

Yes, There's Lead in Protein Powder. Here's What You Need to Know

8 MIN READ

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A new report shows lead in most protein powders, but should you worry?

On October 14th, Consumer Reports released a **report** showing that 70% of tested protein powders contain elevated levels of lead. The headlines are having a field day with this report. I'm sure you've read some: "Most protein powders have lead." Along with the pushback: "CR used a ridiculous threshold." So, which side is right? The truth lies somewhere in between.

We'll start by looking at the details of the report, then dig into what you should do about it.

How Much Lead is in Protein Powder According to The Consumer Reports Study?

Consumer Reports tested 23 different protein powders from brands like Vega, Huel, Muscle Milk, and Optimum Nutrition. They report that "nearly all the plant-based products CR tested had elevated lead levels." When describing their findings, they describe the protein powders as containing "*many times CR's level of concern for lead*."

But it's important to know that that level is based on **California Proposition 65**, which identifies 0.5 micrograms of lead as the maximum allowable dose level. This,

however, is a legal **“safe harbor” regulatory level**, not a point at which science says harm begins.

Now, the **FDA says**, “there is no known safe level of exposure to lead,” and goes on to state that, “it is not possible to completely prevent lead from entering the food supply.” They list action levels of lead exposure for children and pregnant mothers, but not for adults. The European Union also doesn’t define a “safe” amount of lead, but sets maximum allowable levels for lead in different foods.

The **EU’s limits** (100–300 ppb for most foods) are about 10× higher than the **FDA’s proposed “action levels”** (10 ppb for fruits), which reflect a child-protective goal, not a universal “safe level” for everyone.

These limits are intended to keep population exposures “as low as reasonably achievable,” recognizing that trace lead is naturally present in soil and water and, therefore, in nearly all foods we eat. The average American is exposed to about 5.3 mcg of lead daily.

Lead Amounts in Protein Powders vs Foods

Protein Powders:

- ■ **Ensure Plant-Based Protein Shake, Chocolate** = 0.65 mcg per serving (2 ppb)
- ■ **Garden of Life Sport Organic Plant-Based Protein, Vanilla** = 2.76 mcg (61.4 ppb)
- ■ **Huel Black Edition, Chocolate** = 6.31 mcg (70.2 ppb)
- ■ **Momentous Whey Protein Isolate, Vanilla Flavor** = 0.15 mcg (5.6 ppb)
- ■ **Muscle Milk Protein Shake, Chocolate** = 0.63 mcg (1.9 ppb)
- ■ **Naked Nutrition Vegan Mass Gainer** = 7.70mcg (24 ppb)
- ■ **Orgain Organic Protein, Vanilla Bean** = 0.70 mcg per serving (15.3 ppb)

Food Sources:

- ■ **Tomato** (one medium, 150g): **3 mcg** (21 ppb)
- ■ **Apple** (150 g) = **1.5 mcg** (15 ppb)
- ■ **Strawberries** (8–10 pieces, 100g): **1.0–1.5 mcg** (15 ppb)
- ■ **Chocolate** (40 g) = **2–8 mcg** (10-75 ppb), depending on source (dark chocolate is higher)

The point? Soil-derived heavy metals show up in plant-based foods. You just can't completely avoid it.

How to Be Discerning with Supplements/Protein Powders

If you want to supplement with powders because you can't hit your protein goals without them, here's how to do that safely. Because supplements are largely unregulated in the United States, companies can make whatever claims they want, even if they're false. In the Consumer Reports study, all of the protein powders met or exceeded their label claim of protein, offering between 20 to 60 grams of protein per serving.

But studies have repeatedly shown that supplements often contain less of the active ingredient than the label claims, sometimes not containing any at all. Other supplements have been found to contain harmful chemicals, prescription drugs, and even steroids. There's a reason the supplement world is often referred to as the Wild West.

Here's how to find safe products:

- **Look for NSF certification:** This is an independent testing standard and product certification program strictly for dietary supplements and functional foods. You can search for **NSF-certified products** on their website.
- ■ **Check for USP verification:** Universally recognized as the trusted standard for verifying the quality of dietary supplements, dietary ingredients, and active pharmaceutical ingredients.
- ■ **Choose products with lot-level Certificates of Analysis (COAs):** Look for brands that publish COAs showing heavy-metal values.
- ■ **Use independent third-party testing sites:** **ConsumerLab** and **Clean Label Project** publish details about many popular products.

How Much Protein Do You Need?

There's little scientific consensus on how much protein you need. You can find recommendations from 0.36 grams to one gram of protein per pound of body weight. For a 150-lb. person, that means anywhere between 54 and 150 grams *could* be ideal. Getting **0.6 to 0.8 grams per pound** is a solid goal for many people.

The truth is that most Americans already get plenty. If you're eating a variety of vegetables, whole grains, and lean meats, there's a good chance you're getting enough protein to help you stay strong and functional as you age.

That being said, if you find you can't get enough protein from your diet, you have some choices. You can shift your diet to more protein-rich foods (especially **ones derived from plants**). Or you can supplement with a protein powder or bar.

Protein powders are extremely convenient. Drop a scoop into some water or milk, and you're getting 20 or 30 grams of protein. That can help you hit your daily protein goal without adding a ton of calories.

What you can do, though, is use your agency. Focus on a **healthy, whole-food diet** that provides the nutrients you need to stay strong and resilient at every age. Minimize highly processed foods when you can. Only supplement when you need it.

It's easy to obsess over eliminating every bad substance from your diet. But, in the end, there's only so much you can control. Focus on the basics: a healthy diet, exercise, keeping stress to a minimum, and maintaining an active social support system.

If you can do that, you'll create a strong, resilient body that can handle the occasional exposure to substances you'd rather avoid.

TL;DR

What the Consumer Reports Report Says

Consumer Reports found measurable lead in **70% of the protein powders it tested**, especially plant-based ones. The report flagged products exceeding 0.5 micrograms of lead per serving, based on California's Proposition 65 "safe harbor" level, which is a legal limit designed to be *ultra-protective*, not a science-based cutoff for harm. While that threshold is intentionally conservative, it highlights that trace heavy metals show up across the food chain, not just in supplements.

Context: Typical protein powders contained **1–70 ppb of lead**, similar to what's found in **everyday foods** like tomatoes (21 ppb), apples (15 ppb), and dark chocolate (10–75 ppb).

What You Should Know About Lead Exposure

Lead is a cumulative toxin. It doesn't leave the body easily and can impact cardiovascular health, kidney function, and cognition, even at low levels once considered safe.

Research shows that people with blood lead levels of 6.7 µg/dL (still common in the U.S.) have a **70% higher risk of dying** from heart disease than those at 1 µg/dL. Most U.S. adults today have blood levels below 2 µg/dL, thanks to decades of regulation, and are exposed to about 5.3 mcg of lead daily. Exposure from food, water, dust, and supplements remains unavoidable.

What You Can Do Now to Protect Yourself

You can't fully avoid lead, but you can lower your total body burden.

Here's how:

- ■ **Favor certified supplements.** Look for **NSF** or **USP** verification or companies publishing lot-level Certificates of Analysis (COAs) showing heavy-metal values. Check **ConsumerLab** or **Clean Label Project**.
- ■ **Diversify your protein sources.** Rotate between whey, collagen, and various plant types to prevent accumulation from one contaminated source.
- ■ **Filter your water.** Use an NSF-53 or -58 certified filter, which removes lead from pipes or fixtures.
- ■ **Boost nutritional defenses.** **Vitamin C enhances lead excretion** by increasing urinary clearance. **Calcium competes with lead** for absorption sites in the gut.
- ■ **Eat whole foods rich in fiber and antioxidants.** Phytochemicals in fruits, vegetables, and legumes help reduce lead absorption and oxidative stress.
- ■ **Limit “mass gainer” style products.** Because they use large volumes, they can magnify contamination even if concentrations are moderate.
- ■ **If you're in a vulnerable group (pregnant, older, kidney issues),** err on the side of extra caution or choose powders tested far below conservative thresholds.

The lead levels Consumer Reports found aren't ideal, but they're not an immediate

health crisis for most adults. The real takeaway is to be discerning: choose transparent brands, diversify your diet, and support your body's natural detox systems through nutrient-rich food and good hydration.

So what does the research say about lead exposure?

Lead is a systemic toxin with a broad spectrum of harmful effects even at low levels: in adults it is linked to elevated blood pressure and hypertension (e.g. meta-analyses show that doubling blood lead raises systolic BP by ~1 mmHg); it contributes to cardiovascular disease, stroke, and increased mortality risk even within “reference” blood lead ranges; it damages kidney function; it impairs neurocognitive function, especially processing speed, memory, and executive ability, and may worsen age-related cognitive decline in older adults.

In the U.S., average blood lead levels in adults have declined markedly over the past two decades: a review of NHANES data from 1999 to 2016 documented that mean levels fell by 22 %, reflecting decades of regulatory effort. Yet even at these lowered levels, lead remains a silent contributor to all-cause and cardiovascular mortality.

In one study published in *The Lancet* in 2018, when researchers compared adults with relatively low blood lead (about 1.0 µg/dL, the lower 10%) to those with higher (but still common) levels (about 6.7 µg/dL, the upper 10%), the people with higher levels were significantly more likely to die during the study period.

- ■ Their overall risk of dying from any cause was 37% higher.

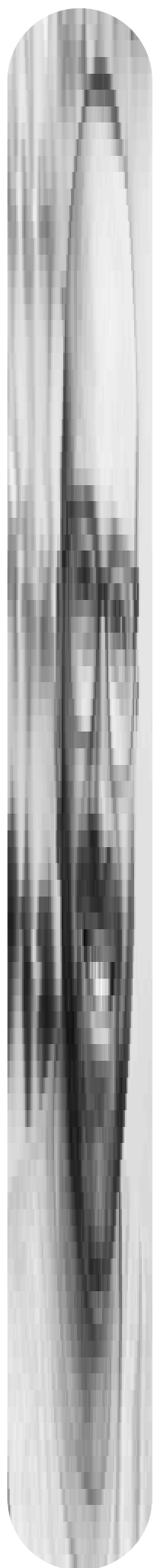
- Their risk of dying from heart or blood vessel disease was 70% higher.
- ■ Their risk of dying specifically from heart attacks was more than double.

These findings mean that even small increases in blood lead within what's considered "typical" today were linked to a noticeable rise in long-term death risk, especially from heart disease.

Sources of adult lead exposure are varied and often cumulative: inhalation or ingestion of leaded dust (from deteriorating paint, soil, industrial emissions); drinking water leached from plumbing solder, fixtures, or lead service lines; occupational or hobby exposures (battery manufacture, smelting, lead-based ceramics, shooting ranges); and dietary exposure from contaminated foods and supplements.

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