

Body wars

Author Donna Jackson Nakazawa answers our questions about the spate of autoimmune diseases

By David Kohn
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For 10 years, Donna Jackson Nakazawa has suffered from a range of autoimmune diseases - ailments in which our cellular defense system mistakes friend for foe and attacks the body's tissues. Among the diseases caused by autoimmunity are: rheumatoid arthritis, multiple sclerosis, lupus, Type 1 diabetes, thyroiditis and many others.

A journalist and author who has published several books, Nakazawa became fascinated with autoimmunity and spent the past three years exploring the topic. The result is her latest book, published this spring: *The Autoimmune Epidemic: Bodies Gone Haywire in a World out of Balance and the Cutting-Edge Science that Promises Hope*.

Here's the author on her book, her health and possible solutions to the problem:

How did you decide to write the book?

Three years ago, I developed Guillain-Barre syndrome, an autoimmune disorder that paralyzed my arms and legs. For a long time, I couldn't move. It took me five months to learn to walk again. I decided that if I could ever get back the ability to type, I would write about what causes autoimmune diseases and what we can do about them. After I got better, as I talked to scientists in the field, I realized that the story was actually much bigger. These diseases have become a frightening epidemic. People at [the National Institutes of Health] were telling me this was scary, and no one was talking about it.

So, how big is the problem?

Twenty-four million Americans have an autoimmune disease. That's one in 12 Americans, and one in 9 women. Nine million Americans have cancer, and 22 million Americans have heart disease. So more than double the number of people who have cancer have an autoimmune disease. Scientists around the world have been looking at this, and over the past 10 years, 15 peer-reviewed journal articles have found that rates of autoimmune disease have been doubling and tripling around the world. You begin to see that not only do we have an epidemic, but it's growing.

Why does autoimmune disease remain relatively unknown as a medical phenomenon?

The idea that autoimmune diseases even existed was not widely accepted in medicine until the late 1970s. It wasn't until the late 1980s that the idea was taught in most med schools. So we are late out of the gate compared to our war on heart disease, our war on cancer.

The other thing that happened is that as autoimmune diseases were discovered, they were farmed out to different specialties. The neurologists took over on neurological autoimmune diseases, the rheumatologists took over on others. So you have groups of specialists working without any kind of integration.

In your book, you argue that our environment plays a large role in this epidemic.

Between 1940 and 1980, we were engaged in the largest industrial growth spurt of all time. ... We introduced every kind of chemical you can imagine: 80,000 new chemicals have now been approved for use in the U.S.

I talked to scientists all over the world, and they suspect that these chemicals are confusing our immune systems. As you and I are talking, our immune system has been checking out the safety of foreign agents that our body is coming into contact with hundreds, thousands of times, over and over. Usually, the system works.

But what's happening now is that our immune systems are getting so many hits, nonstop - not only from these 80,000 chemicals but from our diets - that they're overtaxed. We're eating very differently than we did 100 years ago. A lot of foods that we're eating are full of chemicals, pesticides and additives as well. So our diet is also putting stress on our immune system.

Think of each new thing, foreign invader - whether it's a bacteria, virus or chemical - that comes into your body as having a bar code on it. The immune system has to read those bar codes and decide if this new invader is safe or not. What's happening with all the chemicals in our environment is that many times our immune system is presented with a bar code that is very similar to tissue in our own body. When our immune system is overwhelmed, mistakes get made. The body mistakes the tissue of the body for the foreign invader and attacks both.

Give me an example of an immune-altering chemical.

I'll give you [three]. Trichloroethylene, a solvent used in dry cleaning, paint thinners and strippers, glues and adhesives; PFOA, a breakdown chemical of Teflon found in nonstick cookware, car parts, flooring, computer chips, phone cables, carpet guard, upholstery, new clothing, grease-resistant french-fry boxes and disposable coffee cups; and bisphenol A, or BPA, a plastics building block used in baby bottles, dental sealants, the resin that lines food cans, eyeglass lenses and food packaging; and phthalates, plasticizers found in cosmetics. Recent studies show that low doses of all of these can alter the basic function of the immune system, and, in many cases, trigger an autoimmune response.

What should be done to fix the problem?

[National Institutes of Health] allocates almost \$600 million for autoimmune disease research every year. That contrasts with \$5 billion annually for cancer, which afflicts 9 million Americans. The other thing that we need to do is to make autoimmune disease a reportable disease. If your aunt goes in to see the doctor tomorrow and is told she has breast cancer, that must be reported by law to the federal government. Autoimmune diseases are not reportable diseases. Therefore, we really have no idea how big the problem is. Many scientists believe that the 24 million figure is vastly underreported.

How has Europe responded to the proliferation of untested chemicals?

Europe operates by what is called the precautionary principle, which says that if you have enough evidence to show that a product is probably doing harm, it behooves us to take that product off the market and do more studies before we bring it back on.

Europe has established a program called REACH (Registration, Evaluation and Authorization of Chemicals), and over the next 10 years, 30,000 chemicals will undergo safety testing. Guess who's paying for it? Not the taxpayer, the chemical companies. In this country, we are light years behind Europe in terms of public policy. We know that certain agents damage the immune system, but we keep saying, "We need more studies to prove it." Until it's harmed enough people like tobacco, we're just not going to do anything about it.

What can the average person do in daily life to reduce the threat?

If you think of the problem like a barrel that's too full, you can make small changes without feeling totally overwhelmed. One of the easiest things to get rid of are chemical cleaners. There are so many different nonchemical cleaners on the market now, there is almost no excuse not to clean green. Or make your own: Take one part vinegar, two parts water and a dash of lemon, you've got a pretty good cleaner. Shop for nontoxic cosmetics and use alternatives to pesticides.

We also know that diet can have a profound effect on the immune system. If you clean up your diet, your body has fewer foreign agents to assess. So eat fewer processed foods, fewer packaged foods, more organic fruits and vegetables. And we know that stress hormones play a key role in the onset of many autoimmune diseases. So lessening stress is crucial.

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Autoimmune disease

- In these ailments, the body mistakenly attacks its own tissues.
- Key autoimmune diseases include rheumatoid arthritis, multiple sclerosis, lupus, Type 1 diabetes, thyroiditis, Guillain-Barre syndrome and celiac disease.
- Twenty-four million Americans have an autoimmune disease, more than double the number with cancer.
- Diseases strike women more often; four of five patients in this country are women.

[Source: *The Autoimmune Epidemic: Bodies Gone Haywire in a World out of Balance and the Cutting-Edge Science that Promises Hope*]

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