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Longevity Expert Shares Clues About Drivers of Chronic Disease

Analysis by Dr. Joseph Mercola | November 22, 2026

STORY AT-A-GLANCE

- Dr. Ahvie Herskowitz, a former UCSF professor, treats complex health issues by addressing root causes. He believes microbiome problems and leaky gut are foundational contributors to chronic disease
- In Herskowitz's view, chronic diseases often result from accumulated toxicities and nutritional deficiencies. Herskowitz estimates 80% to 90% of Americans are metabolically unhealthy, which he attributes largely to processed foods and environmental toxins
- "Nuisance symptoms" like toenail fungus or indigestion could indicate underlying health issues. In an informal medical records analysis Herskowitz requested, people with Alzheimer's had roughly 2.5 times more such symptoms over the previous 25 years than matched controls without the disease
- To measure biological age, Herskowitz uses tests for oxidative stress, chronic immune function, mitochondrial function, and senescent cells. He also emphasizes the importance of monitoring serum ferritin levels
- Herskowitz describes an innovative cancer test that analyzes tumor genomics to guide chemotherapy decisions. He believes this approach could change the way chemotherapy is given in the United States

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I interviewed Dr. Ahvie Herskowitz, former clinical professor of medicine at the University of California, San Francisco, and founder of Anatara Medicine, a multidisciplinary integrative center in San Francisco.[1] Herskowitz, an internist, has a deep foundational knowledge and scientific background that's ideal for treating complicated healthcare cases.

At his center, they use advanced techniques aimed at helping people restore their health, including strategies for longevity and treatments for very ill patients, including those with autoimmunity and gut problems, as well as support for people going through cancer care.

Microbiome Issues, Leaky Gut Linked to Failure to Thrive

Herskowitz treats illness by looking at the foundational causes of disease. We discussed that a leading cause of death is, in my view, endotoxemia resulting in septic shock. This occurs when endotoxin is released by facultative anaerobes, otherwise called oxygen-tolerant bacteria, which shouldn't be abundant in your gut.

These pathogenic bacteria secrete a very virulent form of endotoxin, also known as lipopolysaccharides (LPS), which cause inflammation if they translocate across the compromised gut barrier into the systemic circulation. Leaky gut, or a disturbed microbiome, is considered by Herskowitz to be one of the foundational contributors to chronic disease.

Herskowitz explains, "I think that everyone that's doing poorly and failing to thrive has a biome issue and a leaky gut issue, almost 100%. So that is a possibility that is lurking there. And again, in the standard allopathic intensive care units, it's not considered a foundational issue." Herskowitz says that cancer patients who decline often slide into a state he calls failure to thrive.

"They've gotten burdened by so many different layers of toxicity that their system cannot keep up anymore," he says. "And … that's eventually due to mitochondrial failure throughout the body."

Patients Overwhelmed by Toxicity and Nutritionally Depleted

In Herskowitz's view, chronic diseases often result from a buildup of toxicities and a lack of nutrition and healing in the body to compensate for them. "All these toxicities affect every cell of the body simultaneously," Herskowitz says.

"So, we all have relative strengths and weaknesses. And that comes up as to what organ is going to be the most involved. But we all have to almost decide whether we're going to release these toxins on a day-to-day basis … otherwise our concept of longevity is going to be badly estimated."

Herskowitz estimates that 80% to 90% of the U.S. population has metabolic syndrome, which increases the risk of heart disease, stroke, and Type 2 diabetes. By formal diagnostic criteria, 34.7% of U.S. adults had metabolic syndrome in 2011 to 2016,[2] but broader measures paint a bleaker picture: In 2017 to 2018, only 6.8% of U.S. adults had optimal cardiometabolic health.[3]

Obesity is another epidemic. In Herskowitz's view, both are due to several factors, including toxicity that started more than 50 years ago as the food supply became increasingly processed. Herskowitz explains:

> *"This is where you get to the concept of an infinite number of toxicities, feeding a system that only has a finite way of cell responses … it's the seed oils [containing] **linoleic acid**, it's the ultraprocessed foods and snacks. So, when you go to a general store today …*
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> *The overwhelming majority of the food that's sold there is not to be eaten for human consumption … and then the concept of our farming system has evolved toward efficiency … listen, industry is not our friend. It's not our partner, and it's not our foe either. Their job is to sell more stuff, and to do so in an efficient way.*
>
> *… I watched it over 45 years, I mean, '70s, '80s, '90s, stuff is getting worse. Now the most difficult group to get an appointment with in the hospital is not the cardiology department, because it's usually the largest department, but it's*

endocrine and rheumatology, neurology."

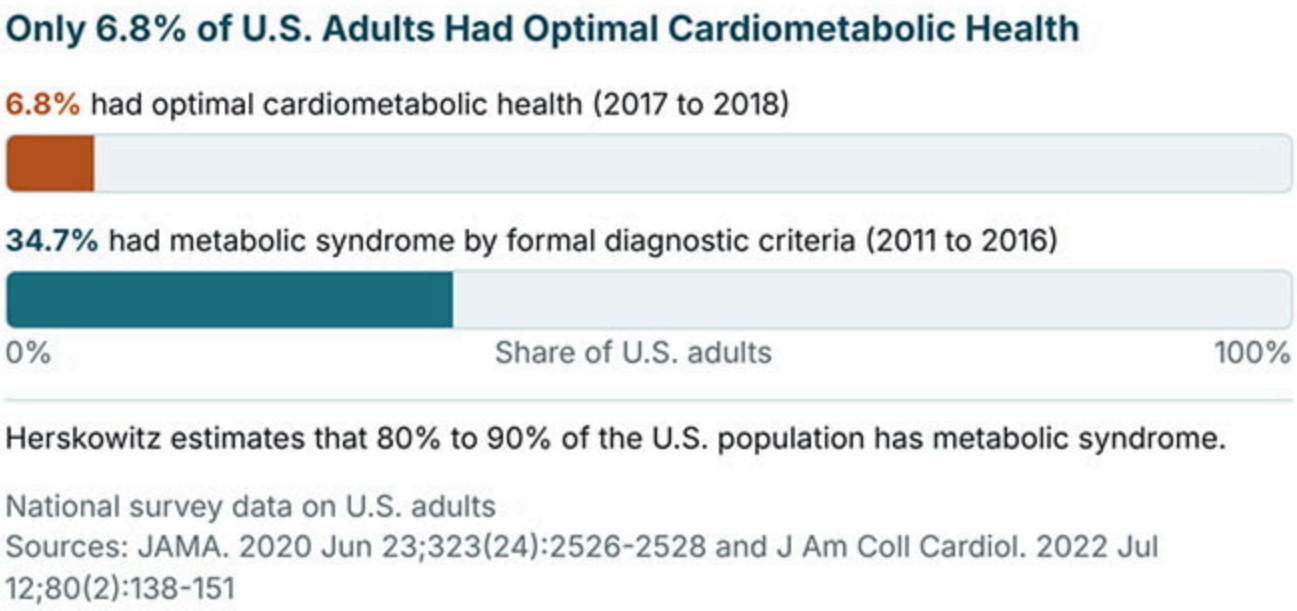


Figure 1. *National survey data show 34.7% of U.S. adults had metabolic syndrome in 2011 to 2016, and only 6.8% had optimal cardiometabolic health in 2017 to 2018.*

In other words, Herskowitz sees exposure to ultraprocessed foods and other toxicities as wreaking havoc in the body and driving widespread chronic disease. "It causes havoc within the communications network, so that hormones go awry, inflammation goes awry … and the detoxification system is overwhelmed," Herskowitz explains.

This leads to all the different disorders … it's a straightforward thing … you have this nutrient depletion, which obviously … you're more susceptible to everything. And then each of us is reaching our limit, so to speak."

Why You Should Pay Attention to 'Nuisance Symptoms'

Herskowitz often sees patients when they're very ill — but they don't start out this way. In one analysis, he asked a team with access to a large medical records database to look back 25 years in the records of patients with Alzheimer's disease and count the

conditions in their past medical history. The people who ended up with Alzheimer's had far more "nuisance symptoms" over those years. These included symptoms such as toenail fungus, GERD, indigestion, occasional diarrhea, or even high blood pressure.

The Alzheimer's patients had 2.5 times more nuisance symptoms than matched controls who didn't have Alzheimer's. This was an informal records analysis Herskowitz requested, not a peer-reviewed published study. "It's consistent with this toxicity type of concept," he says. "When you're toxic, you have all these little things going on, and you don't pay attention to them, because they're not severe."



Figure 2. *In an informal records analysis, people with Alzheimer's had 2.5 times more nuisance symptoms over the previous 25 years than matched controls.*

These may be clues that something is off balance in your body, which may be easier to address in the early stages. Unfortunately, most physicians aren't looking for these types of systemic problems.

Tests to Measure How Old You Really Are

One of the challenges facing longevity medicine is figuring out what to measure in order to get an idea of how old you really are — meaning your biological age, which is how well your body is functioning compared to your chronological age, the actual number of years

you've been alive. Biological age can be younger or older than your chronological age depending on your lifestyle, environmental factors, and genetics.

Herskowitz believes oxidative stress is one useful measure of where you are at a given moment in time, and tracking it over the years may help predict where you're headed. At his center, they use a urine test called 8-hydroxy-2'-deoxyguanosine (8-OHdG) as a biomarker for oxidative damage, and they use lipid peroxides as a marker. He also uses tests to measure chronic immune function, mitochondrial function, and senescent cells.

Senescent cells are cells that have stopped dividing and entered a state of permanent growth arrest without undergoing cell death. These cells can no longer replicate, but they remain metabolically active.

Senescence is a natural part of the cellular lifecycle and serves as a mechanism to prevent the proliferation of damaged cells, which could otherwise lead to cancer. However, the accumulation of senescent cells over time contributes to aging and various age-related diseases.[4] According to Herskowitz:

> *"[We look for] concepts of the subtlety of how the immune system is being suppressed. And it's not the current CBC [complete blood count]. It's more on the chronic side. So how does it deal with biological toxins? And that's more a journey into the complement immune cascade, which deals with chronic infection, chronic biological toxins, and how to deal with it.*
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> *So, measures of complement cascades for autoimmunity as well. And then probably the biggest one, other than mitochondrial function and oxidative stress, to me is if we can measure the number of senescent cells we have in our body at any time. The higher it is, the worse you're doing."*

Herskowitz also uses markers of metabolic pathways that measure glucose metabolism. "It's not as simple as glucose," he says. "It's more inflammatory/metabolic/hormonal," or the fact that patients are so nutrient deficient that their system isn't generating sufficient energy. Further, on a day-to-day basis, Herskowitz uses **serum ferritin level** as an important marker of health.

I have also long stated that serum ferritin, which reflects stored iron and can also rise with inflammation, is one of the most important tests that everyone should have done on a regular basis as part of a preventive, proactive health screen. Talk to your healthcare provider about whether this testing is appropriate for you.

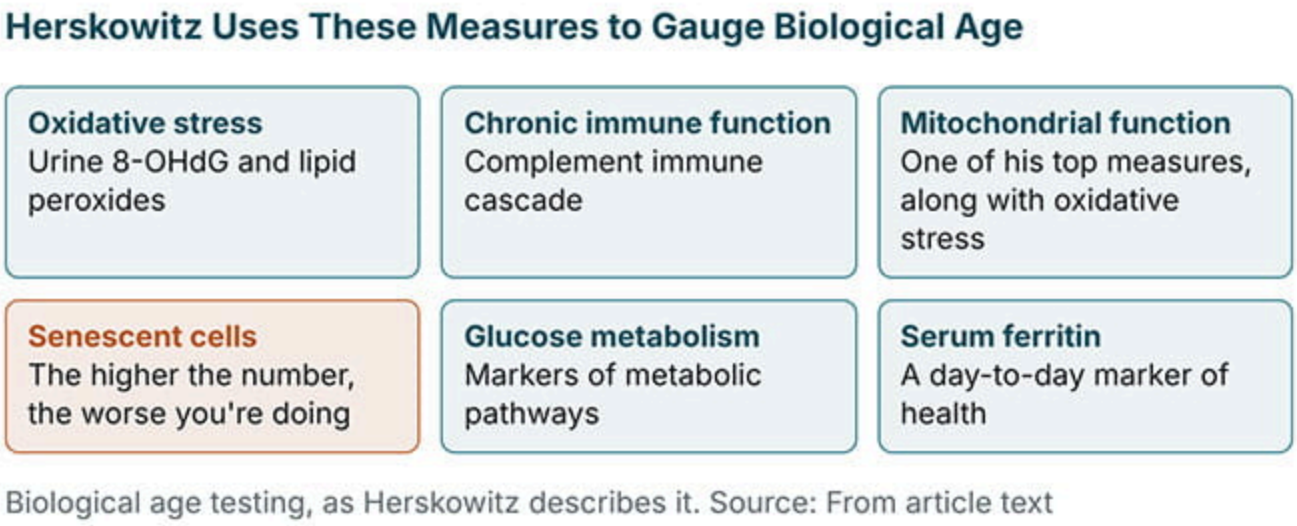


Figure 3. *To gauge biological age, Herskowitz measures oxidative stress, chronic immune function, mitochondrial function, senescent cells, glucose metabolism, and serum ferritin.*

Innovative Test for Cancer Treatment

Meanwhile, Herskowitz described an innovative test for tumors that helps improve treatment decisions. Many people with cancer start chemotherapy, whether by their own choice, out of fear, or on the advice of loved ones or their oncologist.

Many alternative practitioners treating cancer patients say their biggest challenge is the fact that few patients come to see them before starting chemotherapy. Herskowitz noted that this reflects a biased sample, since people who do well on chemotherapy, often younger patients, may never seek out an integrative practitioner.

His approach is not to interfere with chemotherapy. He avoids giving antioxidants during the days when chemotherapy levels are high in the body and focuses on repairing normal cells during the off weeks.

Herskowitz, who uses antioxidants, nutrition, photobiomodulation, intravenous therapies, and other strategies to support people with cancer, details a test he believes may change the way chemotherapy is given in the U.S.:

> *"There's a new innovation you should be aware of. And that's taking a slice of the tumor itself on the biopsy side, articulating the various genomic mutations, and looking for the same genomic mutations in the peripheral blood. So now it's a new generation of circulating tumor cell counts, and this is a whole different generation.*
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> *So, the goal here is, say, I'm on chemo. I don't want to be on it, unless it's working. Whether it's high-dose chemo, or even low-dose chemo, I want it to be working on my behalf. And unless these markers are going down, I'm going to switch. I can tell my oncologist to switch because the genomic data are universally accepted by any oncologist in any university setting.*
>
> *And I think that's going to change the way chemotherapy is given in the United States over time. These are approved tests for advanced cancers, and now they're moving to get approvals for all cancers of any kind."*

Herskowitz added that these assays aren't yet standard practice. In San Francisco's major hospital systems, individual oncologists use them, but entire departments don't, and because treatment protocols are fixed, patients typically need an advocate to change course when results trend the wrong way.

Cellular Function May Be Becoming Less Efficient

In his decades of clinical experience, Herskowitz says he's seen our overall capacity for cellular function becoming less efficient. "Practicing now is just different," he says. For instance, less than 2% of the population used to have autoimmunity, but now he believes it's somewhere between 10% and 20% — and we could be reaching a tipping point.

National data on antinuclear antibodies, the most common marker of autoimmunity, also show a rise, from 11% of Americans aged 12 and older in 1988 to 1991 to 15.9% in 2011 to 2012.[5]

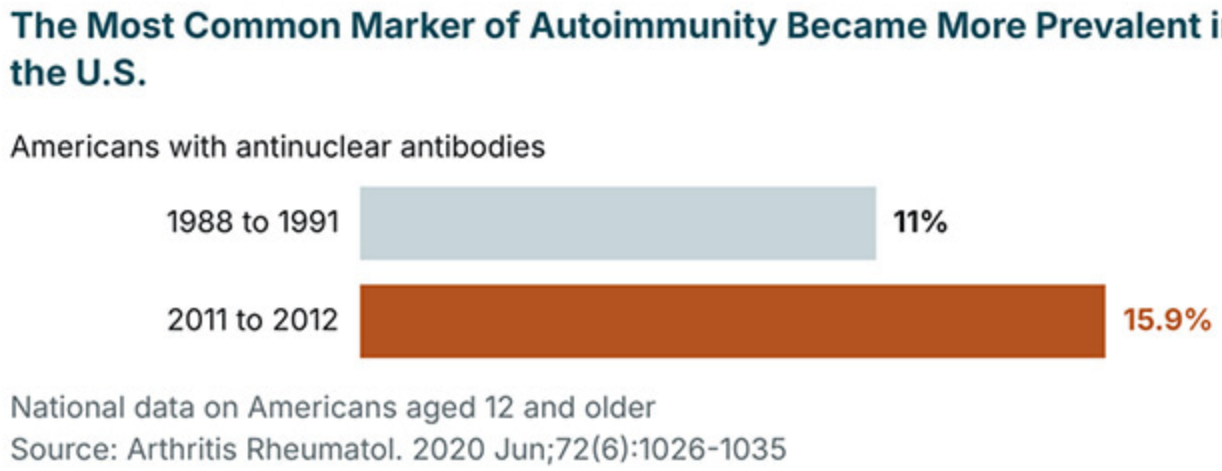


Figure 4. *The share of Americans aged 12 and older with antinuclear antibodies, the most common marker of autoimmunity, rose from 11% in 1988 to 1991 to 15.9% in 2011 to 2012.*

"I don't know where we're going to be in 10 years … people are still functioning, which is to me, fully remarkable … [but] I think that we've lost the majority of our reserves. Our reserve function is relatively gone. So, maybe more than 50% of our reserve function is now gone over the last four decades," he says, referring to both biological resiliency and mitochondrial function. Fortunately, there's still hope to turn health around.

"Mitochondrial biogenesis is possible, at some point, so I think we still have a lot of hope that right now we can reverse by going clean. And the cleaner you go, the better you'll feel anyway," Herskowitz explains. We both believe your body has unbelievable resiliency, provided you identify what's causing your problems and address it, including by eliminating ultraprocessed foods from your diet and reducing your exposure to other toxicities.

You can find out more about Herskowitz's strategies for longevity and chronic disease at his website **Anataramedicine.com**. He adds:

> *“I can tell you one thing. I'll end it like this. There's a lot of secrets going on, there's a lot of mystery. There's a lot of things we don't know very much about. And the worst thing a doctor can do is have an arrogant attitude as if they understand everything. And I think that as long as we remain open and honest, and remain lifelong learners, we will all be in better shape.”*

This article is for informational purposes only and does not constitute medical advice. Consult a qualified healthcare provider before making changes to your health regimen.

Sources and References

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