Do Lactoferrin and Nattokinase Belong in Your Supplement Stack?

6 MIN READ

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BY JULIE STEWART

An enzyme and a milk protein are making the rounds in longevity circles. Here’s an honest look at what science supports.

If health and wellness influencers show up in your social media feed, you might notice that lactoferrin and nattokinase keep popping up.

Scott Noorda, DO, the founder of Resolve Medical, has noticed the trend in practice. He’s seen an uptick in patients asking about this supplement duo, especially for immune health.

“Where we’ve heard it the most is probably people who are educating themselves related to chronic immune issues, particularly long COVID-type immune issues,” he says. These supplements have also attracted attention for potential heart, gut, and brain health benefits.

So are lactoferrin and nattokinase worth the hype, or will they fade back to obscurity soon? The science behind these supplements is still evolving. While laboratory and small human studies suggest a wide range of possible benefits, large clinical trials are still limited. (Read that as *buyer beware.*)

Here’s why these supplements are getting so much attention–and what to know before you buy in.

What is lactoferrin?

Lactoferrin is a whey protein in milk that binds with iron, hence the name lacto (milk) and ferrin (iron). Human cells can also produce lactoferrin to help balance the body's iron levels.

Lactoferrin can help increase iron absorption in **pregnant women**,**female athletes** , and anyone else at risk for anemia. A 2024 study review published in ***BMC Nutrition***found that lactoferrin supplements of 100 to 250 milligrams per day increase blood iron levels about as well as iron supplements do.

Lactoferrin can also help maintain normal levels of ferritin, an iron storage protein that can rise during inflammation.

"Ferritin is an acute-stage reactant in that inflammatory pathway, and so ferritin can rise, and we've seen it extremely high in some of these acute inflammation and even chronic inflammatory situations," says Noorda.

Emerging research in cell cultures and animals also suggests that lactoferrin's benefits might go beyond its namesake effects on iron. Lactoferrin also has **antioxidant** properties with the potential to support heart health and protect neurons from degenerative diseases such as Parkinson's and Alzheimer's. It might also influence the **gut microbiome**, helping beneficial gut bacteria grow and potentially strengthening the intestinal barrier. But the science is young.

What is nattokinase?

Nattokinase is an enzyme found in natto, a traditional Japanese food made of fermented soybeans.

Nattokinase is fibrinolytic. "It breaks down that fibrin mesh that is holding clots together and also kind of supports plasmin activity, which helps break down clots," says Noorda. Nattokinase's natural blood-thinning effects can improve circulation,

suggesting promising cardiovascular benefits.

Nick Norwitz, MD, PhD, has been fielding a lot of questions about nattokinase and heart health on his social media platforms. Norwitz points to early, but interesting, research suggesting nattokinase has potential in reversing atherosclerosis.

??“The conventional point of view is that once you have cardiovascular plaque, there’s nothing that you can do to reverse it, or very, very limited things,” he points out. “There are some human data – they aren’t perfect data – showing that very high dose nattokinase can reverse atherosclerosis.”

For example, a 2022 clinical study published in ***Frontiers in Cardiovascular Medicine*** found that people who took 10,800 Fibrinolytic Units of nattokinase daily for a year improved their carotid artery intima-media thickness and carotid plaque size, markers of atherosclerosis, by 22% and 36%, respectively. They also reduced their total cholesterol by 16%, LDL by 18%, and triglycerides by 16% and increased their HDL by 16%. Smaller doses of 3,600 Fibrinolytic Units didn’t have the same effect. As Norwitz noted, it’s not perfect data. The study was retrospective, not randomized. More research is needed to confirm the findings. Any time you see high dose supplement recommendations, it’s a good idea to pause. Definitely talk to your doctor before making any purchases.

A randomized controlled trial published in 2026 in the ***Journal of Stroke and Cerebrovascular Diseases*** found that people with asymptomatic narrowing of their intracranial or carotid arteries who took 8,000 Fibrinolytic Units of nattokinase daily for six months didn’t fare any better on cognitive tests than those who took a placebo. However, the people who took nattokinase did experience smaller declines in visuospatial function, the ability to interpret and use information you see. The supplement might help by boosting blood flow to the brain, the researchers noted.

Why are people taking lactoferrin and nattokinase together?

The duo of lactoferrin and nattokinase has taken off in the wild west of the online long COVID community. The hype started building during the pandemic, when **research** pointed to these (and other) supplements as promising options to gain control over the then-elusive virus.

Cell culture and animal studies pointed to lactoferrin's potential to stimulate the immune system enough to counteract viruses but not so much as to cause harmful levels of inflammation. In cell cultures, **nattokinase** inhibited the SARS-CoV-2 virus behind COVID-19. The clot-busting abilities of **nattokinase** could also have a plausible benefit in people recovering from COVID-19 and other illnesses, but more research is needed to determine whether it works.

"I think we've underestimated the impact of the kind of micro-clotting that happens in these chronic inflammatory issues," cautions Noorda. "COVID brought to light some of that, but I think we didn't realize just how much that may persist after the initial viral illness kind of calms down."

What does the human evidence say? Lactoferrin was put to the test in clinical trials during the pandemic, and the results weren't exactly a slam dunk. The results suggested that **lactoferrin** isn't helpful in people with active moderate-to-severe infections. It didn't **prevent infection** in health care workers. It didn't boost **long COVID** recovery overall. However, a meta-analysis found that lactoferrin did improve **fatigue** in people with COVID-19 and acute post-COVID symptoms. Though researchers note the evidence base is still early and further trials are needed.

And it might boost protection against other viral illnesses. A 2025 paper published in ***Proceedings of the Nutrition Society*** found that adults 50 and up who took 600 milligrams of lactoferrin per day for four weeks showed enhanced immune cell

responses to respiratory viruses, though effects on systemic inflammation were only seen at the higher dose.

In Noorda's clinical experience, some people with chronic infections and immune system problems find that lactoferrin reduces inflammation, especially in the gut, and improves symptoms like brain fog.

"Another thing we see with long COVID and lots of these chronic inflammatory situations is that there's a component of leaky gut, or gut permeability, and that kind of perpetuates this inflammatory process happening in the body," he says.

Nattokinase hasn't been tested in clinical trials of long COVID.

Will taking lactoferrin or nattokinase supplements improve healthspan?

Research in cell cultures and animals, along with some small human studies, suggests that lactoferrin and nattokinase might have wide-ranging benefits. But more human clinical trials are needed before we can draw solid conclusions about whether consuming them in supplement form will improve your health.

"The art of medicine is making difficult personal decisions based on imprecise or incomplete data," says Norwitz.

It's plausible, though not proven, that this supplement combination could improve healthspan or even lifespan. "Certainly, we know that lowering inflammation has a longevity benefit," Noorda adds.

Should you take lactoferrin and

nattokinase?

These supplements appear to be relatively safe, but nattokinase can cause excess bleeding in some people, especially if used with other medications or supplements with blood-thinning properties. Before starting any new supplement, no matter how safe it seems, it's important to tell your doctor about everything else you take.

"I had one patient who was put on a blood thinner without telling me, and continued to take her nattokinase, and so she did have excessive bruising and nosebleeds until we kind of figured out what was going on," explains Noorda.

How much can you take? **Lactoferrin** has been shown to be safe in studies up to 4.5 grams per day. Clinical studies have used nattokinase at doses up to 10,800 Fibrinolytic Units daily for a full year without reported adverse effects. Short-term human toxicology testing found no adverse effects at higher doses, though long-term safety data beyond that range remain limited. For context, the European Food Safety Authority has approved 2,000 Fibrinolytic Units per day as the maximum recommended dose for food supplements, well below the doses used in cardiovascular research. Norwitz recommends taking at least 6,000 Fibrinolytic Units of nattokinase per day to get the research-backed benefits.

Which supplements should you choose? Opt for supplements that are third-party tested or come from companies that share their certificate of analysis verifying potency and purity.

Can you get lactoferrin and nattokinase from food instead? Yes. If you're intrigued by the benefits of lactoferrin and nattokinase but don't want to commit to a supplement, try eating lower levels in food.

- **Lactoferrin:** Cow's milk contains about 50 to 120 milligrams of **lactoferrin** per liter, or 12 to 28 milligrams per cup. Noorda suggests that for day-to-day longevity and preventive health, you can probably get enough lactoferrin from dairy products.

“If you are already behind the eight ball and in a state of inflammation, iron accumulation, micro-clotting, then I would say you probably are not going to be able to get enough through food,” he advises.

- **Nattokinase**: You can eat nattokinase in natto, which is available at some specialty markets in the United States. **Landmark** research suggests that natto contains about 40 Fibrinolytic Units per gram, so you can get about 1,500 Fibrinolytic Units in a 50-gram serving.

  You won’t get the concentrated anti-clotting effects of a nattokinase supplement, but you’ll get other benefits. As a fermented food, **natto** contains probiotic bacteria. It’s also rich in other helpful nutrients, including B vitamins and vitamin K2.

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WRITTEN BY:



Julie Stewart