

Don't "Boost" Your Immune System, Support It!

Boosting may not do what you think.

April 28, 2026 By Laura Martinell, RD and Fred Hutch News Service

We sometimes hear about the benefits of “boosting” our immune system, but what we really want to do is support our immune system on an ongoing basis.

People often think of the immune system as something that is either weak or strong, like a muscle in our body, but it's actually a complex system. To understand it, it's best to start by explaining how the immune system works. There are two parts: innate immunity and adaptive immunity.

Innate immunity is the body's first line of defense, like guards standing outside of a castle. The innate immune system's job is to stop invaders (pathogens, bacteria) from entering the body. Innate immunity works fast and repels anything it doesn't recognize.

Adaptive immunity is more like a team of detectives. The adaptive immune system investigates intruders and identifies a plan to neutralize them. Made up of T cells and B cells that produce antibodies specific to the invaders, the adaptive immune system can remember invaders and recognize them if they attack again in the future. This allows it to respond faster the next time it sees them.

What happens if you boost your immune system?

The adaptive immune system works by recognizing the foe. It can be supported through vaccination, exposing it to the invaders in weakened or dead form.

Boosting your innate immune system though, would make it work in overdrive, reacting to everything, friend and foe alike. It could cause your body to start attacking its own cells, which is what happens in autoimmune diseases where the immune system essentially attacks the body

itself. We don't want the innate immune system to work in overdrive, demolishing everything in its path.

So, what can we do instead? We can support our immune system by giving it the nutrients it needs to help fight invaders. Unfortunately, taking vitamins or supplements when we're sick doesn't work. Instead, our bodies prefer to have a steady stream of nutrients, which we can accomplish through a healthy diet.

Nutrients to incorporate into your diet include Vitamin C, zinc, Vitamin D and protein.

Vitamin C

Vitamin C is a powerful antioxidant found inside our neutrophils (cells that are part of our innate immune system). Vitamin C protects the neutrophils from damage while they're working. Unfortunately, taking large amounts of Vitamin C doesn't super-charge our neutrophils because Vitamin C is water-soluble. That means our cells use as much as they need and then we excrete the rest through our urine. Ensuring that our diet regularly includes good dietary sources of Vitamin C instead of using supplements when we're sick makes sure our bodies always have what they need.

Vitamin C-rich foods include red bell peppers, oranges, kiwi fruit, broccoli, strawberries and kale.

Zinc

Zinc is a mineral that helps regulate the innate and adaptive immune cells. Zinc helps our T cells function normally, so a deficiency in zinc can negatively impact our immune cells. Because our bodies can't store much zinc, it's important to get it from our diets. Our experts don't recommend taking zinc as a supplement because it can be found abundantly in foods. In addition, too much zinc can result in other nutrient deficiencies because it inhibits absorption.

Zinc-rich foods include fish, seafood, chicken, fortified breakfast cereals, nuts and seeds.

Vitamin D

Vitamin D is important for bone health, but it also helps control the function of our immune cells in

the innate and adaptive immune systems. Too little Vitamin D can increase our susceptibility to infection by weakening the immune system. Approximately 25% of Americans are deficient in vitamin D because it is difficult to get from diet alone. However, before taking a Vitamin D supplement, it is important to know what your levels are. A simple blood test can determine if you need a supplement. Vitamin D is a fat-soluble vitamin and ingesting too much can be toxic. Ask your provider if you are concerned.

Vitamin D-rich foods include fatty fish, fortified dairy, dairy alternatives and fortified eggs.

Protein

Another example of an immune-supportive nutrient is protein. Protein is important for strong muscles, but it is also the building block for the immune system, and it takes priority when we are sick. If we don't get enough protein, our body might start breaking down the muscle we have to supply protein to our immune cells so it can fight invaders. It is especially important to eat protein during and after cancer treatment to keep both our immune system and muscles strong.

Protein-rich foods include lean meats (like chicken, turkey, lean cuts of beef), fish, eggs, dairy (Greek yogurt, cottage cheese) and plant sources like legumes, soybeans, tofu, nuts and seeds.

The bottom line

A well-balanced diet will provide the nutrients we need to keep our immune system working well, even during treatment for cancer. Eat a diet rich in plant foods, including fruits, vegetables, nuts, seeds, legumes, and also protein like fish, chicken and yogurt to help your immune system work optimally.

Other important factors for a supported immune system include vaccines, exercise, adequate sleep and reduced stress.

Questions? Check out our [Nutrition page](#) or visit Fred Hutch's free bilingual cooking website, [Cook For Your Life](#).

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