

Nonagenarian researcher petitions FDA to ban trans fats

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U. of I. emeritus veterinary biosciences professor Fred Kummerow, who is 94, has spent nearly six decades studying lipid biochemistry, and has petitioned the FDA for a ban on trans fats in food. Credit: Photo by L. Brian Stauffer, U. of I. News Bureau.

"I request to ban trans fats from the American diet." Thus begins a 3,000-word petition to the Food and Drug Administration, the work of a man on a dogged, decades-old crusade to eradicate trans fats from food.

Fred Kummerow, a 94-year-old University of Illinois veterinary biosciences professor emeritus who still conducts research on the health effects of trans fats in the diet, filed the [petition](#) with the FDA last month. The petition is now posted on the FDA Web site, and public comments are invited. (See below for information on viewing the petition and making a comment.)

"Everybody should read my petition because it will scare the hell out of them," Kummerow said.

Trans fats contribute to the two main causes of [heart disease](#): [blood clots](#) in the coronary arteries that can lead to sudden death from a heart attack, and atherosclerosis, the buildup of plaque in the arteries that interferes with blood flow, he said. Trans fats are also known to increase low-density lipoproteins (LDLs) in the blood and to spur inflammation, both of which contribute to heart disease.

Trans fats displace the essential fatty acids linoleic acid (omega-6) and linolenic acid (omega-3), which the body needs for a variety of functions. Kummerow's own research, published last month in the journal *Atherosclerosis*, found that trans fats also interfere with the function of a key enzyme essential to blood flow regulation.

An earlier study from Kummerow's lab found that pregnant sows fed a diet that included trans fats passed significant quantities of the trans fats to their offspring during nursing. The piglets' plasma levels of trans fats increased from 5 percent three days after birth to 15.3 percent at 6 weeks of age.

Kummerow believes the FDA's requirement (begun in 2006) that trans fats be included on food labels is inadequate and misleading. Anything less than one-half gram of trans fats per serving can be listed as zero grams. This means that people are getting the mistaken impression that their food is trans fat-free, he said.

Although Kummerow began publishing on trans fats in 1957, his efforts against trans fats in food began in earnest in 1968, when he urged the American Heart Association to ask the Institute of Shortening and Edible Oils to have its members decrease the amount of trans fatty acids in shortenings and margarines, replacing them with essential fatty acids.

"Even then, there was strong evidence that trans fatty acids increased plasma cholesterol levels," Kummerow said.

The food oil industry reluctantly agreed to lower the trans fatty acid content and increase essential [fatty acids](#) in its products. That change coincided with a dramatic decline in coronary heart disease mortality after 1968. Kummerow believes the decline in the dietary intake of trans fats and the increase in linoleic acid could explain at least part of the reduction in mortality due to heart disease.

To reinforce his message, Kummerow keeps in his lab a sample of human arteries that are clogged with atherosclerotic plaque. Another unfortunate characteristic of trans fats is that they cause cells to increase calcium in the blood, which builds up in and narrows the arteries, the main symptom of atherosclerosis.

Atherosclerosis makes the arteries "look like old scrub boards," Kummerow said. "They look corrugated. This corrugation builds up to the point where it will stop blood flow."

Kummerow's petition was filed Aug. 7, 2009. The FDA has 180 days to respond.

"According to American Heart Association data, nearly 2,400 Americans die of [heart disease](#) each day," Kummerow said. "This statistic shows the importance of a quick response."

More information:

To view and comment on the petition, visit www.regulations.gov. Under "Enter Keyword or ID," type the petition docket number: "2009-P-0382" and click on the "Search" button. Once you get the results, scroll down the right-hand column and click on "Submit a Comment." Enter your

information on the left and write your comment in the box on the right.

The full petition is also available at [news.illinois.edu/WebsandThumb ... red/FDA-petition.pdf](https://news.illinois.edu/WebsandThumb/red/FDA-petition.pdf)

Source: University of Illinois at Urbana-Champaign ([news](#) : [web](#))

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