July 11, 2012

Ms. Trish Hall, Editor, Sunday Review  
Mr. Marc Charney, Editor  
Mr. Arthur Brisbane, Public Editor  
The New York Times  
620 Eighth Avenue  
New York, NY 10018

Dear Ms. Hall and Mr. Brisbane:

Last month the Sunday Review published an article by Gary Taubes that argued that encouraging people to eat less salt (sodium) could be harmful. A number of leading researchers and public health advocates on salt, hypertension, and cardiovascular disease have written the enclosed critique of Mr. Taubes’ article. We concluded that Mr. Taubes took facts and quotes out of context; ignored the great body of research that has persuaded the American Heart Association, World Health Organization, and many others of the importance of lowering sodium consumption; and wrote an article that misleads readers and could undermine the public’s health.

We recognize that Mr. Taubes’ article was published a month ago and that the Times published several brief letters about it. But this issue is of such great public health importance that we feel it is incumbent upon the Times to publish a much more detailed and expert critique, such as the enclosed.

Sincerely,

Michael F. Jacobson, PhD  
Executive Director

On behalf of the following:
Lawrence J. Appel, MD, MPH  
Professor of Medicine, Epidemiology and International Health (Human Nutrition)  
Director, Welch Center for Prevention, Epidemiology, and Clinical Research  
Johns Hopkins Medical Institutions  
Baltimore, MD

Norm Campbell, MD, FRCPC  
Professor of Medicine, Community Health Sciences, and Physiology and Pharmacology  
Libin Cardiovascular Institute of Alberta  
University of Calgary  
Calgary Alberta

Stephen Havas, MD, MPH  
Adjunct Professor in Preventive Medicine  
Northwestern University Feinberg School of Medicine  
Chicago, IL

Norman M. Kaplan, MD  
Clinical Professor of Medicine  
Department of Internal Medicine  
University of Texas Southwestern Medical School  
Dallas, TX

Graham MacGregor, MD  
Professor of Cardiovascular Medicine at the Wolfson Institute of Preventive Medicine  
Barts & The London School of Medicine and Dentistry  
Honorary Consultant Physician at St George’s Hospital, London.  
London, England

Frank Sacks, MD  
Professor of Cardiovascular Disease Prevention  
Department of Nutrition  
Harvard School of Public Health  
Boston, MA

Jeremiah Stamler, MD  
Professor Emeritus in Preventive Medicine  
Department of Preventive Medicine  
Northwestern University Feinberg School of Medicine  
Chicago, IL
Last month, The New York Times’ Sunday Review section carried an extraordinarily deceptive article. The article, by free-lance medical writer Gary Taubes, argued that the conventional advice to eat a low-salt diet to reduce the risk of cardiovascular disease was not only all wrong, but deadly. In the process, Mr. Taubes distorted the positions of scientists and asserted that those involved in policy-making, including some of the cosigners of this letter, selectively reported evidence. Yet, one of the most striking aspects of Mr. Taubes’ argument is his biased approach to evidence. He highlighted studies with poor quality methods, often observational studies in which it is impossible to disentangle the effects of low sodium intake from other factors. He also ignored persuasive yet inconvenient evidence that does not align with his own biases.

We disagree strongly with Mr. Taubes’ views and urge the Times to provide accurate information to its readers on this important topic.

1. Mr. Taubes contended that “the actual evidence to support [eating less salt] has always been so weak” and that eating less salt “can increase our likelihood of dying prematurely.” To support that contention, he dredges up 30- and 45-year-old, out-of-context quotes from Dr. Jeremiah Stamler, of the Northwestern University Feinberg School of Medicine, a prominent, long-time advocate for a lower-salt diet (and a cosigner of this letter). He also asserts that the National Institutes of Health “has spent enormous sums of money to test the hypothesis,” but that the government’s admonitions to cut the salt “all essentially rely on the results from a 30-day trial of salt.”

In fact, the advice to cut sodium is not based on one brief study, but on a mountain of research conducted over the past half-century. Animal studies, human clinical studies, epidemiological studies, and intervention trials all point to the harmfulness of diets high in salt, or sodium.

2. Two recent “meta-analyses” are at the heart of Mr. Taubes’ argument. Each included several trials in which people were—or were not—assigned to eat less salt. (Trials may carry more weight than studies that simply observe differences in people who choose to eat high or low levels of sodium on their own.) However, both meta-analyses are seriously flawed.

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One meta-analysis was suspect because many of the trials included were very short.\textsuperscript{2} Shorter studies “are of no relevance to a public health policy,” notes Graham MacGregor, a leading hypertension expert at Barts and London School of Medicine and Dentistry (and cosigner of this letter). Actually, the meta-analysis “shows significant falls in blood pressure with salt reduction...in those studies which lasted four or more weeks.”\textsuperscript{3}

The second meta-analysis included a study conducted in Italy of people with heart failure.\textsuperscript{4} “The participants were severely salt- and water-depleted due to aggressive diuretic therapy,” noted MacGregor in a letter to \textit{The Lancet}, a prominent medical journal.\textsuperscript{5} Because “the dose of diuretics was not adjusted downwards, a lower salt intake is likely to worsen the salt and water depletion and therefore, unsurprisingly, resulted in worse outcomes.” (Hyper-aggressive treatment for heart failure with high doses of diuretic drugs plus low sodium intake is uncommon in the United States.)

The other six trials included in the meta-analysis found less cardiovascular disease and fewer deaths in people assigned to eat less salt, but the results were not statistically significant. That's because the authors of the review separated people who had normal blood pressure from those with high blood pressure, which left each group with too few “events” (heart attacks, strokes, deaths). When MacGregor re-analyzed the data combining the two groups, he found a statistically significant 20-percent drop in events among those randomized to lower-salt diets.\textsuperscript{3} Even the authors acknowledged the weakness of their study: “Our meta-analysis only had 10 percent power to detect a 10 percent reduction in relative risk.”\textsuperscript{2}

For evidence on people with normal blood pressure, the meta-analysis relied heavily on the Trials of Hypertension Prevention (TOHP) study. That study found a 30-percent reduction in cardiovascular events among people randomized to cut


Why did the meta-analysis find no reduction in the same group? The TOHP researchers analyzed the data for individuals, and then adjusted for possible confounders like age, race, and sex. In contrast, the meta-analysis just looked at the aggregate number of events in the two groups without adjusting. Using individual data, with adjustments, is more precise and revealing than use of aggregate data.

3. What about the “slew” of studies on the dangers of cutting back on salt? Only one of the studies was a trial that randomly assigned people to either cut salt or not. (It was the above-mentioned trial of people with heart failure.) The other three studies simply stated that people who reported consuming less salt (for whatever reason) had a higher risk of heart disease. Mr. Taubes implies that they ate less salt because they were health conscious, but that is a biased and probably incorrect assumption. Thus, in one study, the low-sodium group included people who supposedly consumed only about 600 mg of sodium a day. That’s a red flag, indicating the likelihood of gross under-reporting of food intake or that the 24-hour urine collections to assess sodium intake were incomplete. It is well-recognized among experts that underestimation of sodium intake is a common and serious problem that can lead to spurious results and that invalidates the results of many such studies.

The salt industry accepts that people with high blood pressure should follow their doctors’ advice to eat less salt. But the industry contended that even if studies show that salt raises blood pressure and that high blood pressure causes heart disease, they hadn’t shown in one study that lowering salt directly prevents heart disease. Now that study has been done, but Mr. Taubes failed to acknowledge it. The important TOHP study noted above documented a 30-percent reduction in cardiovascular disease among persons who were counseled to reduce their salt intake.

The consistency, variety, and solidity of findings from multiple studies of varied types, not just one 30-day study, has led practically every nutrition and public health agency in the world to advise the general population to reduce sodium. The Centers for Disease Control and Prevention, National Institutes of Health, American Medical Association, American Heart Association, American Public Health Association, World Health Organization, and many other groups have advocated reducing sodium in both processed foods and in diets. Even the Grocery Manufacturers of America has encouraged its member companies to

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lower sodium levels in their products. In contrast to Mr. Taubes, policy makers got it right—excess salt intake has a prominent role in the pathogenesis of elevated blood pressure, the leading cause of preventable mortality worldwide.

The prominence, implied scientific credibility, and contrarian perspective of The New York Times article undoubtedly confused countless readers who have been hearing from experts to look for lower-sodium foods and restaurant meals. That’s bad enough, but the timing of the article may have larger negative effects.

Years ago, the Institute of Medicine concluded that the evidence was clear that Americans were consuming too much sodium and recommended major reductions. In an important follow-up report two years ago, the IOM found that experts’ admonitions since 1969 to industry to voluntarily cut sodium levels had been an utter failure—we’re consuming more salt now than we did 40 years ago. Hence, the IOM recommended that the Food and Drug Administration restrict sodium levels in processed foods, which it is now considering doing. Mr. Taubes’ article might give ammunition to those in and out of the Obama administration who want to derail the FDA’s efforts. That would only mean more hypertension, heart disease, deaths, misery, and medical costs down the road.