

Building a Healthy Offensive: The Physical and Mental Benefits of a Strong Immune System

Immune System Basics

The body's ultimate defense system discriminates between native cells and foreign particles (bacteria, viruses) that can cause disease—mounting a quick, broad response to attack and clear what it perceives as harmful, then aiding in subsequent tissue repair.

- **Innate, or natural, immunity:** The defense system we are born with.
- **Adaptive, or acquired, immunity:** The defense system our bodies develop by being exposed to a disease or after being vaccinated.

Meet Your Microbiome

70% of our immune system is in our gut; this is referred to as the microbiome. "Because the gut bacteria, known as microbes, are fueled by our food, we literally are what we eat," says 98point6 physician Paris Kharbat, DO. "And our microbiome, which can be altered, good or bad, directly impacts our immune response."

Good for the Microbiome

- + Yogurt with active cultures
- + "Eating the rainbow" of fruits and veggies
- + Fermented foods like kefir, kimchi and tempeh
- + Polyphenol-rich food and drink like cocoa, almonds and green tea
- + Practicing relaxation techniques
- + Intermittent fasting

Bad for the Microbiome

- Alcohol and smoking
- Disrupted sleep patterns
- Unnecessary antibiotics
- Artificial sweeteners
- "Junk" food void of nutrients or fiber
- Stress



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In this post-pandemic world, a top-notch immune system matters more than ever—not just physically, in terms of safeguarding against illness, but emotionally, for strength, resilience and hope.

- Paris Kharbat, DO

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Stress, Immunity & You

Chronic stress, which involves consistently heightened levels of the hormone cortisol, negatively impacts body functions, including digestion and sleep (both of which have a definite effect on the microbiome!). This would explain why long-term stress—like the stress of the COVID-19 pandemic—can be detrimental to our immune health.

Win-Win Solutions

Know the nutrients C, D and Z— and where to get 'em

WHY:

Vitamin C neutralizes unstable compounds in the body; it can also help prevent or reverse the cellular damage these “free radicals” cause. **Vitamin D** has been proven to enhance our natural defense mechanisms pertaining to respiratory health. The effect of **Zinc** on immune cells has also been well-documented, with one study¹ showing a connection to the immune cells that respond fastest to infection.

HOW:

- Foods high in **Vitamin C** include veggies broccoli, kale, cauliflower, bell peppers, sweet potatoes and tomatoes, and fruits like orange, kiwi, papaya, cantaloupe and strawberries.
- While food like egg yolks, beef liver and fatty fish (salmon or mackerel) provide **Vitamin D**, the best source is the sun, through approximately 15 minutes of UVB rays a day. It's OK to wear sunglasses and a hat to protect your eyes and face, but aim to expose one-third of your body to get the necessary dose. If you plan to stay out longer, use sunscreen.
- Good sources of **Zinc** include oysters, red meat and poultry, as well as beans, nuts, crab and lobster.

Got Symptoms, Questions or Concerns?

With primary care on-demand, our board-certified physicians offer diagnosis, treatment and peace of mind anytime, from anywhere.

A SOURCE YOU CAN TRUST: This resource was put together using expert guidance from 98point6's board-certified physicians.

Get a better night's rest

WHY:

Sleep resets our bodies and minds. Because stress negatively affects the time we actually spend sleeping (known as “sleep efficiency”) vs. tossing and turning, we end up with less of the deep, restorative sleep needed for daily recovery. One study² showed that volunteers who averaged less than seven hours of sleep a night were nearly 3x as likely to get an infection; those with poor sleep efficiency were 5.5x more likely.

HOW:

- Avoid caffeine after lunch, and try to avoid nicotine and alcohol near bedtime.
- Turn off screened devices 30 minutes before bed.
- Set your bedroom temperature lower, or take a hot shower or bath before bed. This increases heat loss, which helps the body fall asleep more easily.

Laugh out loud. (Really!)

“Isn't a real, good belly laugh 2–3 times a day what we all need right now?” says Dr. Kharbat. “Medical evidence backs this up, so go for it...doctor's orders!” Laughter incites physical changes in the body that stimulate vital organs and circulation and release chemicals that fight stress, pain and illness. One study³ found an increase in natural killer cell activity, a vital part of our innate immune system responsible for killing virally infected cells, after participants watched a comedy.

¹ <https://www.ncbi.nlm.nih.gov/pubmed/9701160>

² Cohen S, Doyle WJ, Alper CM, Janicki-Deverts D, Turner RB. Sleep Habits and Susceptibility to the Common Cold. Arch Intern Med. 2009;169(1):62–67. doi:10.1001/archinternmed.2008.505

³ <https://sci-hub.tw/10.3892/ijmm.8.6.645>