and Mount Sinai Hospital, Toronto.

Dr. Michael Alderman cited "a remarkable heterogeneity of response to salt restriction" in another review of clinical trials. "Almost as many subjects showed increased blood pressure with salt restriction as showed decreased blood pressure," he said.

Although subgroups of the population, such as salt-sensitive people, those with severe hypertension, and some who are obese, do benefit from limiting their salt consumption, "there is

no scientific basis for a single universal recommendation regarding sodium intake," concluded Dr. Alderman of Albert Einstein College of Medicine, New York.

Dr. Logan noted that even patients who are salt sensitive can change. "Salt sensitivity is not immutable."

Dr. Alderman disputed the notion that salt restriction should be promoted because it may benefit some people and doesn't harm anyone. "Many studies suggest that a low-sodium diet may not be a good thing."

His own research showed that salt restriction caused a threefold increase in plasma renin activity, which is associated with cardiovascular events, said Dr. Alderman, a past president of the American Society of Hypertension.

George Davey-Smith, Ph.D., added that sodium restriction has been linked to short-term increases in aldosterone and LDL cholesterol levels, as well as a rise in noradrenaline levels that indicates increased stress.

There also is evidence linking salt restriction with increased fatigue, erectile problems, and sleep disturbances. "And we shouldn't overlook how very difficult it is to adhere to a low-sodium diet, particularly in Western society. Research subjects are more likely to drop out of counseling to help them limit salt intake than counseling on general weight reduction, which is notoriously shunned.

"But most trials never address these quality-of-life issues," said Dr. Davey-Smith of the University of Bristol, England.

Meanwhile, the ongoing controversy over the issue threatens to undermine the public's trust of the entire medical community. In the words of one member of the audience, "For the last 20 years, doctors told us to cut down on salt. Now they'll tell us not to. People feel swindled."

### Shaking Out the Myths About Salt

Dr. McCarron listed these common misconceptions about sodium chloride:

**Myth:** Sodium intake has increased over the past century. Actually, data on sodium excretion going back for 125 years show that sodium intake has remained constant.

**Myth:** People consume more salt than they need. In fact it is salt restriction, not salt consumption, that is nonphysiologic. Worldwide, sodium intake is remarkably consistent across extremely diverse populations, environments, and food sources.

**Myth:** All people would benefit from some degree of restriction of their salt intake. Only a minority of the population is salt sensitive and would benefit from restriction. "The blood pressure benefit of restricting salt in the general population is minimal to absent," Dr. McCarron

said. There also is no evidence that sodium restriction reduces any cardiovascular endpoints in people who are not salt sensitive.

Myth: Sodium's effects on blood pressure are mediated directly by sodium alone and are unrelated to other nutrients. Actually, the anion of the sodium makes a big difference. Many sodium salts, such as sodium citrate and sodium bicarbonate, lower blood pressure.

Myth: The sodium intake levels used in laboratory studies are relevant to human intake levels. In one prominent and widely cited study involving rats, the animals were given "the human equivalent of a Frito snack pack every 15 minutes for 24 hours a day" Dr. McCarron said.

Myth: The increased prevalence of high blood pressure among African Americans is due to their high salt intake. "This is one of the most frequently repeated statements you'll hear. Salt intake may be a factor here, but it is not the cause," Dr. McCarron said. Across world populations, mean salt intake does not correlate with the prevalence of hypertension.

Myth: Restricting sodium has no effect on other nutrients. "The idea is that if you just stop using your salt shaker and stop using prepared soups and foods, it won't affect the rest of your diet. But the only prospective data on this issue show that even under carefully managed clinical research conditions in university centers, this level of salt restriction made dramatic modifications to people's diets. Protein, potassium, calcium, and total caloric intake all changed markedly," he said.

Myth: Americans' excessive salt intake is due to processed foods. In fact, the current sodium intake in America is essentially the same as it was in the mid-1800s, before processed foods were widely used.

Myth: Thiazide diuretics decrease blood pressure by raising sodium excretion. The rise in sodium excretion is a short-term effect only After a few weeks on diuretics, sodium balance is restored, yet the blood pressure stays low.

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