



Is there lead in your chocolate?

Nadia Kounang | March 25, 2016

(CNN) It's not something that will be listed among the ingredients, but chocolate contains some lead. Manufacturers say it's trace amounts, and it makes its way into chocolate as a naturally occurring element that is absorbed by the cacao plant.

As You Sow, a California-based consumer advocacy group, believes that some chocolate has more lead than necessary. [An updated survey released by the group this week](#) found levels of lead in chocolate at nine times the daily amount that California considers safe to avoid reproductive harm. In addition, the group also found cadmium up to seven times the state's maximum daily exposure.



Manufacturers say there are only trace amounts of lead in chocolate.

The group had multiple samples of 50 different cocoa products analyzed by an independent lab and found more than half contained lead and cadmium levels above the state's limits, which are more strict than federal guidelines. As You Sow won't disclose the exact amounts of metals found in the products, in hopes of working directly with the manufacturers to help target sources of these metals, it said.

"Our goal is to work with chocolate manufacturers to find ways to avoid these metals in their products," said Danielle Fugere, president of As You Sow.

California laws are more strict

Lead can be found in foods, air, soil, dust and water. According to the [Center for Disease Control and Prevention](#), there is no safe level of lead for children. It can impair IQ and affect a child's ability to pay attention. When children ingest lead, they [absorb about 50%](#) of it into their bloodstream. Eating low levels of cadmium, over time, can damage the kidneys. The Environmental Protection Agency [calls the metal a probable human carcinogen](#).

Under [federal guidelines](#), small children shouldn't have more than 6 micrograms of lead a day from candy. For adults, the limit is higher. The U.S. Food and Drug Administration doesn't have guidelines for [cadmium in food](#). In all cases, the guidelines are just that -- not enforceable regulations.

When the initial survey on chocolate was released, the FDA said in a statement, "FDA monitors lead levels in the U.S. food supply and has established guidance levels for lead in some foods, such as candy."

California's limits on toxic chemicals such as lead and cadmium are the strictest in the nation, tougher than federal FDA's guidelines. California limits lead exposure to just 5 micrograms a day for everyone, from all sources. While the FDA's guidelines are set to a maximum level of where there are no observable effects, the California standard takes it further, dividing that limit by 1,000 to ensure no possible harm.

When it comes specifically to chocolate, FDA regulations say no more than .1 parts per million of lead in a piece of chocolate. If you broke up a candy bar into a million pieces, just one-tenth of one those million pieces could be lead.

For that candy bar to meet California standards, you would start out with much smaller candy bar -- one it equal to 5 grams, rather than the average 50 grams -- and break it up the same way.

Where consumers believe federal policies are failing, they turn to state laws -- which can set stricter limits -- to add protection. Under [California's Safe Drinking Water and Toxic Enforcement Act](#), commonly known as Proposition 65, products must be labeled if they contain chemicals at levels that can pose a significant cancer risk or cause birth or reproductive harm.

"Proposition 65 has been a thorn in the side of the food industry for decades," said Bruce Silverglade, an attorney who has represented the food industry and has served as legal director for the Center for Science in the Public Interest, a consumer advocacy group. "It's common practice for advocacy groups to take advantage of state laws that set stricter standards for safety and labeling, hoping to eventually set an example for action by the federal government."

Chocolate makers respond

CNN reached out to the manufacturers tested, and several replied by the time of publication. All companies said that the products were safe and that the metals were from naturally occurring sources.

- **Chocolove:** "The types and amounts of elements in a food product can come from soil and the natural growing of the plant or from food processing. There is a significant distinction between natural occurring components of the soil and the plant being in food, versus contamination added by incorrect food contact surfaces adding elements to the food."
- **Earth Circle Foods:** "We're involved in discussions with As You Sow, we dispute these claims. We have a testing program in place and we believe that this product is safe."
- **Hershey Company:** "People have been eating cocoa and chocolate safely for centuries. Consumers can rest assured that our products are safe, and that our industry adheres to all government regulations."
- **Lake Champlain Chocolates:** "Per Proposition 65, the labeling requirement does NOT apply to low levels of substances found in foods that are naturally occurring. ...There is no process at our factory that contributes to lead or cadmium levels in chocolate."
- **Theo Chocolate:** "We are evaluating the issues raised by this claim. ... We are fully confident in both the quality and safety of Theo Chocolate products ... we take robust measures to ensure the safety of our products."
- **See's Candies:** "See's regularly evaluates its products to assure compliance with all state and federal guidelines."

A response from the National Confectioners Association, a trade group representing the confectionery industry, said "Some minerals -- like cadmium and lead -- are found naturally in many foods, including seafood, peanuts, potatoes, grains, leafy vegetables and -- sometimes -- cocoa beans. Cocoa-based foods are consumed in small amounts and are not a major source of these minerals in the diet."

Eleanne Van Vliet, a consultant on testing for As You Sow, said that lead and cadmium can enter the products a variety of ways.

"It depends on the growing, processing, manufacturing, shipping. So there are a few possible sources, from our research," she said. "We would really like to have the chocolate industry come together and determine the sources."

Van Vliet said it wasn't known whether the metal sources were natural or from manufacturing. Growing processes can include using phosphate fertilizers and pesticides, which can contain high levels of both of these metals. A [study from 2005](#) found that most lead contamination in chocolate came from shipping and manufacturing, after the beans were harvested.

Power of the people

However, would taking these levels out affect our health?

"It's good to get it out of there. It's a preventative approach. You certainly don't want it in your food supply -- but I don't know how much of a source it is -- but it would be better to have this stuff out," said [Marion Nestle](#), author of "Food Politics," who studies the politics of what we eat.

She says consumer groups and advocates like As You Sow have become more powerful and political with the help of social media. Last March, As You Sow was active in helping remove titanium dioxide nanoparticles from [Dunkin Donuts'](#) powdered sugar. Recently, Mars, the maker of M&M's and Snickers, announced that it will begin to include genetically modified food labeling on its products in order to comply with a 2014 Vermont law that requires food with genetically modified products to be labeled.

But the health effects of these shifts are not known.

"Consumer groups are becoming more powerful -- using politics to promote advocacy, whether it is scientifically justified, or even if the science isn't clear," Nestle said.

"Labeling changes no longer need to wait for FDA responses to lengthy consumer group petitions, but can occur at lightning speed as a result of social media campaigns that go viral. Many of those campaigns are based more on political science than sound science. It's a confusing minefield for both manufacturers and the public," attorney Silverglade said.

CNN's Adrian Rabin contributed to this report.