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Beating the Supergerms...and Other Infections

A wholesome diet and supplements can boost your immunity and help protect you against the threat...

By Jack Challem

When Quebec premier Lucien Bouchard thought he had pulled a leg muscle in December 1994, he started taking a common nonsteroidal anti-inflammatory drug (NSAID) to relieve the pain. Such drugs—which include aspirin, ibuprofen, and acetaminophen—are available at any pharmacy without a prescription.

Within days, Bouchard found himself in a life-or-death struggle with the so-called flesh-eating bacteria, known more formally as Streptococcus Group A, or *Streptococcus pyogenes*. Antibiotic treatment failed, and to stop the rapidly spreading infection, doctors had no choice but to amputate Bouchard's leg. Was there a connection between the NSAID and his infection?

The association between NSAIDs and the flesh-eating bacteria might have seemed odd, but it was far from coincidental. Some doctors now suspect that Bouchard's body held its own against a strep infection until he began taking the NSAID. The drug, which reduces inflammation, suppressed the activity of Bouchard's white blood cells. That allowed the strep bacteria to run rampant.

Obviously, not everyone who takes NSAIDs develops a life-threatening infection. A dangerous strain of bacteria must be present and other factors, such as stress and poor diet, also increase a person's susceptibility.

NSAIDS may increase your risk of other infections, according to Dennis L. Stevens, MD, an infectious diseases specialist at the Veterans Affairs Medical Center in Boise, Idaho. The same class of drugs may help set the stage for toxic shock syndrome, a potentially deadly *Staphylococcus* infection linked to super-absorbent tampons. These tampons can alter the bacterial environment of the vagina, and NSAIDS (often taken to relieve menstrual pain) can give disease-causing bacteria a deadly edge.

ANTIBIOTICS CAN WEAKEN IMMUNITY

NSAIDS have become part of an unparalleled assault on our immunity. But they are not the only drug that interferes with our ability to fight supergerms and other bacteria.

Antibiotics, the very drugs prescribed to fight bacterial infections, also impair the body's immune system. This paradoxical effect was first reported in 1950, but dismissed because researchers couldn't confirm their finding. Then, in 1972, researchers at the Baylor School of Medicine, Houston, re-discovered that some antibiotics prevented white blood cells from attacking and killing bacteria.

Tetracycline-class antibiotics may be the worst offenders in this regard, but erythromycin, chloramphenicol, clindamycin, and netilmicin also throw a chemical wrench into the immune system.

Gerhard Pulverer, MD, and his colleagues at the University of Cologne, have figured out at least part of the reason. Some species of bacteria, which normally reside in the intestine, produce protein-like peptides that stimulate the immunity of their animal and human hosts. Antibiotics destroy both beneficial and disease-causing bacteria and, in doing so, temporarily stop production of these immune-stimulating peptides. This could be why people taking antibiotics are especially susceptible to infections from *Salmonella* and *E. coli* in food.

OTHER IMMUNE ATTACKERS

NSAIDs and antibiotics aren't the only assaults on our immunity and ability to fight infections.

Researchers have known for more than 30 years that common dietary sugar reduces the ability of white blood cells to capture and kill bacteria. Sugar makes white blood cells sluggish within one hour of consumption, and studies have shown that the resulting immune depression lasts at least five hours. Sugar is added to almost every processed food—even to some brands of salt—which means the body has little if any time to re-establish normal immunity.

Polyunsaturated fatty acids (PUFAs)—largely from vegetable oils—can also play havoc with the immune system. Over the past 50 years, people have decreased their consumption of saturated fats, replacing them with PUFAs. Yet PUFAs interfere with the ability of white blood cells to fight infections. In one study, PUFAs suppressed immunity so much that researchers were able to prevent organ rejection among kidney-transplant patients!

Pesticides also suppress your ability to fight infections. Although researchers have traditionally studied the neurological and endocrine effects of these chemicals, which are sprayed on fruits, vegetables, and grains, they are now weighing their impact on immunity. Dioxin, a component of many pesticides, is well established as an immune toxin. But pesticides in general depress activity of white blood cells, B cells (which produce antibodies), and T cells (which appear to orchestrate the immune system).

DEFENDING AGAINST SUPERGERMS

The most common sources of supergerm infections are very close to home. The deadly *E. coli* 0157:H7 strain is now common in beef, particularly hamburger, although thorough cooking will kill it. Having surgery in a hospital increases your risk of contracting a serious infection. A study at a respectable Canadian hospital recently found that almost half of the women undergoing caesarean sections developed post-surgical infections. And in day-care centers, antibiotic-resistant *Streptococcus pneumoniae* is a common cause of ear and lung infections.

Your immune system is your first line of defense against these and other infections, and the biochemicals that constitute your immunity do not come out of thin air. Their source is ultimately your diet, a fact that is often forgotten. Just as nutritional deficiencies impair the immune system, you can boost your immunity by increasing your intake of these nutritional building blocks.

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Start with a good overall diet that emphasizes fresh natural foods. Freshness translates into higher vitamin levels, whereas processing reduces vitamin levels. Organic foods are particularly worthwhile because they do not contain immune-toxic pesticides. Two recent studies have confirmed that organically grown foods actually contain higher levels of vitamins and minerals than do supermarket foods—providing more of the nutritional building blocks needed for immunity. There's nothing unusual about organic foods—until modern pesticides were developed during World War II, that's everyone ate.

Cultured (or fermented) foods, from yogurt to sauerkraut, provide armies of beneficial bacteria that strengthen your body's defense against disease-causing bacteria. Such foods—along with so-called probiotic capsules—prevent *Salmonella* and other undesirable species of bacteria from gaining a foothold in your intestine.

Eating plenty of garlic helps as well. Garlic contains a number of well-documented antibacterial substances. It also possesses more than 70 sulfur-containing compounds that help the body make other immune-stimulating compounds, including cysteine and glutathione. While garlic probably should not be used as a replacement for antibiotics in a serious infection, it does help build a healthy immune system, and that might keep you well enough to avoid antibiotics.

ENHANCING YOUR IMMUNITY

Beyond diet, several nutritional supplements can jump-start your immune system and stimulate its ability to effectively fight infections.

• Vitamin C is probably the best known "alternative" remedy for the common cold, influenza, and other infections. In an analysis of 21 vitamin C studies, Harri Hemilä, PhD, of the University of Helsinki, found that 1 gram daily was the minimum helpful dose of vitamin C for fighting colds, and 4-6 grams daily reduced the length of colds by one-third.

Vitamin C also helps the immune system fight more serious infections, including mononucleosis and the human immunodeficiency virus (HIV). Although HIV infections are so far incurable, high doses of vitamin C do improve well being and extend life expectancy, according to the clinical experiences Robert Cathcart III, MD, of Los Altos, Calif.

• Vitamin A was termed the "anti-infective vitamin" back in 1928, and for respiratory infections it is often superior to vitamin C. High doses of vitamin A have dramatically reduced the childhood death rate from measles (which is a respiratory infection) in developing nations, and the World Health Organization has been a strong advocate of its use. It is also helpful in treating respiratory syncytial virus infections, which are common in children. The key to preventing an overdose is using high but brief doses of vitamin A. Taking 50,000 to 100,000 IU daily for two days is usually sufficient. Beta-carotene and other carotenoids also boost immune function, but they do not provide the immediate benefits of vitamin A.

• Selenium deficiency in people and animals triggers a dangerous mutation in the coxackievirus, which ordinarily causes infections comparable to the common cold. It's likely that deficiency of selenium and other nutrients causes mutations in other viruses. Researchers are investigating whether similar mutations, caused by nutritional deficiencies, lead to new strains of influenza.

Recently, Will Taylor, PhD, of the University of Georgia, theorized that the HIV and Ebola viruses have a huge appetite for selenium. He believes they spread in the body when cells stores of selenium are depleted. Interestingly, soil levels of selenium are low in Zaire, which is where both viruses originated.

• Other nutrients important to immunity include coenzyme Q10, the B-complex vitamins, vitamin E, and N-acetylcysteine.

In sum, your best ongoing defense against supergerms is supernutrition. Eat a diet rich in immune-stimulating vitamins and minerals, cultured food products, and garlic. Take a high-potency vitamin and mineral supplement, plus extra vitamins C and A as needed. At the same time, lower your intake of sugar and PUFAs, and use drugs like NSAIDS and antibiotics prudently.

Follow these steps, and the odds are your worst encounter with supergerms will be in reading newspaper headlines.

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Learn more about building your immunity in...

The Natural Health Guide to Beating the Supergerms

Jack Challem is the coauthor, with Richard P. Huemer, MD, of *The Natural Health Guide to Beating the Supergerms*, published by Pocket Books/Simon & Schuster in May 1997 (352 pages, $14.00). Although written for the consumer, the book contains more than 700 references of value to researchers and clinicians. The book is available from Barnes & Noble, Border's, and other book stores, and it can also be ordered through your local health food store.

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