

The Bitter Truth About a Sweetener Scare

By Elizabeth Whelan

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The recent death of Michael Sveda, the chemist who discovered cyclamates, an artificial sweetener, and worked on other industrial chemicals including DDT, brought me back to the pivotal day in my professional career.

On Oct. 18, 1969, holding a can of Tab, I watched Health, Education and Welfare Secretary Robert Finch tell the nation that because the sweetener posed a risk of cancer it would be banned. Just a few days before, I had seen a Food and Drug Administration scientist on television holding up deformed, sickly chicks that had been injected with cyclamates. At the time I was pursuing a doctoral degree in public health and knew that no sweeteners or other food additives had ever been cited as a possible factor in cancer causation. Why all this attention for a phantom risk? Why were we banning safe, useful products under the guise of cancer prevention? I have pursued an answer to those questions ever since.

Sveda was among a little-appreciated group of scientists who dramatically improved the world's quality of life. Sadly, in his lifetime he saw his contributions vilified and rejected as a result of antiscientific, technophobic witch hunts that caused chemicals to be banned at the drop of a rat.

It was serendipity that led to Sveda's discovery of the sweetener. In 1937, while doing laboratory research, he brushed some loose tobacco shreds from his lips and inadvertently tasted one of the chemicals. "It was sweet enough to arouse my curiosity," he later said. That taste prompted him to do more research and seek a patent. Cyclamates were introduced in the 1950s, primarily as a drug for the obese, but were soon reclassified as a food additive. Between 1963 and 1970 national consumption of cyclamates--in soft drinks, canned fruits, candy, salad dressings and other foods--soared to 21 million pounds annually from 5 million.

All was well until October 1969, when FDA scientist Jacqueline Verrett appeared on the "NBC Nightly News" with her cyclamate-injected, malformed chicks. (She did not mention that injections of salt, water or even air would probably have had the same effect.) A few days later the manufacturer of cyclamates, Abbott Laboratories, released a study showing that eight out of 240 rats fed a mixture of saccharin and cyclamates--at levels equivalent to humans ingesting 350 cans of diet soda per day--developed bladder tumors. Finch announced the ban shortly thereafter.

Many scientists immediately criticized Finch's decision. The pathologist who examined the tumors, Stephen Sternberg, now at Memorial Sloan-Kettering Cancer Center in New York, pointed out that there were two chemicals involved. Why were cyclamates singled out? An editorial in the international medical journal *Lancet* noted that "never have so many pathologists

been summoned to opine on so few lesions from so humble a species as the laboratory rat." The journal *Nature* warned that "it would be all too easy for public apprehension to be raised to the pitch where a fever of vegetarian faddism drives everything but mothers' milk from the market," adding in another editorial that the evidence against cyclamates was "about as solid as candy floss."

In subsequent years, dozens of other studies reported no cancer risk in rats, mice, dogs, hamsters and monkeys. By the mid-1980s professional health organizations from around the world agreed with the National Academy of Sciences that "the totality of evidence from studies in animals does not indicate that cyclamate (or its metabolite) is carcinogenic." More than 50 countries, including Canada, have now approved or reapproved the use of the sweetener. Abbott Laboratories, submitting evidence that cyclamates were the most studied component of the human diet, asked the FDA in 1974 to reconsider its decision, but its appeal was denied. A new request for reapproval filed in 1985 is still pending.

Sveda's obituaries said he was not bitter about the banning of cyclamates, but in fact he was. He claimed that the original FDA decision was based on a combination of bad science and "sugar politics" (he thought the sugar industry was behind the health charges against cyclamates). He accused the FDA of a "massive coverup of elemental blunders," and believed that the American public was due an apology for withholding an alternative to sugar.

Sveda also worked on DDT, which when introduced during World War II became the single most important pesticide responsible for maintaining health and garnered its inventor, Paul Muller, a Nobel Prize in Medicine. In 1970 the National Academy of Sciences declared that "in a little more than two decades, DDT has prevented 500 million human deaths due to malaria." But this cause for celebration was forgotten when another 1969 study found tumors in mice fed DDT. Soon environmentalists lobbied for DDT's ban. And in 1972, ignoring advice from experts, Environmental Protection Agency administrator William Ruckelshaus banned it for virtually all uses.

As Sveda discovered, self-appointed consumer activists are capable of bringing great pressure on regulatory agencies to "protect" health by purging the environment of hypothetical risks. Those who rationalize the bans speak of the "precautionary" principle, banning things "just in case" and arguing that "there are alternatives" and we can "live without it."

These arguments are naive at best and sinister and manipulative at worst. DDT saved lives. Cyclamates offered choices. As risk hyperbolists succeed in chipping away at our country's technological arsenal--pesticides, food additives, pharmaceuticals, industrial chemicals--they threaten our enviable high standard of living while offering no health benefits in return.

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