

# Health Insights Today

A SERVICE OF CLEVELAND CHIROPRACTIC COLLEGE

November/December 2009, Volume 2, Issue 6

## The Great Soybean Controversy: Part II – Misleading Media Narratives

By Daniel Redwood, DC

**A**mong the challenges faced by people seeking valid nutritional information is that commercial media thrive on drama and controversy. Accurate, nondramatic information about healthy foods won't sell as many copies or garner as many website hits as hard-hitting yet misleading headlines claiming miracle cures or life-threatening toxic reactions. And while these patterns are by no means unique to media coverage of soy foods, two recent examples of misleading stories about soy provide excellent cases in point.

### Tofu Causes Dementia?

I awoke one morning earlier this year to find headlines on numerous health websites about a study on elderly Indonesians. A team of British researchers found that those who ate tofu daily had weaker memory function than those who ate it rarely. This led to alarming headlines circling the world (for example, "Eating Soy Linked to Memory Loss" and "Tofu May Raise Risk of Dementia") which generalized these findings to all tofu, and implicitly or explicitly, to all soy products. As someone who has eaten soy products for many years, my interest was piqued. I decided to explore the story in greater depth.

First, the researchers who found that Indonesian elders eating two or more servings of tofu daily had worse memories (by about 20%) also found that eating tempeh (another Indonesian soy product) *improved* memory. This was strong evidence that soybeans were not themselves the source of the memory loss. Instead, something about tofu, or perhaps something specific about the tofu eaten in Indonesia, appeared to be the issue.

Was there anything about Indonesian tofu that might be a problem? In fact, it turns out that *formaldehyde is used in Indonesia as a preservative for tofu*. Formaldehyde is a known neurotoxin. It damages brain cells.

### Most Stories Miss the Main Point

Was this information noted in the scores of articles that circled the globe? In most, it was left out completely, while in a few it appeared only several paragraphs down into the text. Interestingly, the best article among the dozens I reviewed appeared in the *Jakarta Post*, the largest newspaper in the capital of Indonesia. This isn't all that surprising because readers, reporters and editors in Jakarta were the ones whose friends and relatives stood to be most directly and personally impacted by the story.

So what did the *Jakarta Post* story include that all others left out? Read on.

The study's lead author, Professor Eef Hogervorst of the University of Loughborough, said tofu's associations with a worsening memory might be attributed to formaldehyde contents in the soy product. "The culprit may be formaldehyde but we need further study to confirm this." Formaldehyde had killed brain cells of rats in a study, she said.

Further nutrients that can reduce the risk of dementia include vitamin B12 and anti-oxidants, but Hogervorst said these were more effective if consumed as part of the diet and not as tablets.

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Active people with a higher education were less likely to develop dementia, while smokers and drinkers were in a high risk category, she said.

“Besides those factors, diseases or illnesses like diabetes mellitus, high blood pressure, high LDL-cholesterol, obesity and cardiovascular disease are among things negatively affecting the brain,” she said.

Thus, the real bottom line is that tofu consumed in Indonesia, in which formaldehyde is present, is associated with memory loss in the elderly. The lead scientist says further studies are needed to clarify this possible chain of causation. Soy products such as tempeh do not harm memory, and in fact appear to improve it.

Since there is no evidence that North American or European tofu contains formaldehyde, (apparently formaldehyde-laden tofu is tough on the outside and brittle on the inside), this study’s findings are likely irrelevant for those outside Indonesia.

You certainly wouldn’t know that if you only read the headlines.

## Taking Scare Tactics to New Level

The popular magazine, *Men’s Health*, led its June 2009 issue with a story on soy, part of their “Eat Like a Man” series. Splashed across the front cover was the headline, “Is This the Most Dangerous Food for Men?” The teaser text on the cover beckoned, “The unassuming soybean has silently infiltrated the American diet as what might just be the perfect protein source. It’s cheap and vegetarian, and could even unclog our hearts. But there may be a hidden dark side to soy, one that could undermine everything it means to be male.” Subtle, don’t you think? I am guessing that many men saw the cover, skipped the story and resolved on the spot never to eat anything containing soy.

In a classic example of taking one highly unusual case and distilling its message into a recommendation for all males on planet Earth, the author tells the truly disturbing story of a manly man in Texas who heard that soy milk was better for one’s health than cow’s milk and switched his beverage of choice accordingly.

As the months went by, his beard growth slowed, he lost hair from his arms, developed breasts, and generally displayed a wide range of feminized characteristics. His doctors couldn’t make heads or tails of it, until he went to an insightful physician who inquired about his diet and figured out that soymilk was the culprit.

## Three Quarts of Soymilk a Day

How much soymilk was the man drinking? *Three quarts a day!!* This is, needless to say, extreme. To condemn soy milk (and by extension, all soy products) because of what happened to one man who drank three quarts a day is similar to rejecting all use of vitamin B-complex tablets because someone self-prescribes thousands of milligrams (mg) a day (the recommended daily amount for most of the B-complex is under 10 mg, and the typical supplement pill contains 50 mg) and as a result develops widespread neuropathic symptoms including numbness and tingling in his arms and legs. (A patient in my practice actually did this.) It would also be similar to rejecting all uses of a particular prescription medication (e.g., an antibiotic, anti-inflammatory, etc.) because a poorly informed patient decided that if one pill at a time is good, seven pills at a time would be wonderful.

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But to frame the story from a reasoned perspective would require respect for readers' intelligence, along with a willingness to forego the sales that scare headlines bring. For now, that appears to be too much to expect from much of the popular press.

There is a solution to this problem. Since you are an intelligent reader, use your intelligence. Look more deeply at claims in the popular press, seek out both pro and con views, and don't jump to hasty conclusions. The ride may be a bit less exciting but it's far better for your health.

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