

Investigation: Tests Reveal Contaminants in Many Protein Drinks

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Unclear Labeling May Lead To Excessive Protein Consumption Which Can Pose Health Problems

YONKERS, NY — A new investigation by Consumer Reports, including tests at an outside lab of 15 protein drinks, reveals that some protein drinks may pose health problems over time, especially at a consumption level of three or more servings a day, due to the potential to consume harmful heavy metals and excessive protein. **All of the protein drinks tested by Consumer Reports had at least one sample containing one or more of the following contaminants: arsenic, cadmium, lead, and mercury, which can have toxic effects on the body, including several organs.** The report is available in the July issue of Consumer Reports and online at www.ConsumerReports.org.

The products, sold as ready-to-drink liquids or powders that are mixed with milk, juice or water to make shakes, attract not just athletes, but also baby boomers, pregnant women, and teenagers looking for a shortcut to a buff body. For most of the drinks tested by Consumer Reports, levels of contaminants detected were in the low to moderate range, but **levels in three of the products were of particular concern because consumers who have three servings daily could be exposed to levels of arsenic, cadmium or lead that exceed the maximum limits for one or two of those contaminants in dietary supplements** proposed by the U.S. Pharmacopeia (USP).

The USP is the federally recognized authority that sets voluntary standards for health products. Federal regulations do not generally require that protein drinks and other dietary supplements be tested before they are sold to ensure that they're safe, effective, and free of contaminants, as the rules require for prescription drugs. *"We need better government oversight and regulation of this product sector, as well as better quality control practices in manufacturing. Especially for consumers who are using these products regularly—consuming two or three or more times a day—there should be better safeguards to ensure the safety of these protein drinks,"* said Urvashi Rangan, PhD., director of technical policy, Consumer Reports.

Proposition 65, a California State law, mandates that manufacturers notify consumers when products contain toxic substances at levels the state says pose even a low cancer or reproductive risk. Eight of the fifteen protein drinks tested by Consumer Reports fall into this category due to their elevated levels of lead. *"Those products should be required to carry a warning label if they were sold in California,"* said Rangan.

Consuming excess protein can also cause health problems. Teenagers who want to look like the sculpted images they see in fitness magazines are especially vulnerable to the marketing messages trumpeted by the makers of protein drinks. Enticed by the promise of "hope in a can," teenagers tend to overuse the products, assuming that if one scoop is good, then four to five would be even better. A 2005 study published by the American Academy of Pediatrics found that protein powders and shakes were the supplements most commonly used by those aged 12 to 18. Pregnant women are also vulnerable because heavy metals can pose risks to a developing fetus or a nursing baby. Some protein drinks market directly to these groups while others warn they are not suitable for people under 18 years of age or that pregnant women should consult a physician before use.

What the Tests Found

Consumer Reports purchased 15 protein powders and drinks mainly in the New York metro area or online and tested multiple samples of each for arsenic, cadmium, lead, and mercury. **The levels discussed here are based on three servings per day, an amount that experts say is common. The results showed a considerable range, but levels in three products were of particular concern:**

Product (powder unless otherwise indicated)	Amount in 3 servings	Protein (g/ 3 servings)	Test results			
			Arsenic (µg/3 servings)	Cadmium (µg/3 servings)	Lead (µg/3 servings)	Mercury (µg/3 servings)
BSN Core Series Lean Dessert Protein Shake Chocolate Fudge Pudding	105 g	63	3.3	3.7	2.5	0.3*
BSN Core Series Syntha-6 Ultra Chocolate Milkshake	132 g	66	4.2	2.6	5.4	1.1
Designer Whey 100% Whey Protein Chocolate	78 g	54	3.9	1.6	2.4	0.9
EAS Myoplex Original Rich Dark Chocolate Shake (liquid)	1,500 mL	126	16.9	5.1*	-	-
GNC Lean Shake Chocolate	144 g	27	7.0	3.9	4.9	-
GNC Pro Performance AMP Amplified Wheybold Extreme 60 Chocolate	237 g	180	5.4	2.5	2.5	-
Jillian Michaels Natural Whey Protein Vanilla Cream Shake	81 g	45	1.9	-	1.2	-
Muscle Milk Chocolate	210 g	96	12.2	5.6	13.5	0.7*
Muscle Milk Nutritional Shake Chocolate (liquid)	990 mL	66	14.3	-	6.8	-
Muscle Milk Vanilla Crème	210 g	96	11.2	2.0	12.2	-
MuscleTech Nitro-Tech Hardcore Pro-Series Vanilla Milkshake	96 g	75	1.2	-	0.4*	0.9
Optimum Nutrition Gold Standard 100% Whey Extreme Milk Chocolate	96 g	72	2.5	1.7	1.0	0.2*
Optimum Nutrition Platinum Hydro Whey Velocity Vanilla	117 g	90	1.5	-	-	-
Six Star Muscle Professional Strength Whey Protein French Vanilla Cream	117 g	78	2.3	-	-	-
Solgar Whey to Go Whey Protein Powder Natural Vanilla Bean	60 g	48	0.6*	-	-	-

(-) Element was not measurable in all samples tested.
 *In some samples of this product, this metal was below measurable levels and could be as low as zero. For those products, the average was calculated using zero as the value for samples in which metal could not be measured by the analytical method used.

- Three daily servings of the ready-to-drink liquid **EAS Myoplex** Original Rich Dark Chocolate Shake provide an average of 16.9 micrograms (µg) of arsenic, exceeding the proposed USP limit of 15 µg per day and an average of 5.1 µg of cadmium, which is just above the USP limit of 5 µg per day.
- The samples of **Muscle Milk** Chocolate powder contained all four heavy metals, and levels of three metals in the product were among the highest of all products tested by Consumer Reports. Average cadmium levels of 5.6 µg in three daily servings exceeded the USP limit of 5 µg per day, and the average lead level of 13.5 µg also topped the USP limit of 10 µg per day. The average arsenic level of 12.2 µg was approaching the USP limit of 15 µg per day.
- **Muscle Milk** Vanilla Crème contained 12.2 µg of lead in three daily servings, exceeding the lead limits, and 11.2 µg of arsenic.

The Consumer Reports investigation notes cadmium raises special concern because it accumulates in and can damage the kidneys, the same organs that can be damaged by excessive protein consumption. It can take 20 years for the body to eliminate even half the cadmium absorbed today.

How much protein?

Only one of the products tested by Consumer Reports, Six Star Muscle Professional Strength Whey Protein, specifies a maximum daily intake. Others use vague language that could encourage a high level of consumption. Consuming excess protein can also pose health problems, including diarrhea. Although protein is needed for bone development, excessive protein over the long term might also cause calcium to be excreted from the bones, increasing the risk of osteoporosis. And for diabetics or others with kidney problems, it can lead to further complications.

The Consumer Reports investigation notes that consumers can roughly calculate how many grams of protein they need by multiplying their body weight by .4. For athletes, the general rule of thumb is about 1 gram of protein per pound of body weight per day. The report provides several examples of better, cheaper ways to bulk up. Case in point: a sandwich with three ounces of chicken and an eight ounce glass of whole milk provides about 40 grams of protein, which is more than half the 72 grams needed by a 180-pound person and most of the 48 grams required by someone weighing 120 pounds.

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**Exploring the Features & Benefits of Self-Care Solutions by
Understanding the Influence of Lifestyle Factors on the Human Body**

Do you know what's in YOUR whey? Although this report provides several examples of what they refer to as “better, cheaper ways to bulk up”, aside from unmatched convenience, there are numerous benefits to complementing a balanced diet with a high quality whey protein. Whey is the most exceptional source of complete protein delivering the perfect complement of amino acids which are the building blocks of the body's structures (esp. muscle), provides ALL the neurotransmitter pre-cursors for healthy brain chemistry (plays key role in energy, moods and motivation), and supports immune function (incl. glutathione production, the body's master antioxidant and detoxifier found in every cell of the body). In order to receive *all* the benefits whey has to offer it **MUST** be an *organic, undenatured* (cold-processed) whey protein *concentrate*. I recommend emphasizing whey protein concentrate for meal replacements because it's a more complete whole food with higher levels of immunosupportive factors and other bioactive compounds. Isolates do not make the most complete meal replacements and are a) often digested too quickly, not allowing for sufficient time within the digestive system for the nutrients to be properly absorbed, and b) less effective at satisfying hunger and metabolic needs for sufficient durations. Better whey protein concentrates will also be *ultra-low lactose* (less than 2%) and contain *live active enzymes, probiotics* and *trace minerals* for enhanced digestibility with greater bioavailability and assimilation at the cellular level. Avoid products with artificial sweeteners. **Consume a maximum of 40g per serving.**