

## Dr. Z's Medical Report (From Everyday Health)

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### **Immune system boosters – one of the biggest scams around**

It's a good thing that all the so-called immune system booster products don't work. You wouldn't want them to.

That's right. I just said that there are no effective immune system booster products. I know that the Internet is awash in products claiming to enhance the immune system, but there's simply no scientific evidence that they work.

But, contrary to what you might think, that's a good thing! Of course it's not a good thing from the consumer's economic point of view. All the millions that people spend on these products does nothing more than fill the coffers of the unscrupulous companies peddling them (how these people even sleep at night is beyond me!).

It is, however, a good thing they don't work from a health perspective. With few exceptions, you wouldn't want your immune system to be boosted. Far more commonly, you'd want your immune system dampened down. So who would want their immune system boosted? Someone with **HIV/AIDS** might. Look at the name: acquired immune deficiency syndrome. Because immune deficiency was so rare before HIV, a new disease name had to be coined. In AIDS, the Human Immunodeficiency Virus causes parts of the immune system to stop working. And the results, without treatment, can be devastating.

Fortunately, the vast majority of people don't have HIV/AIDS and, because of that, they don't need immune system enhancement. And the people who do have HIV/AIDS can attest to just how hard it is to enhance their immune systems (in fact, the only way is by eliminating the virus with antiviral therapy). If any of these so-called immune system boosters really worked, they'd immediately be used in the treatment of HIV/AIDS (but they don't and therefore aren't).

So let's look at the flip side. Let's look at illnesses cause by immune system over-activity. The list here is, unfortunately, huge. How many people do you know who suffer from allergies or asthma? For these people, things in the environment that most people abide without incident cause their immune system to overreact leaving them suffering miserably.

Then we have all the inflammatory diseases: inflammatory bowel disease (**Crohn's** and **ulcerative colitis**), inflammatory arthritis (**rheumatoid** for example), and inflammatory skin disease (**psoriasis** for one). By definition, inflammatory diseases are caused by an overactive immune system. Sometimes these are known as autoimmune disorders because the immune system, instead of reacting to foreign material, is reacting to the body's own tissues. The list of autoimmune diseases is already quite long and, every day, new research is showing that more and more illnesses are actually immune-mediated. Just take a quick look at these lists of **known and suspected autoimmune diseases**.

I mentioned above that if anything, you'd probably want your immune system dampened down. That's because the treatment for the problems noted above is to try to ratchet down the over active immune system. Nearly all these disorders respond beautifully to treatment with the anti-inflammatory drugs called steroids (that's corticosteroids, not the anabolic steroids abused by athletes). Unfortunately, however, steroids have all kinds of side effects that severely limit their use (otherwise, we'd probably all be taking them).

## **Immune system boosters are a scam, part 2**

Last time, I wrote about why immune system boosters are both ineffective and undesirable. Far more diseases are caused by immune system *over*-action than by *under*-action. So it's more likely you'd need to be treated with an immunosuppressant like a steroid than you would with an immune system booster (if there were such a thing!). Why then is there such an apparent demand for these products? Of course, part of it is created by incessant advertising and the alluring promise of wonderful health benefits. But these scams only work because most people simply don't understand how the immune system works and can therefore be easily misled.

So a little painless education is in order. At its most basic level, our immune system is designed to do two things: to recognize dangerous things in the environment and then to get rid of them. We want to be able to respond to foreign organisms like bacteria, viruses and parasites so they don't cause infection, or, if they do, to get rid of them as soon as possible. So we have special cells that help identify the bad actors. And if you think about it, this identification process has to be pretty exacting. First of all, we have to be able to distinguish between self and non-self so we don't attack our own tissues. This is why you'd reject an organ transplant from an unmatched donor â€“ it's not you! Moreover, within the realm of foreign, you have to know what's potentially harmful and what's safe. These activities require a very sophisticated ID system. And it's this ID process that makes the immune system so complex and so hard to “boost.”

Think of it like a border crossing checkpoint. Every person (organism) has to be scanned, identified and checked for danger. They have to be checked every time they try to come in, and the identification has to be exact. And if we've encountered a dangerous person (organism) before, we'd like to remember that and be able to react quickly and efficiently. This is exactly the way the immune system works. Each foreign substance gets uniquely scanned, identified, reacted to and cataloged for future reference.

The immune system reacts to the environment. It works on a case-by-case basis, reacting specifically and uniquely to each foreign substance. There's no way to enhance its activity across the board because its activity occurs step-by-step, one substance at a time.

Actually, we do know how to increase immunity, but only on a case-by-case individual basis. Every time you encounter a bad actor you “boost” your immunity to it. But only to *it*. So vaccination is one way we've learned to “boost” our immunity. If you become immune to chicken pox, however, that doesn't confer immunity to measles. Every organism that we want to protect against has to have its own vaccine. That's why we've developed separate vaccines for tetanus, diphtheria, whooping cough, measles, mumps, rubella, chicken pox, influenza and, most recently, against the human papilloma virus responsible for genital warts and cervical cancer. It's the way we eliminated smallpox from existence. One organism at a time. Yes, some of these vaccines are combined into one shot (e.g., DPT: diphtheria, pertussis, tetanus and MMR: measles, mumps, rubella), but within the shot each vaccine is separate and unique.

I'm hopeful that it's now a bit clearer why even the concept of an immune system booster is essentially absurd. Except at the vaccine level of detail, whereby you get immunized against a particular foreign organism, there's just no way to "boost" immunity across the board. It just doesn't work that way.

So what is it that's being sold and why is it allowed? Great questions. The various products alleged to be immune system boosters are all nutritional supplements like vitamins, minerals, herbs and the like. And yes, they do contain components required by the immune system for proper function. You do need certain vitamins and minerals for all the various parts of your body to work. But assuming you eat a balanced average American diet, you're getting everything you need from your food. And if you add in a multivitamin/mineral supplement like many people take, you're surely covered (even that is really unnecessary, but some people like extra insurance).

The problem is that nutritional supplements are basically sold as foods and as such they are available over-the-counter for sale to all without a doctor's prescription. As to why they can make the health claims they do with impunity, your guess is as good as mine. But there is one thing you should know. For all its problems, it's not the FDA that is to blame. The FDA regulates the advertising of prescription drugs *not* over-the-counter products. That advertising is regulated by the FTC, the Federal Trade Commission. And if you think it might have something to do with the FTC not being staffed with medical professionals, you're probably right! But if you think it has more to do with the activity of lobbyists working Congress on behalf of the supplement industry, you're probably getting warmer!

#### References:

1. Everyday Health - <http://www.everydayhealth.com>
2. Dr Z's Medical Report [Immune system boosters – one of the biggest scams around](http://www.everydayhealth.com/blog/zimney-health-and-medical-news-you-can-use/immune-system-boosters-one-of-the-biggest-scams-around/)  
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3. [Dr Z's Medical Report Immune system boosters are a scam, part 2](http://www.everydayhealth.com/blog/zimney-health-and-medical-news-you-can-use/immune-system-boosters-are-a-scam-part-2/)  
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