

EPOCH HEALTH

How to Become Resilient Amid the Rise of Superbugs

A study predicts millions will die from antibiotic-resistant superbugs over the next 25 years, but you can prepare by building your immunity.



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In recent decades, medical experts have warned of a looming health crisis due to superbugs resistant to antimicrobials. Such warnings have [become dire](#), increasing the importance of each person ensuring the health and vitality of their immune system.

“For most of human history, infections have been one of the main causes of premature death,” [Dr. Jacob Teitelbaum](#), a board-certified internist and author of “[You Can Heal from Long COVID](#),” told The Epoch Times in an email. “With the advent of antibiotics, we have forgotten how deadly infections truly can be.”

When antibiotics were first marketed, they were a game-changer in treating infectious disease, saving countless lives. Yet, over time, bacterial strains have increasingly mutated, so they are no longer susceptible to the drugs’ eradicating effects. This has caused the emergence of superbugs, which are currently untreatable. A [study](#) recently published in The

Lancet forecasts that 39.1 million deaths caused by antimicrobial resistance and 169 million deaths associated with antimicrobial resistance will occur between 2025 and 2050.

Your Health Matters

“While we have been developing new skills, so have the bacteria, which have learned how to create antibiotic resistance,” said Teitelbaum.

It’s important to take steps to protect yourself from superbugs. A nutritious diet, healthy lifestyle, and certain dietary supplements can boost immunity.

Healthy Diet

As antibiotics lose their effectiveness, it’s crucial to focus on boosting our body’s natural defenses, clinical dietitian Ria Hawle from Clinicspots told The Epoch Times in an email.

“One of the best ways to do this is through proper nutrition,” Hawle, who specializes in diabetes and cardiac nutrition, said. “A well-rounded diet can provide your immune system with the nutrients it needs to function at its best, helping you fight off infections more effectively.”



Hawle provides the following dietary recommendations:

Fruits and vegetables: Aim to eat a wide variety of these food groups. The more colorful your plate, the more nutrients you’re getting. Try to incorporate five servings a day in the diet, focusing on nutrient-dense options like leafy greens, berries, and citrus fruits.

Whole grains: Include grains such as quinoa, oats, and brown rice, which contain essential B vitamins and fiber.

Protein: A key component of a strong immune system, protein is essential for producing antibodies, which help fight infections. Choose lean sources like poultry, fish, beans, and lentils.

Healthy fats: Eat foods with omega-3 fatty acids, such as fish, flaxseeds, and walnuts, which can reduce inflammation.

The diet that Howle describes resembles the Mediterranean diet. A [review](#) on the eating plan published in Aging Clinical and Experimental Research noted that the diet contains fiber and a broad spectrum of nutrients that increase the populations of friendly gut bacteria. This, in turn, regulates immune function.

Foods That Harm Immunity

The following have a negative effect on the immune system:

Sugar: High amounts [lead to pathological conditions](#) through elevated cytokine production, small proteins acting as messengers in the immune system. Excessive cytokines are proinflammatory.

Salt: A high salt diet [can help promote](#) the development of immune-regulated diseases, including infections, multiple sclerosis, cancer, and high blood pressure.

Omega 6 fatty acids: Too many of these fats in the diet are pro-inflammatory and [are associated with](#) lower immune function. Specifically, a diet with a high omega 6/3 ratio may induce excessive inflammation, which can play a role in inflammatory cytokine storms in the lungs during viral infections

Stress Management

A [review](#) published in BJPsych Advances found that chronic stress has a maladaptive effect on the immune system. It triggers the release of cortisol and activates a substance that increases proinflammatory cytokine production. This, in turn, has an adverse effect on mental health, leading to symptoms such as anxiety.

Chelsie Rohrscheib, a medical scientist, neuroscientist, and sleep expert at Wesper, explained the findings to The Epoch Times in an email. "Chronic stress weakens the immune system by causing long-term elevation of cortisol," she said.

"Although cortisol is essential for survival, too much of it has a negative impact on the entire body. In terms of the immune system, it suppresses the production and activity of white blood cells, which locate and destroy harmful pathogens," she added.

Thus, focusing on stress reduction throughout your day can help foster optimal cortisol levels, added Rohrscheib.

Experts recommend [stress management techniques](#), such as taking time to relax through deep breathing, engaging in an enjoyable activity, and talking with people you trust.

Exercise

Cortisol is also associated with the benefit of exercise on immunity. "Exercises raise heart rate, which requires a large boost of cortisol to help you maintain your energy levels," said Rohrscheib.

"Once your exercise is over, most of your reserve cortisol stores have been used, which means that you are less likely to have chronically elevated cortisol throughout the day. Normal blood cortisol levels allow the immune system to remain active and functioning."

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Scientific studies have also shown that immune cell circulation increases during exercise, said Rohrscheib. A [review](#) published in Springer Nature noted this and other beneficial effects on immunity, which decrease the incidence of infectious diseases, including viral infections such as COVID-19.

Experts advocate at least [150 minutes](#) of moderate-intensity physical activity per week for healthy adults, such as 30 minutes a day for five days.

Adequate Sleep

A [review](#) published in Communications Biology stated that sleep supports immunity, adding that disturbance in the immune-inflammatory system may explain why sleep deprivation is associated with negative health effects. The researchers indicated a link between inadequate sleep and a higher risk of herpes zoster virus, respiratory tract infections, the common cold, and gastroenteritis.

“Deep sleep, in particular, promotes the production and activity of white blood cells, which are the first line of defense from invading pathogens,” said Rohrscheib. “Studies, [such as the above review], have shown that people who are chronically sleep deprived have reduced white blood cell activity, making the body less effective at fighting infections.”

Adults 18 to 60 need at least [7 hours](#) of sleep per night.

Sunlight Exposure

Teitelbaum strongly advocates getting enough sunlight exposure to help avoid vitamin D deficiency, which is detrimental to immunity. “Medical advice should be to avoid sunburn rather than avoid sunshine,” he said.

While vitamin D has varied effects on immune cells, the overall effect on the immune system is stimulatory, reports a [review](#) published in Frontiers in Immunology.

Some [experts](#) advise spending 5 to 30 minutes in the sun, especially between 10 a.m. and 4 p.m. daily or at least twice per week.

Nutritional Supplements

Teitelbaum says that the healthcare system should make producing new families of antibiotics its key focus, but they shouldn’t allow them in everyday use to avoid the development of resistance.

“Instead, we should keep them in reserve for when, not if, we get hit by the next plague,” he said. “Fortunately, natural options can be extremely effective for these antibiotic-resistant infections as well.”

Zinc

Zinc is vital for maintaining the immune system, and its deficiency is associated with adverse effects on immune functions, according to the review published in Frontiers in Immunology. It reported that zinc supplementation may reduce the incidence of diarrhea and pneumonia in children in developing countries, as well as upper respiratory tract infections in institutionalized older adults. The researchers stated that zinc overload can impair immunity just as zinc deficiency can, so further research is necessary to ascertain optimal zinc intake.

Berberine

Teitelbaum called berberine an “anti-infectious superstar,” noting that it is one of the supplements he keeps in his medicine cabinet.

“A [study](#) published in Frontiers in Microbiology stated that berberine has a wide range of activity against unhealthy bacteria with special promise against antibiotic-resistant

organisms," he said. This includes Staphylococcus aureus, a common bacteria that can cause a range of infectious diseases, such as endocarditis and sepsis.

The problem with berberine is poor absorption, continued Teitelbaum. He recommended a product called Berberine MetX, which contains GamaSorb, a plant-based substance that binds to nutrients and increases their absorption.

Elderberry Plus Key Nutrients

Teitelbaum points to a [study](#) published in Molecules that found elderberry has beneficial properties. "In addition to being antiviral, elderberry has wide ranges of activity against some of the nastiest bacteria, especially Staphylococcus aureus and Pseudomonas aeruginosa," he said. "Interestingly, it supports the growth of healthy gut bacteria while killing the bad."

He added that he takes this supplement called ViraPro when traveling or when infections are going through town. It is a combination of elderberry and key immune nutrients, which supplies optimal levels of vitamins A, C, E, zinc, and selenium.

Probiotics

Probiotics are friendly gut bacteria that naturally reside in the body, primarily within the gastrointestinal tract. They provide numerous health benefits, including protecting the gut and immune system, nutritionist Lisa Richards told The Epoch Times in an email.

"They can be an effective means of giving your immune system the extra boost it needs to get through a time of significant illness and for overall health," she added. "A probiotic should contain at least 10 billion colony forming units (CFUs) for it to be useful for an adult or at least 5 billion CFUs for children."

A [review](#) published in Cells stated that probiotics are reliable in preventing the onset of various disorders. They also improve immunity by interaction with gut immune cells in a positive manner.

Final Thoughts

Research indicates that eating a nutritious diet and engaging in healthy lifestyle practices fosters a better functioning immune system. This can help protect against infections, such as superbugs and immune-related noncommunicable diseases.

Moreover, doctors recommend such practices for everyone, not just people seeking to improve immunity, as they promote optimal general health.