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Q&A

Whey Protein and Hormones

by Will Brink

Q: *Does whey protein contain steroids or other hormones that could have adverse health consequences for humans?*

Being an animal-based product derived from milk, whey, like any animal-based product, will potentially contain some naturally occurring hormones. The issue is, which hormones and how much?

With modern testing equipment able to detect compounds in parts per million, per billion, and even parts per trillion, hormones of one kind or another can be found in virtually everything we eat. This is especially true of food derived from animal sources, though plants also often contain some naturally occurring hormones.

The concerns about whey protein “contamination” revolve around steroid-based sex hormones such as synthetic testosterone, growth hormones such as bovine growth hormone, and non-hormonal compounds such as antibiotics.

Steroid hormones are highly lipophilic (fat-soluble) and are found in the lipid (fat) portion of unprocessed whey and every other milk-based product. Life Extension’s whey protein contains a very high-grade whey isolate that is essentially fat free, containing less than one-tenth of one gram of dairy fat per 20-gram serving (approximately one scoop). The remaining fat in most whey isolate products generally comes from the addition of small amounts of lecithin, which is not an animal-based lipid. Sex hormone levels in the lipid portion of milk fat or in whey are so low as to be virtually undetectable.



Growth factor hormones such as bovine somatotropin (bST) and insulin-like growth factor-I (IGF-1) are protein-based as opposed to steroid based, and thus can be found in the protein fraction of animal-based products such as milk. Dairy farmers often inject their cows with synthetic bST (also known as rbGH) to increase their milk and meat production. Milk, and thus whey protein, contains minute amounts of bST; however, bST is not found in higher levels in the milk produced by cows treated with this synthetic hormone than in the milk of cows not treated with it. The levels of bST found in milk range from approximately zero to 10 parts per billion, with a typical level being 3 parts per billion, or approximately 1 mcg (millionth of a gram) per liter.

The scientific community has studied this issue extensively. For example, the National Institutes of Health concluded: “The composition and nutritional values of milk from bST-supplemented cows is essentially the same as milk from untreated cows . . . Meat and milk from rbST-treated cows are as safe as that from untreated cows.”¹ An article in the *Journal of the American Medical Association* noted, “The FDA has answered all questions and concerns about the safety of milk from bST-supplemented cows . . .”² And according to an article in the journal *Science*, “The data evaluated by the FDA documented the safety of food products from animals treated with rbGH.”³

Finally, several studies have found that in a small number of cases, antibiotic residues could be detected in commercial milk. This has led some people to use organic non-treated milk. The company that produces Life Extension’s whey tests every batch of incoming milk for antibiotic residues and rejects any batch that yields any amount of antibiotic residues, no matter how small. Only milk receiving this stamp of approval after testing is used to produce the whey. Thus, no antibiotic residues are contained in Life Extension’s whey protein. The fact is, all major manufacturers of whey protein powders test constantly for antibiotic residues, as does the dairy industry generally.

An impressive body of re-search suggests that far from having adverse health consequences, whey protein has many health-promoting, disease-fighting, and immune-boosting properties.

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References

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