

Your Chocolate, Your Questions: Lead & Cadmium

News coverage of lead and cadmium in chocolate and cocoa products has swirled for years and has resulted in confusion among consumers, regulators and lawmakers. Fortunately, the reality is not as extreme as it is made out to be in the media. Here's a quick snapshot of what you need to know about lead and cadmium content in chocolate and other foods.

Why is there lead in chocolate and cocoa?

Lead from many sources, including soil, dust and deposition from power plants around the world, can adhere to the outer shells of cocoa beans after they are extracted from the pods. When they are harvested, cocoa beans are naturally covered with a sticky cacao pulp which allows lead to cling to the beans while they are being fermented and dried in the open in the tropical countries where cocoa is grown. The shells are removed at the beginning of the chocolate making process.¹

Why is there cadmium in chocolate and cocoa?

Cadmium can be found in chocolate and cocoa due to its presence in tropical soils where crops are cultivated and harvested. Cocoa trees absorb cadmium from soils via their roots and deposit it in the nibs (center) of cocoa beans.²

By eating a diverse diet, you are likely consuming some amount of lead, in many cases more than you would find in chocolate. Some food items with the highest content of lead include³:



Meat



Fish



Vegetables

A 2019 study found that people in the U.S. received the highest amounts of cadmium from the following food groups⁴:



Cereals and breads



Leafy vegetables



Potatoes

A 2022 Consumer Reports article said:

“Treat chocolate as a treat. A single ounce of even one of the chocolates with the highest cadmium and lead levels in CR’s tests is unlikely to cause any immediate harm.”⁵

People in the U.S. enjoy chocolate and candy

2-3 times per week,

averaging about

40 calories per day

and just one teaspoon of added sugar per day.⁶

Chocolate and cocoa are safe to eat and can be enjoyed as treats as they have been for centuries. Food safety and product quality remain the highest priority for chocolate companies around the world that are dedicated to being transparent and socially responsible.

¹ <https://candyusa.com/news/research-reveals-ways-lead-and-cadmium-in-chocolate-may-be-reduced/>

² <https://candyusa.com/news/research-reveals-ways-lead-and-cadmium-in-chocolate-may-be-reduced/>

³ <https://pubmed.ncbi.nlm.nih.gov/24645773/>

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6356330/>

⁵ <https://www.consumerreports.org/health/food-safety/lead-and-cadmium-in-dark-chocolate-a8480295550/>

⁶ National Health and Nutrition Survey (NHANES)