

Calling All Physicians: The Salt 'Debate' Must Stop

Shelley Wood | June 18, 2014

ATHENS, GREECE — There is no real "debate" over the dangers of dietary salt as a cause of cardiovascular disease, and physicians need to take a more active role educating the public, supporting high-quality science, and participating in initiatives to reduce salt intake at the population level.

Those were the key messages of a no-holds-barred session on dietary sodium and hypertension earlier this week at **HYPERTENSION 2014**, the joint conference of the **European Society of Hypertension** (ESH) and the **International Society of Hypertension** (ISH).

Any "controversy" over whether dietary salt is a cause of heart disease and stroke is the result of weak research methodology or commercial interference, **Dr Norm Campbell** (Libin Cardiovascular Institute of Alberta, Calgary) and **Dr Graham MacGregor** (Wolfson Institute of Preventive Medicine, London, UK) argued here.

"One of the challenges," said Campbell, "is to recognize that most of the effort to reduce dietary salt is not based on 100% conclusive data from multiple randomized trials, with hard outcomes, as we might expect from the pharmaceutical industry. It's an incomplete database, and that allows fertile ground for controversy. . . . In addition, because there is so much salt in our environment, we don't have a lot of studies where people are consuming less than 2300 mg of sodium per day."

Related to that, he added, is the glut of low-quality studies that have relied on flawed measures of sodium consumption. Both Campbell and MacGregor roundly dismissed the use of spot urine analyses as a hopeless means of estimating sodium consumption, coupled with the difficulties of accurately measuring blood pressure in large population studies.

When a member of the audience pointed to the **PURE analysis** showing that most of the world eats much higher levels of sodium than those recommended by most international organizations, MacGregor and Campbell leaped on this as an example of a study that had radically failed to measure salt in an appropriate fashion, even devising a new "formula" to estimate salt intake because even spot urine testing had been inadequate. "Please let [PURE principal investigator **Dr**] **Salim Yusuf** [McMaster University, Hamilton, ON] know that he should stop using spot urine analysis," MacGregor said curtly.

Poor-Quality Studies Often Reflect Commercial Meddling

"It's also important that we recognize the extent of commercial interference," Campbell continued. "This is a growing area of research. There are some academics who have financial interests in the salt and food industries [who have published misleading papers], and we have very prominent journals, I'll mention *JAMA* in particular, that publish studies that probably would have [never been printed] if a medical student had tried to publish them" and that appear to be hoping to increase citations and publicity by publishing contradictory papers.

But in fact, when international and national organizations have done rigorous reviews of the literature, omitting low-quality data, they've come up with recommendations that clearly support lowering salt intake to prevent stroke and cardiac diseases, Campbell said. Doctors have a responsibility to acquaint themselves with these recommendations, then educate their peers and patients, he added.

Physicians: Take a Tougher Stand

It also falls to physicians and their organizations to take a tougher stand to make sure that science is well-vetted before it is presented, published, and picked up by the media, Campbell urged the audience.

In fact, the **World Hypertension League** (WHL) has recently put out a call for the setting of research standards related to dietary salt, to try to prevent low-quality research from being "conducted, published, and getting out into the press," Campbell said. "This isn't to suppress science but to encourage high-quality science with reliable results." Secondary to this, the WHL is putting together a global coalition of national and international organizations to oversee those standards, he said.

"As scientists and clinicians, we need to be very critical of the science and of the 'controversy for controversy's sake.' I think we are far too generous with individuals and organizations that make money creating controversy that endangers our public, and I don't see that there's much difference between these tactics and the tobacco industry, except that the tobacco [fight] is 10 to 20 years ahead of the salt-reduction effort," Campbell said.

An important part of that is educating the media that there is no "equipoise" in the science surrounding dietary salt.

"I do get irritated with the media when they are always trying to balance the stories, when there is no balance in my view," MacGregor told **heartwire**. By seeking the "other" perspective, quoting the salt lobby group, the **Salt Institute**—or quoting physicians who are consultants to the Salt Institute—they create controversy and debate where none should exist.

Salty Stats

Both Campbell and MacGregor, in their respective talks, gave the same striking statistic, that a 2-g drop in the amount of salt consumed per day would translate into a 20% reduction in cardiovascular events.

The problem may be that individual physicians have not accepted the size of the problem.

Citing a 2010 **Institute of Medicine** (IOM) report, Campbell said that approximately 32% of hypertension cases are caused by high dietary salt—a number that translates into about 300 million people.

Moreover, he continued, "The **Global Burden of Disease** study estimates over three million deaths, 61 million years of disability, and 57 million years of life lost were related to high dietary salt in 2010. This is really a massive and catastrophic public-health problem."

Positive Strides

Countries around the globe have already made strides in implementing mandatory or voluntary reductions in dietary salt, primarily tackling processed foods and launching public-education initiatives. **Dr Elizabeth Dunford** (George Institute for Global Health, Australia) presented an overview of some of the progress internationally, noting that the number of countries that have launched initiatives has gone from 32 to 60 in the past four years alone. Moreover, the number of countries that have actually demonstrated changes in sodium policies has gone from five to 12.

"A huge amount of progress has been made in a short period of time," she said.

Among the highlights:

- Finland, which has one of the longest-running public salt-reduction initiatives, lowered salt intake by 15% between 1979 and 2007, from 12.8 g to 9.0 g.
- The UK reduced intake by 15% between 2001 and 2011, from 9.5 g to 8.1 g, saving an estimated 8500 lives per year.
- Turkey, where salt intake was a soaring 18.0 g/day, lowered intake by 17%, to 15.0, between 2008 and 2012.
- Initiatives targeting salt content in bread, one of the main sources, have achieved reductions of 36% in Chile, 26% in Spain, and 29% in the US.
- In 2013, South Africa became the first country to legislate mandatory salt restrictions for the food industry, aiming to reduce sodium consumption to less than 5 g per person per day by 2020.