

Some health products paring back on claims they boost the immune system

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Airborne, the popular dietary supplement created by a germ-averse schoolteacher, no longer boasts that it can prevent your cold or ease the aggravating symptoms. Instead, the packaging says the effervescent pill helps "support your immune system."

To many people, shoring up the body's defensive shield is a logical way to get through the cold and [flu season](#), especially with the H1N1 virus lurking. But despite what marketers promise, there's little evidence that herbal cocktails, vitamins, minerals and even specific foods have a beneficial effect on the [immune system](#).

Some nutrients may raise the number of cells that fight [infection](#) in the body or increase their activity, but experts say that doesn't necessarily translate to enhanced immunity.

"It's really impossible to boost your immune system instantly by taking a pill," said Dr. Renee Scola, a primary care doctor at Northwestern Memorial Hospital. "What keeps it healthy are the common-sense things you do on a daily basis: Eating a well-balanced diet, sleeping, exercising and de-stressing yourself."

Immunity, or protection from disease-causing germs, is often seen as the holy grail of health. It's what parents want most for their children, according to the journal *New Nutrition Business*, which tracks food, nutrition and health trends. The global retail market for products related to "digestive health and immunity" is projected to exceed \$22 billion by

2013, according to the market research firm Packaged Facts.

To enhance immunity, the thinking often goes, you simply need to get more [immune cells](#) circulating throughout the body. The herb echinacea, for example, has been shown to increase the function of [white blood cells](#) called macrophages, which can destroy invading germs.

The problem with that is scientists don't know what level of immune system cells best helps the body resist disease. There is a wide variety of immune cells and it's not known how they interact. The immune system, experts say, is a complex system that doesn't need to be enhanced in healthy people.

"We know the immune system falters in extreme cases, but there's a wide spectrum where it works fine," said David Nieman, a researcher in exercise immunology and director of the Human Performance Laboratory at Appalachian State University. "You can't boost it in that spectrum by adding nutrients."

Most immune system claims are "misleading," he added: "You can't strengthen the immune system by adding extra vitamins or minerals unless the person has a severe deficiency as a result of a disease like HIV."

Trying to crack down on assertions that certain products can cut the risk of colds or flu, the Federal Trade Commission last year accused Airborne of making false and unsubstantiated claims of cold-prevention and germ-fighting. Airborne, which said it appreciated the rule clarification, agreed to pay up to \$30 million.

Last month, CVS Pharmacy paid nearly \$2.8 million to settle FTC charges related to a similar dietary supplement called Airshield.

Dannon Co. recently settled a class-action lawsuit alleging that company engaged in false advertising by touting the health benefits of yogurt products. Dannon, which denied wrongdoing, agreed to set up a \$35 million fund for reimbursing consumers. Labels that once claimed "a positive effect on your digestive tract's immune system" instead are to say the yogurt will "interact" with that system.

In general, a food or vitamin can "provide support" for body functions, said Richard Cleland, the FTC's assistant director of advertising practices. "But to say something 'strengthens,' 'builds' or 'enhances' somehow implies you're building the wall higher and, as a result, 'hey, it's harder for the little germs to get over.' That's something that needs proof."

The immune system involves an elaborate network of cells, tissues and organs that functions like an army whose job is to defend the body against microbes that can make us sick.

"The immune system is made up of scouts -- or white blood cells -- that look for invaders or anyone who might harm the host," said family physician David Rakel, director of integrative medicine at the University of Wisconsin at Madison. "If the scouts find something, they blow the whistle and recruit a number of other cells ... to immobilize and destroy the invading organism."

When the immune system recognizes an enemy, it produces antibodies to help neutralize and expel the unwelcome visitor from the body. It's a continual process in the skin, lungs and gastrointestinal tract, said Rakel.

Mistakes, or friendly fire, can occur. When for some reason the body attacks itself in the same way it would kill a germ, this treason can unleash autoimmune disorders, including allergies, rheumatoid arthritis, some forms of diabetes and lupus.

There is good evidence that physical and emotional stress, a lack of sleep, a poor diet and even binge drinking all can weaken the body's protective shield.

Nieman's research, for example, has found that marathon runners are six times more likely to get sick in the week following a 26.2-mile race than during training because the immune cells throughout the body "go through transient dysfunction after heavy exertion that lasts longer than 75 to 90 minutes," he said.

"The body recognizes it as stress ... and there's a downturn in the body's ability to protect the athlete from sickness," Nieman said.

In moderation, however, regular activity and exercising 30 to 60 minutes a day can have an astonishingly protective effect, said Nieman. Exercisers can expect to reduce sick days by a third to a half; when they do get sick, the symptoms are less severe.

Sleep is thought to be another important factor related to immunity. In one study, published in the *Archives of Internal Medicine*, researchers gave study participants nasal drops containing a cold virus. Those who slept less than seven hours a night were three times more likely to get sick than those who slept eight hours a night.

At this point, researchers say, the best way to maintain a strong immune system is to keep your entire body healthy by incorporating the usual healthy living strategies: getting more sleep, reducing stress levels and eating a [balanced diet](#).

"Herbs and nutrients can help increase the numbers of chemicals and cells in immune system but it doesn't always translate to improved immune function," Rakel said. "There are certain things that we know that do improve it; we look behind what it does to the cells and actually

look at outcome."

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