LETTERS

ATTEMPTING TO REDUCE SODIUM INTAKE MIGHT DO HARM AND DISTRACT FROM A GREATER ENEMY

Take it with a grain of salt: despite assertions to the contrary,[1] we do not know that reducing mean population sodium intake would decrease the risk of cardiovascular disease or save lives. Yes, we know that "excess sodium consumption raises blood pressure"[1] (at least transiently, for most people,[2] to a clinically minor degree[3,4]). But based on the intermediate outcome of blood pressure, we cannot extrapolate that lowering sodium consumption would reduce cardiovascular risk or premature death. In fact, randomized controlled trial evidence suggests just the opposite: that lower sodium intake may lead to worsened cardiovascular disease and earlier death.[5]

It turns out that biological response to sodium intake is complex. Reducing sodium intake may lower blood pressure; but it may also decrease insulin sensitivity, alter lipids, and stimulate a variety of neurohormonal pathways detrimental to the cardiovascular system.[4,6,7]

For these reasons, our bodies may work to keep our sodium intakes higher than the levels the Institute of Medicine and other authorities now advise. In fact, mean sodium consumption—well above recommended levels[1,8]—has been fairly constant across diverse populations for multiple generations.[8] Thus, although it may be true that "individuals have little control over their sodium intake,"[1] it is probably not for the reasons Angell and Farley contend in their editorial blaming the food industry and consumers' inability to avoid high-sodium processed and prepared foods.[1] Sodium consumption may have much more to do with human physiology than food formulations.[8]

If food reformulations were to make processed foods less palatable and discourage their consumption, this might be the only way the National Salt Reduction Initiative could be good for public health. Indeed, it is probably not the sodium in processed foods but the foods themselves that are the problem. Among other issues, these "foods" are generally engineered from dizzying arrays of highly refined carbohydrates; the consumption of which is associated with obesity, unhealthy lipids, high blood pressure, and insulin resistance, all as part of a broader metabolic syndrome[9,10] (likely much more a risk for cardiovascular disease and early death than any modest effect of "excess" sodium intake).

When it comes to preventing cardiovascular disease and early death, refined carbohydrates are a greater enemy. Although there has been some action targeting refined carbohydrates, current action falls short. If sugar-sweetened beverages are a public-health problem, then why aren't sugar-laden cookies? If an energy drink is unhealthy, why not an energy bar? If reformulating products to have less sodium results in more sugar, will that be good for public health?

New York City could build on the momentum of its sugar-sweetened beverage work to refocus national action. Targeting high-sugar prepared and processed foods, as opposed to sodium, would be a decided start in the right direction. ■

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ANGELL AND FARLEY RESPOND

In his letter, Lucan argues that the relationship between excess sodium consumption and adverse health effects is not supported by the evidence. He concludes that public health actions to improve population health should instead focus on sugar.