

How safe is tuna?

Federal regulators and the tuna industry fail to warn consumers about the true health hazards of an American favorite



KRT photo by Julie Fletcher/Orlando Sentinel

Benny Fray helps carry the day's tuna catch at Port Canaveral in Florida. U.S. regulators say canned light tuna is low in mercury, but industry officials concede that millions of cans contain tuna from a species that often has higher mercury levels.

Last of three parts.

By Sam Roe and Michael Hawthorne
Tribune staff reporters

In the fall of 1970, a chemistry professor in upstate New York reached into his pantry, grabbed a can of tuna and, on a hunch, tested it for mercury.

What he found stunned him: levels of the toxic metal far above U.S. safety limits. Embarrassed regulators immediately did their own testing, which confirmed the professor's results.

Tainted tuna soon captured national headlines and became a cultural reference point, from the butt of Johnny Carson jokes to the lyrics of a Marvin Gaye hit: "Fish full of mercury/Oh mercy, mercy me."

Government officials characterized the high mercury levels as an anomaly. After recalling 12 million cans, they pronounced tuna safe to eat again.

But three decades later, canned tuna still contains mercury—sometimes in amounts as high as those found by the

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professor.

A Tribune investigation shows the tuna industry has failed to adequately warn consumers about the risks of eating canned tuna, while federal regulators have been reluctant to include the fish in their mercury advisories—at times amid heavy lobbying by industry.

When the Food and Drug Administration updated its mercury warning last year, it arbitrarily classified canned light tuna as low in mercury to "keep market share at a reasonable level," one agency official told an FDA advisory panel, according to transcripts of the meeting.

The government has recommended that children and pregnant women eat



Confused about mercury content in canned tuna? Is there a 'safe' tuna on the store shelves? We break down the different kinds of canned tuna on PAGE 12

TRIBUNE INVESTIGATION MERCURY MENACE

Canned tuna holds hidden risks

FISH

CONTINUED FROM PAGE 1

canned light tuna because it generally contains less mercury than canned albacore does. Yet industry officials acknowledged in interviews that tens of millions of cans of light tuna sold each year are made with a species that on average contains just as much mercury as albacore.

Some of these cans carry special labels marketing them as a "gourmet" product, but others are sold as regular light tuna. That means shoppers have no way of knowing whether the can of light tuna they buy at the store tonight is potentially risky.

Making choices about canned tuna based on mercury risk is complicated because not all tuna species contain the same amount of the toxic metal, which can harm children's developing brains and cause neurological problems in adults.

Albacore tuna is a big fish and therefore tends to have higher mercury levels. The government has warned young children and pregnant women to limit how much albacore they eat.

There are no warnings for light tuna, because most of it is made with skipjack, a relatively small species with lower levels of mercury.

But some canned light tuna comes from another species: yellowfin. While the mercury content of yellowfin varies, industry testing found the average to be equal to that of albacore.

About 15 percent of canned light tuna is made with yellowfin, the industry acknowledged. Each year, roughly 180 million cans of yellowfin are sold in the U.S.

All of these cans are sold as "light tuna," and only about half are labeled as "yellowfin," "gourmet" or other wording that might signal to shoppers that the fish inside is likely high in mercury.

The other half, or about 90 million cans sold each year, have labels identical to those on other cans of light tuna. These cans contain three times more mercury on average than cans containing skipjack, the industry said.

Industry officials acknowledged their boats catch more yellowfin tuna than they can sell as a gourmet product. So instead of discarding the fish, they sell it as regular light tuna.

A top official with the Food and Drug Administration, which is responsible for the safety of commercial seafood, said in an interview that the agency did not know the industry is putting high-mercury yellowfin into a product the government has explicitly recommended to groups at risk for mercury exposure.

"We do not have information on what is put in canned light tuna," said David Acheson, the FDA's chief medical officer.

When the FDA tests light tuna for mercury, he said, it treats each can as if it were the same. "If there are some of those tuna that have higher levels, then that will come out through the testing by means of an average," Acheson said.

Agency officials said they stand behind the FDA's position that canned light tuna is a good choice for at-risk groups concerned about mercury exposure. The average mercury levels in canned light tuna are low, they said.

They also denied giving special treatment to industry, saying public health decisions are based on the best scientific evidence available at the time.

Tuna industry officials say their lobby is small and wields little influence in Washington. They said the mercury risks are overblown and there is no credible evidence that anyone has been harmed by eating tuna.

"There are no Americans at risk," said John Stiker, who until recently was an executive vice president of tuna producer Bumble Bee Seafoods and a leading industry spokesman.

Stiker and others in the fishing industry point to a study conducted in the Seychelles Islands in the Indian Ocean that found no significant harm to children whose mothers ate large amounts of fish while pregnant.

But the National Academy of Sciences, the nation's leading scientific body, concluded in 2000 that a larger body of evidence shows mercury does cause harm and that exposure limits should be based on that research.

Tuna industry officials remain unconvinced, stressing that their product is one of the healthiest foods children and pregnant women can eat.

Medical experts say fish is a good low-fat source of proteins and omega-3 fatty acids, which are thought to help prevent heart disease. The industry points to these qualities in touting tuna as a healthy meal.

At risk consumers do not need to steer clear of gourmet canned tuna or canned light tuna in general, Stiker said. Though he thought the government's consumer warnings on mercury in fish were too strict, he said the industry believes at risk consumers should heed the advice and eat no more than 13 ounces of fish in a week.

David Burney, executive director of the U.S. Tuna Foundation, an industry lobbying group, said he feared consumers will overreact to the mercury issue.

"That would be the greatest calamity to public health in this country," he said, "if we literally reached a point where everybody said, 'My God, I'm so worried about eating fish, I'm just not going to eat it anymore.'"

35 YEARS AGO, FDA SAID PROBLEM FIXED

When Bruce McDuffie tested that can of tuna 35 years ago, the results were liberating for beyond his campus laboratory.

"It was the shot heard around the world," recalled McDuffie, 84.

Then a chemistry professor at the State University of New York in Binghamton, McDuffie had been testing fish for pollutants in a creek near campus. One day, an undergraduate student remarked, "The only fish I care about is tuna fish."

The professor wondered: Is it possible canned tuna is polluted?

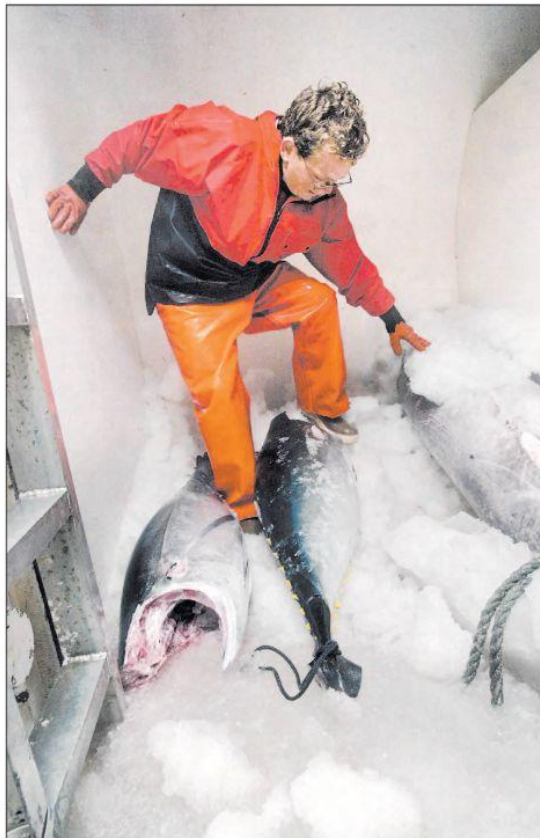
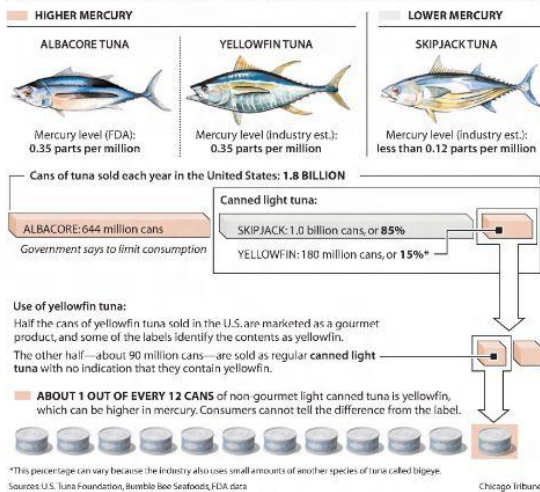
He found a can of tuna in his pantry and ran the tests. The levels were 0.75 parts of mercury per million parts of fish tissue—higher than the FDA's limit at the time, 0.5 parts per million.

The professor called the local newspaper, and the story went nationwide.

The FDA immediately started its own testing.

Breaking down canned tuna

The federal mercury warning recommends that young children and pregnant women eat canned light tuna as opposed to many other fish. But what the government and industry don't tell consumers is that some canned light tuna is made solely with a tuna species called yellowfin, which can be high in mercury.



Josh Anderson helps unload tuna from a boat at Florida's Port Canaveral. Tuna industry officials emphasize the health benefits of eating fish and say the risks of mercury exposure are overblown.

finding numerous samples of canned tuna over the limit. Within weeks, the agency recalled millions of cans.

Such bold action came at a time when both regulators and the American public were embracing environmental issues. The first Earth Day had recently been held, and the government had just created the Environmental Protection Agency. A year earlier, in 1969, the FDA for the first time had set limits for mercury in seafood.

FDA officials said they were unsure why mercury levels in the canned tuna they tested were so high. The prevailing theory—one now widely accepted—was that mercury was everywhere in the oceans and that it accumulated up the food chain.

That meant large predator fish, such as tuna, would contain high amounts of mercury. Because little could be done immediately to rid the oceans of mercury pollution, the toxic metal would continue to taint large species year after year.

Despite this knowledge, the FDA characterized to the public that the mercury it found in canned tuna was an unusual, one-time incident. After the agency recalled 12 million cans, it announced that Americans could safely eat tuna

again.

"We've audited the entire tuna supply in the United States," FDA Commissioner Charles Edwards told the media in 1971, "and, for all practical purposes, got the contaminated stuff off the shelves."

For years afterward, the FDA tested few cans of tuna, and the issue dropped from public view. Even McDuffie, the professor who gained brief fame, moved on to other experiments.

Prompted by the National Academy of Sciences report on mercury's hazards, the FDA decided in 2000 to issue a new consumer warning. Early drafts indicated some FDA officials thought the public should be cautioned about canned tuna.

The drafts were tested on consumer focus groups, and during one session the parent of a 15-month-old child asked about the risks of canned tuna. Alan Levy, chief of the FDA's consumer studies branch, answered: "It would be, you know, prudent to cut back if he's eating more than a can-and-a-half a week," according to transcripts of the meeting.

Addressing another focus group, Levy acknowledged that the agency's mercury limit in fish—since relaxed from 0.5 to 1 part per million—was not low enough to protect fetuses.

But a stricter standard, he said, would "put the availability of certain kinds of fish in question," according to the transcripts. "We would lose some fish."

"Like king mackerel, shark, and swordfish?" the moderator asked.

"Well, those in particular," he responded, "but also tuna."

One group firmly opposed any FDA warning on tuna to the U.S. fishing industry.

Industry leaders met privately with FDA officials five times in late 2000 when the agency was crafting its mercury warning. FDA records show:

During one meeting, the U.S. Tuna Foundation argued that if consumers were warned about tuna, the market for canned tuna would shrink about 20 percent, the U.S. tuna fleet would default on loans, and the seafood industry could face numerous class action lawsuits "at substantial cost and adverse publicity," a copy of the industry presentation shows.

In the end, the FDA rewrote the draft and released the final version of the warning to the public in January 2001. It recommended that at-risk groups not eat shark, swordfish, king mackerel and tilefish.

Tuna was not mentioned.

A month later, the FDA issued a statement explaining the warning. It said canned tuna was not included because consumers did not eat enough to cause a significant risk.

Yet the federal government's own data showed canned tuna was then the nation's No. 1 consumed seafood.

The FDA said material from the National Food Processors Association, an industry lobbying group, suggested that "consumption is not as great as anecdotal observations would indicate" and that the vast majority of people consumed less than 7 ounces a week.

The FDA told the Tribune it did not favor industry in its decisions, noting the agency also had met privately with consumer and health groups.

But Vas Aposhian, a University of Arizona toxicologist who served on an FDA advisory panel at the time, thought the agency had caved to industry pressure.

"What's more important: the health of the tuna industry or the mental health of American children?" he recalled thinking.

When the Environmental Working Group, a non-profit advocacy organization, released transcripts of the FDA focus group sessions showing the agency's reluctance to warn consumers about canned tuna, an embarrassed FDA said it would re-evaluate its advice.

WARNING CATEGORIES SET 'ARBITRARILY'

The FDA spent more than two years reviewing its mercury warning. Finally, in March 2004, it released a joint advisory with the U.S. Environmental Protection Agency, in part to coordinate federal advice.

But the revised warning misled consumers in fundamental ways.

FDA officials classified mercury levels in fish as low, medium or high. Consumers were told that canned light tuna was low in mercury and that high-risk groups should eat this fish as opposed to many other kinds.

But the FDA classified canned light tuna as low in mercury not because it was especially low, but "to keep market share at a reasonable level," FDA official Clark Carrievon had told the advisory panel just three months before the warning's release, according to transcripts.

Acheson, the FDA's chief medical officer, told the same panel that all of the categories—low, medium and high—were arbitrarily chosen to put light tuna in the low category.

That decision had implications far beyond tuna. Once the FDA defined canned light tuna as low, all other kinds of seafood with comparable levels of mercury, such as cod, also had to be listed as low.

When asked in an interview why officials arbitrarily chose the low mercury level instead of employing scientific calculations, Acheson said: "It was a perfectly appropriate scientific decision to choose that value compared to any other value. You could certainly move it up, you could move it down, and you might get a different result."

But he said industry interests did not affect the decision. "Our mission here at FDA is to protect public health," he said. "It has nothing to do with safeguarding market shares."

The 2004 warning did caution consumers about eating canned albacore tuna, putting it in the medium category for mercury. But even if consumers followed the government's suggested limits on albacore, they would absorb too much mercury, according to calculations devised by the EPA and recognized by the FDA.

The warning says pregnant women, nursing mothers, women of childbearing age and young children can safely eat one 6-ounce can of albacore weekly plus six ounces of another fish. But a 161-pound woman—the average weight of a U.S. female of childbearing age—would exceed the EPA's exposure limit just by eating the can of tuna.

Aposhian was so upset that the government was not tougher on canned tuna that he quit the FDA advisory panel.

"Nobody asked what this is doing to children," he recalled. "Nobody seemed really concerned about what this would do to pregnant women."

NOT ALL LIGHT TUNA LOW IN MERCURY

While many consumers might be aware that mercury levels can be high in albacore tuna, what hasn't been fully disclosed is the hidden mercury risk in canned light tuna.

Government and industry officials repeatedly have stated that canned light tuna is a healthy, low-mercury fish. But they do not tell consumers that about 15 percent of all canned light tuna sold is made with yellowfin, a high-mercury tuna species.

Industry officials said these cans, often marketed as a gourmet product but not always labeled as such, contain about 0.35 parts per million

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CONTINUED FROM PREVIOUS PAGE

lion of mercury—the same as albacore canned tuna, for which there is an FDA warning. Mercury levels in yellowfin are on average about three times higher than those in canned light tuna made with skipjack.

Industry officials say each of the three leading U.S. canned tuna makers—StarKist, Bumble Bee and Chicken of the Sea—sells gourmet canned light tuna. StarKist calls its product “Gourmet’s Choice,” Chicken of the Sea markets a “Tonno” product under the Genova label, and Bumble Bee offers a “Tonno in olive oil” variety.

When asked if there is more mercury in gourmet light tuna versus the regular cans, Stiker, the former Bumble Bee executive, said: “Most definitely. It’s a bigger fish.”

StarKist and Chicken of the Sea declined to comment, forwarding questions to the Tuna Foundation.

Burney, the foundation’s executive director, said that in the 1960s canned light tuna was primarily made with yellowfin. When the industry moved to new fishing grounds in the 1970s, boats caught fewer yellowfin and more low-mercury skipjack. So canned light tuna became mainly a skipjack product, with the yellowfin moved into a gourmet line.

The Tribune tested 18 cans of albacore and 18 cans of light tuna for mercury. After learning that yellowfin is often used in canned light, the newspaper analyzed 18 cans of gourmet tuna in a second round of testing.

The gourmet cans showed low levels of mercury: 0.06 parts per million—even lower than regular canned light and far lower than the average reported by the tuna industry.

Stiker said he was surprised by the findings. He speculated that Chicago had received shipments of gourmet cans made with small, juvenile yellowfin that would be low in mercury. Yellowfin range from 10 to 200 pounds, he said, “so you can certainly get some yellowfin that are low in mercury.”

When the newspaper tested tuna steak made

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LIVE CHAT: Ask the reporters questions, 1 p.m. Tuesday.

with yellowfin, it averaged 0.35. Canned light tuna averaged 0.11 parts per million and albacore 0.30.

Mercury content varied widely within most species tested. One can of light tuna had 0.31 parts per million of the toxic metal—in the range of albacore and other high-mercury fish. One can of StarKist had 10 times more mercury than another can of exactly the same kind of tuna.

“That’s one of the reasons pregnant women have to be really careful,” said Joanna Burger, a Rutgers University scientist whose staff conducted the mercury analysis for the Tribune. “If you happen to get a couple or three cans in the high range at a critical period when you are pregnant, it would not be good.”

Among those calling for improved warnings about mercury in tuna is the American Medical Association, which adopted a policy last year that physicians should help make their patients more aware of the potential risks.

The group also urged the FDA to consider “requiring that fish consumption advisories and results related to mercury testing be posted where fish, including canned tuna, are sold.”

Last year, the state of California sued the nation’s big three tuna producers, demanding

they place warnings on cans of albacore and light tuna or post signs in grocery aisles to inform state residents that the products contain mercury. The state alleges the firms are violating a state law requiring business to warn people before exposing them to carcinogens or reproductive toxins. The case is continuing.

Industry officials are fighting the suit, and they have an unlikely ally: the FDA. The agency said the federal warning issued last year—the same one that misleads consumers about the levels of mercury in fish—is the best way to advise the public.

In an August letter to California’s attorney general, then-FDA Commissioner Lester Crawford wrote: “California should not interfere with FDA’s carefully considered approach of advising consumers of both the benefits and possible risks of eating seafood.”

The FDA, Crawford stated, has studied the mercury problem for years, has compiled “substantial data” and has developed “significant expertise” on educating consumers.

The FDA, he concluded, is “uniquely qualified” to protect the public from mercury in seafood.

sroe@tribune.com
mhawthorne@tribune.com