



"Is it true that putting a piece of garlic in the rectum at night can cleanse the body?"

And with that single question posed by an audience member back in 1975, my chemical focus shifted to food and nutrition. The question came after one of my first public talks on chemistry at a local library, where I had described the role chemistry plays in our daily lives, mostly using dyes, drugs, plastics and cosmetics as examples.

I was sort of taken aback by the question, but managed to stammer something like "where did you hear that?"

Back came the answer, "from Panic in the Pantry." After mentioning that my only experience with garlic had been with rubbing it on toast with some very satisfying results to the palate, I promised to check out the reference.

It wasn't hard to track down Panic in the Pantry in a local bookstore. The title had suggested some sort of attack on our food system, but this turned out not to be the case. At least not in the way I had thought. Flipping through the book I came across terms like "chemophobia," "carcinogen," "additives," "chemical-free" and "health foods." I was intrigued, especially on noting that the book had been written by Frederick Stare, a physician with a previous degree in chemistry who had founded the Department of Nutrition at Harvard's School of Public Health, and co-author Elizabeth Whelan. Within a day I had read Panic in the Pantry from cover to cover and was so captivated that I dove into the turbid waters of nutrition and food chemistry with great enthusiasm. Ever since then, I have been trying to keep my head above water, buffeted by the growing waves of information and misinformation.

Panic in the Pantry focused on what the authors believed were unrealistic worries about our food supply, vigorously attacking the popular lay notion that "if you can't pronounce it, it must be harmful." Yes, that daft message was around long before the Food Babe made it her anthem. In truth, the risks and benefits of a chemical are a consequence of its molecular structure, and are determined by appropriate studies, not by the number of syllables in its name. Stare and Whelan also challenged the "Delaney Clause," a piece of U.S. legislation stating that no additive shall be deemed safe if it has been shown to cause cancer in any species upon any type of exposure. They pointed at studies that showed very different effects of chemicals in rodents and humans and maintained that it was unrealistic to condemn additives if exposure was not taken into account. "Too much sun can cause skin cancer, but does that mean we should stay indoors all the time?" they asked.

What about the curious case of the clove of garlic in the rectum? An excellent example of a misinterpretation of information, something that I have seen much too often. In a discussion of food faddism through the ages, the authors introduced the antics of one Adolphus Hohensee, who had forged a career as a "health food" advocate after his real estate business had landed him in jail for mail fraud. The dietary guru told his audiences that the sex act should last an hour, and if they did not measure up to this level of sexual adequacy it was because they had a diet laden with additives.

Hohensee's answer to the chemical onslaught was a clove of garlic in the rectum at night, with proof of its efficacy being the scent of garlic on the breath in the morning. Obviously, the garlic had worked its way from bottom to top, cleansing everything in-between. Far from promoting this regimen, Stare and Whelan had used it to highlight the extent of nutritional quackery.

I found most of the arguments in Panic in the Pantry highly palatable, but there was a discussion of one chemical that left a somewhat bitter taste. That chemical was sugar. I had been quite taken by Pure, White and Deadly, a 1972 book by British physiologist John Yudkin, who made a compelling case linking sugar to heart disease, cavities, diabetes, obesity and possibly some cancers. Stare dismissed sugar as a culprit, implicating saturated fats as the cause of coronary disease. That to me seemed not to meet the standard of evidence that was applied to other issues in Panic in the Pantry.

As it turns out, there was a reason for Stare's dismissal of sugar as a health problem. In 1965, the Sugar Research Foundation (SRF), the industry's trade association, asked Stare to sit on its advisory board because of his expertise in the dietary causes of heart disease. The sugar industry was extremely worried about Yudkin's growing influence and decided to embark on a major program to take the focus off sugar and direct it toward fats. Stare's defence of sugar as a quick energy food that should be put in coffee or tea several times a day and calling Coca Cola a healthy between meals snack was welcomed by the industry.

As we have now learned from historical documents brought to light in a paper in the Journal of the American Medical Association, the SRF paid members of Stare's department to carry out a literature review, overseen by Stare, designed to point a finger at fats while expressing skepticism about sugar's supposed criminality. That review was published in the New England Journal of Medicine without any disclosure of sugar industry funding and successfully steered readers away from associating sugar with heart disease. While Stare, who died in 2002, was correct about many aspects of unfounded chemophobia, his reputation has now been tarnished by the undeclared payments received by his department from the sugar industry.

Sugar, as we now know, is not as innocent as Stare had claimed. But at least he never did suggest garlic in the rectum to cleanse toxins. As far as I know, neither has the Food Babe.