

The Role of Diet in a Healthy Immune System

Food is the most powerful tool we can use to improve the health and function of our immune system. The immune system is built with and fueled by the nutrients we taken in. Proper nutrition supports a healthy gut microbiome (where most of our immune cells reside), helps regulate inflammation, and enhances immune cell function. In contrast, a diet comprised mostly of processed foods and foods high in refined carbohydrates and sugar lacks the nutrients needed for a healthy immune system.

A nutrient-dense, whole-foods diet is comprised of a balance of protein, complex carbohydrates (fruits, veggies, whole grains), and healthy fats. This provides the body with immune-boosting nutrients such as folate, iron, polyphenols, thiamine, selenium, iron, copper, zinc, B vitamins, vitamins A, C, D, E and K, as well as probiotics and pre-biotic fibers to feed the good bacteria in the gut. While not a comprehensive list, below is a highlight of some of the key nutrients we can bring into our body through food to boost the health and function of our immune system.

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Vitamin C

Vitamin C is a powerful antioxidant that plays a large part in increasing B cells and T cells, the white blood cells that are key in producing antibodies and stopping infection. Eating a nutrient-dense diet with a variety of color is the best way to increase your vitamin C intake, which is abundant in fruits and vegetables! Some foods high in vitamin C include kiwifruit, guava, bell peppers (especially red bell peppers), strawberries, oranges, broccoli, tomatoes, snow peas, kale, Brussels sprouts, papaya, potatoes, lemons, limes, and several others.

Vitamin E

Vitamin E protects immune cells from oxidative damage and strengthens their function. Vitamin E has been shown to **increase** the amount of T cells, which is the type of white blood cell that finds and destroys harmful invaders! It is a fat-soluble vitamin, which means it is important to consume healthy fats so that the body will be able to absorb it and use it. Vitamin E can be found naturally in foods such as nuts (peanuts, hazelnuts, almonds), sunflower seeds, spinach, broccoli, tomatoes, pumpkin, red bell peppers, mango, asparagus, avocados, as well as chili powder, curry powder, and cayenne.



Vitamin D

Vitamin D plays a big role in the proper function of the immune system and it enhances the function of immune cells. Vitamin D deficiency can impair maturation of white blood cells (immune cells), thereby increasing the susceptibility to infection and disease. We can take in more vitamin D through foods like fatty fish, egg yolks, cod liver oil, mushrooms, and fortified dairy products. Vitamin D is also a fat-soluble vitamin, so it's important to consume healthy fats for the body to be able to absorb it and use it.



Zinc

Zinc is important in maintaining the integrity of our skin, which is part of the immune system's first line of defense. Zinc is also crucial for the development of specific immune cells that fight infection, neutrophils and natural killer cells. A zinc deficiency results in the body producing fewer infection-fighting cells. Good sources of zinc include meat, legumes (lentils, chickpeas, beans), Greek yogurt, pumpkin seeds, sesame seeds, nuts (pine nuts, peanuts, cashews, almonds), shellfish (oysters, crab, lobster), and whole grains.

