

Did Your Collagen Supplement Come From a CAFO?

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✓ Fact Checked

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STORY AT-A-GLANCE

- › Many nonorganic collagen supplements have been found to contain contaminants associated with factory farmed animals, but even organic products have their quality concerns, specifically those made from bovine (cow) hides
- › Bovine hide-based collagen supplements are made from castoffs from the tannery (leather) industry that have undergone harsh chemical processing. Due to this, even organic collagen from hides may be of questionable quality in terms of their “organic” status
- › An ideal way to supply your body with much-needed collagen is to make homemade broth by boiling down chicken feet or beef bones. The gelatin that forms on top as it cools is your richest source of collagen
- › Collagen can help counteract dull, wrinkled, sagging skin and dry, brittle hair and nails, all of which are signs of aging that result from a loss of collagen
- › Other benefits of collagen include improved sleep, stronger bones, reduced joint pain and stiffness, and improved muscle building, wound healing, connective tissue repair, gut health, digestion, blood pressure and glucose tolerance

Please make sure you watch the video above as you will surely enjoy it. It will quickly help you understand not only the benefits of collagen but the very serious risks you run when you purchase nonorganic collagen, which is almost universally made from hydrolyzed CAFO cattle hides, not beef bones.

Collagen makes up anywhere from 25%¹ to 30%² of the total proteins in your body, and as much as 70% to 80% of the protein in your skin,³ in terms of dry weight. It's found specifically in the connective tissues throughout your body,⁴ making collagen supplementation a valuable tool for healing many injuries.

An ideal way to supply your body with much-needed collagen is to make homemade broth by boiling down chicken feet or beef bones. The gelatin that forms on top as it cools is your richest source of collagen. (The difference between collagen and gelatin is that collagen is the raw material, and gelatin is what you get when you cook the collagen.⁵)

Most people, however, prefer using a collagen supplement, which presents a number of challenges. Many nonorganic products have been found to contain contaminants associated with factory farmed animals, which is no great surprise, but even organic products have their quality concerns, specifically those made from bovine (cow) hides.

They may be made from organically raised cattle hides, but the hides in question are still scraps from the leather tannery industry, which have undergone such intense processing that one cannot help but question how "organic" the product is by the end of it all.

Nonorganic Collagen Products Are Likely CAFO-Derived

Another downside is the issue of contamination. For example, when ConsumerLab tested 11 popular collagen products, one was contaminated with the heavy metal cadmium, which disqualified it from being approved by the lab for use.⁶

In another case, the FDA announced that a company was recalling its collagen protein bites and bars due to a possible listeria contamination.⁷ In 2018 another recall was announced due to a possible milk — an allergen to some — contamination.⁸

While most agree that collagen can be helpful for certain health issues, a real concern is how to make sure the product you choose is safe, according to Dr. Mark Moyad, of the University of Michigan Medical Center, who told WebMD:⁹

“I think the elephant in the room here is safety. We are talking about ground-up fish, chicken, pig, and cow parts, and these parts tend to act as sponges for contaminants and heavy metals.”

Aside from the potential health concerns such contaminants might pose, CAFO products are problematic and best avoided for other reasons as well. Importantly, CAFO operations accelerate antibiotic resistance and contribute to severe environmental pollution.

The take-home message here is to be aware that nonorganic collagen supplements made either from cows or poultry are likely derived from CAFO byproducts, and if you make a point to avoid CAFO foods in general, you’d want to avoid these supplements as well, and opt for U.S. Department of Agriculture (USDA) certified organic¹⁰ collagen supplements.

In this case, you may still want to avoid collagen derived from cow hides, though. In our quest for the highest-grade collagen, my research team visited many tanneries to see firsthand where the hides used to make collagen come from, and what we learned raised many important production questions. In the end, we decided not to source our collagen from cow hides.

Hide-Based Collagen Is a Byproduct of the Tannery Industry

Raw, newly skinned hides arrive to the tannery on large pallets, where they can remain to rot for weeks before being processed. Even though they’re salted, they’re not entirely preserved and the stench is overwhelming. The tannery process itself typically involves an acid bath and processing with harsh chemicals such as sulfuric acid or chromium salts.

Hides with scars and imperfections are discarded once they’ve gone through this processing, and these castoffs are what are used to make bovine hide-based collagen supplements. The already processed scraps then undergo additional processing to dissolve the hide and release the collagen peptides.

So, sure, the original raw hide may have come from an organically raised, grass fed cow, but after all that chemical processing, just how organic is the final product?

From my perspective, even organic collagen products, if derived from cow hides, have the potential to be problematic in terms of quality for this reason. Collagen products made from organic poultry or grass fed beef bone broth (which is typically dehydrated bone broth) would be safer options. Without a doubt, though, your best source of collagen is homemade broth made from grass fed beef bones or organic chicken feet.

The Many Benefits of Collagen

Assuming you have obtained a high-quality collagen source, how can it benefit your health? Collagen can help counteract dull, wrinkled, sagging skin^{11,12,13} and dry, brittle hair and nails, all of which are signs of aging that result from a loss of collagen. Its value is far from simply cosmetic, however. Health benefits provided by collagen supplementation also include:

Deeper sleep and serotonin release due to its glycine content¹⁴

Reduced joint pain and stiffness,¹⁵ including osteoarthritis pain¹⁶

Improved muscle building¹⁷

Improved wound healing^{18,19} and connective tissue repair (which also translates into more rapid workout recovery), as your body selectively takes collagen into stressed areas

Improved gut health and digestion, thanks to the presence of glycine²⁰

Improved blood pressure and reduced cardiovascular damage²¹

Improved glucose tolerance²²

Some of the benefits of collagen may also be attributable to the glycine it contains. Glycine is one of the three predominant amino acids that make up collagen.²⁶

Glycine (and collagen, being a source of glycine) inhibits the consumption of nicotinamide adenine dinucleotide phosphate (NADPH), thereby lowering inflammation and oxidative damage in your body.

NADPH is used as a reductive reservoir of electrons to recharge antioxidants once they become oxidized. It's also necessary to make your steroid hormones and fats.

As discussed in this previous article about NADPH, glycine supplementation may be beneficial for the prevention and/or treatment of metabolic syndrome, complications from diabetes, cardiac hypertrophy, and alcoholic and nonalcoholic liver disorders.

Boosting Your Collagen Without Supplements

While taking a collagen supplement off the shelf may seem like the easiest way to get the collagen you need, it may not be the most ideal. It's certainly not your only option. In fact, you may not even need a collagen supplement if you provide your body with the needed precursors and building blocks.²⁷ Below are several ways to boost your collagen level in lieu of taking a supplement:

Making and consuming homemade bone broth, made from organic, pasture-raised poultry or grass fed and finished bovine bones and cartilage. Chicken feet are excellent for this, as chicken claws are particularly rich in collagen.²⁸

Low-level laser light therapy has been shown to increase collagen production, thereby reducing wrinkles and improving skin elasticity.²⁹

The antioxidant retinol (vitamin A1) increases the life span of collagen and blocks enzymes that destroy it. Food sources include beef and lamb liver, cod liver oil,

herring, mackerel and wild caught Alaskan salmon.^{30,31}

Ginseng, which has antioxidant and anti-inflammatory properties, has been found to increase collagen in the bloodstream and may have antiaging benefits.³²

Aloe vera, taken orally, nearly doubled hyaluronic acid and collagen production in study participants.³³

Hyaluronic acid, an important compound for collagen in the skin, can be found in beans and root vegetables, or taken as a supplement. Hyaluronic acid has also been shown to improve skin moisture and suppleness and reduce wrinkles when added to the diet.³⁴

Vitamin C boosts collagen production in your body by helping the amino acids lysine and proline convert to collagen.³⁵ Since it plays an important role in collagen synthesis, your body's natural collagen production will be impacted if your vitamin C level is low. Fruits and vegetables rich in vitamin C include kiwi, oranges and other citrus fruits, tomatoes, bell peppers and broccoli.

Antioxidants enhance the effectiveness of existing collagen. Berries such as blueberries, blackberries and raspberries are good sources.

Garlic contains sulfur, a necessary component for collagen production, as well as lipoic acid and taurine, which help rebuild damaged collagen fibers.

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