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A look into Immune Health

THE HOW WHAT AND WHY

Gareth Michael

What can you do to boost your immune system?

On the whole, your immune system does a remarkable job of defending you against disease-causing microorganisms. But sometimes it fails: A germ invades successfully and makes you sick. Is it possible to intervene in this process and boost your immune system?

Evidence has shown that we know how to tap into the innate immune system to spike and boost the immune system so it becomes sharper without fear and inflammation. The idea of boosting the immune system sounds great, but the ability to do so has proved elusive for several reasons. The immune system is precisely that — a system, not a single entity. To function well, it requires balance and harmony. There is still much that researchers don't know about the intricacies and interconnections of the immune response. For now, there are no scientifically proven direct links between lifestyle and enhanced immune function.

But that doesn't mean the effects of lifestyle and a 'four doctor' model on the immune system aren't intriguing and shouldn't be studied and practised. Researchers are exploring the effects of diet, exercise, age, psychological stress, and other factors on the immune response, both in animals and in humans. In the meantime, general healthy-living strategies and taking your foot off the gas every now and then are a good way to start giving your immune system the upper hand.

Your first line of defence is to adopt a healthy lifestyle. Every part of your body, including your immune system, functions better when protected from environmental assaults and bolstered by healthy-living strategies.

Increase immunity the healthy way

Many products on store shelves claim to boost or support immunity. But the concept of boosting immunity actually makes little sense scientifically. In fact, boosting the number of cells in your body — immune cells or others — is not necessarily a good thing.

Attempting to boost the cells of your immune system is especially complicated because there are so many different kinds of cells in the immune system that respond to so many different microbes in so many ways. Which cells should you boost, and to what number? What is known is that the body is continually generating immune cells. Certainly it produces many more lymphocytes than it can possibly use. The extra cells remove themselves through a natural process of cell death called apoptosis — some before they see any action, some after the battle is won. No one knows how many cells or what the best mix of cells the immune system needs to function at its optimum level.

Immune system and age

As we age, our immune response capability becomes reduced, which in turn contributes to more infections and more cancer. As life expectancy in developed countries has increased, so too has the incidence of age-related conditions.

While some people age healthily, the conclusion of many studies is that, compared with younger people, the elderly are more likely to contract infectious diseases and, even more importantly, more likely to die from them. Respiratory infections, influenza, and particularly pneumonia are a leading cause of death in people over 65 worldwide. No one knows for sure why this happens, but some scientists observe that this

'increased risk correlates with a decrease in T cells, possibly from the thymus atrophying with age and producing fewer T cells to fight off infection'. Whether this decrease in thymus function explains the drop in T cells or whether other changes play a role is not fully understood. Others are interested in whether the bone marrow becomes less efficient at producing the stem cells that give rise to the cells of the immune system.

It goes without saying to practice good hygiene. Washing your hands regularly can prevent infections but there appears to be a connection between nutrition and immunity in the elderly. A form of malnutrition that is surprisingly common even in affluent countries is known as "micronutrient malnutrition." Micronutrient malnutrition, in which a person is deficient in some essential vitamins and trace minerals that are obtained from or supplemented by diet, can be common in the elderly. Older people tend to eat less and often have less variety in their diets. One important question is whether dietary supplements may help older people maintain a healthier immune system.

Diet and your immune system

Like any fighting force, the immune system army marches on its stomach. Healthy immune system warriors need good, regular nourishment. Scientists have long recognised that people who live in poverty and are malnourished are more vulnerable to infectious diseases. Whether the increased rate of disease is caused by malnutrition's effect on the immune system, however, is not certain. There are still relatively few studies of the effects of nutrition on the immune system of humans, and even fewer studies that tie the effects of nutrition directly to the development (versus the treatment) of diseases.

The greatest tool you have for protection. Your gut wall houses 70% of the cells that make up your immune system. Your body and its natural ability to regenerate and fight off foreign invaders. The fact that you have broken it down and it still tries to fight is amazing. But what would happen if you build it up to the point that it doesn't have to work that hard and it works to full efficiency just like your car. Nature is intelligent and when it

works within your vehicle you have something special there.
There is some evidence that various micronutrient deficiencies — for example, deficiencies of zinc, selenium, iron, copper, folic acid, and vitamins A, B6, C, and E — alter immune responses in animals. However, the impact of these immune system changes on the health of animals is less clear, and the effect of similar deficiencies on the human immune response has yet to be assessed.

So what can you do? If you suspect your diet is not providing you with all your micronutrient needs — maybe, for instance, you don't like vegetables — taking a daily multivitamin and mineral supplement may bring other health benefits, beyond any possibly beneficial effects on the immune system. Taking huge of a single vitamin does not. More is not necessarily better.

That being said there are a lot of great natural foods you can eat to help boost immune function.

Improve immunity with herbs and supplements?

Walk into a store, and you will find bottles of pills and herbal preparations that claim to "support immunity" or otherwise boost the health of your immune system. Although some preparations have been found to alter some components of immune function, thus far there is no evidence that they actually bolster immunity to the point where you are better protected against infection and disease. Demonstrating whether an herb — or any substance, for that matter — can enhance immunity is, as yet, a highly complicated matter. Scientists don't know, for example, whether an herb that seems to raise the levels of antibodies in the blood is actually doing anything beneficial for overall immunity.
Fasting is the fastest way to regenerate the cells within your stomach. Colon cleansing and natures boosters like supplements will allow you to be Superman or Woman. Take heed for your health will be how you see another month. Its always been more important than ever but for those who haven’t taken it serious its time for you to pay attention.

Stress and immune function

Modern medicine has come to appreciate the closely linked relationship of mind and body. A wide variety of maladies, including stomach upset, hives, and even heart disease, are linked to the effects of emotional stress.
Despite the challenges, scientists are actively studying the relationship between stress and immune function.
For one thing, stress is difficult to define. What may appear to be a stressful situation for one person is not for another. When people are exposed to situations they regard as stressful, it is difficult for them to measure how much stress they feel. One thing we know for sure is different stresses that can be applied to the body, chemical, emotional, physical, stresses to name a few. See my blog on stresses on the body here.

Most scientists studying the relationship of stress and immune function, however, do not study a sudden, short-lived stressor; rather, they try to study more constant and frequent stressors known as chronic stress, such as that caused by relationships with family, friends, and co-workers, or sustained challenges to perform well at one's work. Some scientists are investigating whether ongoing stress takes a toll on the immune system.
But it is hard to perform what scientists call "controlled experiments" in human beings. In a controlled experiment, the scientist can change one and only one factor, such as the amount of a particular chemical, and then measure the effect of that change on some other measurable phenomenon, such as the amount of antibodies produced by a particular type of immune system cell when it is exposed to the chemical. In a living animal, and especially in a human being, that kind of control is just not possible, since there are so many other things happening to the animal or person at the time that measurements are being taken.

Breathing is one thing we focus on during meditation and why meditation is so important to combat stress, I have clients focus a lot on breathing when exercising as a relaxed body can take in more oxygen.

Does being cold give you a weak immune system?

Almost every mother has said it: "Wear a jacket or you'll catch a cold!" Is she right? So far, researchers who are studying this question think that normal exposure to moderate cold doesn't increase your susceptibility to infection. Most health experts agree that the reason winter is "cold and flu season" is not that people are cold, but that they spend more time indoors, in closer contact with other people who can pass on their germs.

But researchers documented an increase in upper respiratory infections in competitive cross-country skiers who exercise vigorously in the cold, but whether these infections are due to the cold or other factors — such as the intense exercise or the dryness of the air — is not known.

Should you bundle up when it's cold outside? The answer is "yes" if you're uncomfortable, or if you're going to be outdoors for an extended period where such problems as frostbite and hypothermia are a risk. But not necessarily because of your immunity.

A cold shower for 30 seconds to a minute in the morning can have huge benefits in blood flow to the body and helping the mind to focus.

Exercise: Good or bad for immunity?

Regular exercise is one of the pillars of healthy living. It improves cardiovascular health, lowers blood pressure, helps control body weight, and protects against a variety of diseases. But does it help to boost your immune system naturally and keep it healthy? Just like a healthy diet, exercise can contribute to general good health and therefore to a healthy immune system. It may contribute even more directly by promoting good circulation, which allows the cells and substances of the immune system to move through the body freely and do their job efficiently.

For now, even though a direct beneficial link hasn't been established, it's reasonable to consider moderate regular exercise to be a beneficial arrow of healthy living, a potentially important means for keeping your immune system healthy along with the rest of your body.

Phagocytes can move through your blood vessels and tissue to ingest or absorb invaders. Phagocytes target organisms that cause disease (or pathogens) and toxins. Toxins are a natural poison

produced by some organisms as a form of protection. Sometimes when a phagocyte has absorbed a pathogen, it sends out a chemical that helps lymphocytes identify what kind of pathogen it is.
Each pathogen carries a specific type of antigen, and each lymphocyte in your body carries antibodies meant to fight the antigens carried by pathogens. There are three main types of lymphocytes in the body: B cells, T cells, and natural killer cells.
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B cells create antibodies that attack bacteria, viruses, and toxins that enter the body. T cells kill cells in the body that have been overtaken by viruses or that have become cancerous. Like T cells, natural killer cells kill infected or cancerous cells. But instead of producing antibodies, they make a special enzyme, or chemical, that kills the cells.
Your body creates new antibodies whenever it's infected with a new antigen. If the same antigen infects you a second time, your body can quickly make copies of the corresponding antibody to destroy it.

Fever and inflammation can be good signs

Having a fever and inflammation can be unpleasant, but they're signs that your body is doing its job. Fever releases white blood cells, increases metabolism, and stops certain organisms from multiplying.
Inflammation occurs when each damaged cell releases histamines. The histamines cause the cell walls to dilate. This creates the redness, heat, pain, and swelling of inflammation. As a result, your body limits the effects of the irritant. That being said, constant inflammation in the gut lining is bad and should be addressed, that feeling you are getting when you are constantly bloated from food is your bodies way of telling you you are intolerant to something you ate. See my blog here on food intolerance.

Sleep now or forever hold your peace

Have you been running around like crazy, and suddenly find yourself sick? That's your immune system getting its revenge.
If you're not getting more than five hours of sleep a night, your immune system can become depressed, just like you. This leaves you open to colds, flu, and infection. Read more on my e-book to help with sleep.
Getting a good night's sleep. Your body can't function correctly if you aren't sleeping well.

Some sun is good

Vitamin D3 blended with organic sunflower oil is good source to help with the absorption of calcium and phosphorus. It will help to reduce the effects of osteoporosis (brittle bones) and osteomalacia (bone softening) The daily use of vitamin D3 will help your body naturally produce vitamin D and promote strong bones, teeth and a healthy immune system. Vitamin D3 is also known as the sunshine vitamin. This is the same vitamin that is produced when we are exposed to sunlight.

This vitamin is particularly important during the winter months when we have shorter days and we spend most of our time indoors. Getting sufficient vitamin D3 is important not only for your bones, teeth and immune system, nervous and cardiovascular system, but it will also help ward off an array of bad things like depression, heart disease, and certain cancers. It's even good for people with autoimmune disorders and help your mood and SAD (seasonal affective disorder).
A fair-skinned person only needs about 10 minutes on a sunny day to get all the vitamin D they need. However, too much sun can cause temporary damage to your immune system and eventually lead to skin cancer. Remember some sun is good, but you need to protect your skin when you plan to spend time outside.
Skincare experts recommend all people wear sunscreen with broad-spectrum UVA and UVB protection, Sun Protection Factor (SPF) 30 or higher, and water resistance. When the sun is very strong, you should also wear protective clothing, such as:

- long-sleeved shirts
- long pants
- wide-brimmed hats
- sunglasses

Also, stay mostly in the shade when the sun's rays are strongest, between 10 a.m. and 2 p.m.

Stress damages your immune system

Your immune system is ready for anything you can throw at it. But it can only handle so much.
Stress has a significant effect on your immune system. During stress, a series of events release cortisol, adrenaline, and other stress hormones from the adrenal gland. Together they help your body cope with stress. Normally, cortisol is helpful because it decreases the inflammation in the body that results from the immune responses caused by stress.
But if a person is chronically stressed, stress hormones can affect the way the body functions over time. This increases your risk of health problems, including:

- anxiety
- depression
- digestive issues
- heart disease
- sleep disorders
- weight gain
- problems with memory and concentration

It's important to find healthy ways to deal with your stress. This will decrease your risk of long-term stress and its related health problems. Balance your Ying and Yang. Some good ways to reduce stress include:

- meditation
- yoga
- acupuncture
- talk therapy
- art therapy
- exercise start with a basic hip stretch or mild zone exercises.
- Reducing alcohol intake. If you do drink, these steps can help the next day.

Laughter helps your immune system

The saying goes that laughter is the best medicine, and there's truth to that. Laughter releases dopamine and other feel-good chemicals in the brain, all of which can help decrease stress. Spend time around people who bring joy in your life.
Twenty minutes of laughter a day may not keep the doctor away, but it may help keep your immune system working properly.

Germs keep you healthy

Your gut is filled with tons of bacteria and other things to help you digest your food. But germs outside your body are normally regarded as vile and disgusting. While some of this may be true, you need those germs to stay healthy.

Your immune system can adapt, which is why human beings have been around for so long. Once your body comes in contact with a foreign substance, it attacks it and remembers it. If it comes back, your body knows what to do. This is most apparent with measles: one infection is usually enough to protect you for life.

Autoimmune disorders

Sometimes your immune system attacks the tissues in the body, causing disease. This is called autoimmunity.

Most people's immune systems get used to their own tissue before they are born. They do this by turning off the cells that would attack them. Autoimmune disorders are when the body mistakenly attacks healthy tissue. This is what occurs in people with autoimmune diseases such as:

- multiple sclerosis
- lupus
- rheumatoid arthritis
- psoriasis

Keep your immune system strong

Stay Blessed, and listen to your body.

Gareth Michael