New scares about bad foods

By ACSH Staff — March 13, 2012

The results of two observational studies by the same group at the Harvard School of Public Health have made headlines, spurring claims that red meat increases mortality risk and sugar-sweetened drinks raise the risk of heart disease. While these observational studies cannot show causation, it’s clear that many in the public are interpreting the studies in exactly this way.

The first study [1], published in the Archives of Internal Medicine and whose lead author was Dr. An Pan, analyzed dietary information from over 37,000 men and 83,000 women for up to 28 years. After controlling for a variety of lifestyle and diet factors, the researchers estimated that for every increase in red meat consumption of one serving per day, there was a 12 percent higher risk [2] of all-cause mortality. Higher red meat consumption was also associated with a higher risk of death from cardiovascular disease and cancer.

But as ACSH’s Dr. Josh Bloom points out, these are very small changes to be accepted at face value. Their conclusion could be tainted by insufficient statistical power or the presence of one or two confounding factors that were not considered.

In the second study [3], led by Dr. Frank Hu and published in the journal Circulation, researchers assessed nearly 43,000 men from the Health Professionals Follow-Up Study. Participants in this study were mainly Caucasian men aged 40 to 75 who were followed for up to 22 years.

The researchers found that when risk factors such as smoking, physical activity, alcohol use, and family history were controlled for consuming a 12-ounce sugar-sweetened beverage once a day was linked to [4] a 20 percent increase in heart disease risk, compared to drinking no sugar-sweetened beverages. However, a lesser frequency (a couple of drinks per week or month) of sugary beverage consumption was not associated with any increase in risk.

Unfortunately, explains ACSH’s Dr. Gilbert Ross, these studies are excellent examples of data dredging. The researchers have a huge pool of observational data, and they just plug in whatever factors they can think of to look for statistically significant correlations. But these small differences of 10 to 20 percent don’t mean anything in a retrospective observational study.

Dr. Ross adds, The epidemiological results that these two studies come up with are nowhere near strong enough to support the conclusions that the authors and especially the press arrive at."  

As ACSH advisor Dr. Harold Sandstead points out, these studies need to be taken with a grain of salt. Scaring the public from eating red meat could actually be harmful. Dr. Sandstead explains: Low red meat intake is frequently associated with increased risks of zinc and iron deficiencies, two of the most common diseases of humans. Both have serious implications, especially zinc deficiency for immunity, wound healing, cognitive function, growth, and gene expression.
ACSH’s Dr. Ruth Kava notes that Dr. Sandstead is a highly respected nutrition researcher who has investigated mineral nutrition for many years. I take his concerns seriously.

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[3] http://circ.ahajournals.org/content/early/2012/03/09/CIRCULATIONAHA.111.067017