



WARNING: The silent—and dangerous—epidemic that's strikingly common in older adults

For a supposedly well-fed—and even overfed—society, we are sadly undernourished. Especially as we age.

I've reported before about the epidemic of vitamin D deficiency, which becomes worse as people get older. (Simply search the archives at www.DrMicozzi.com for more.) But there's another common nutritional deficiency that also increases with age.

Up to 38 percent of adults may have vitamin B12 deficiency, according to a 2009 review of eight clinical trials.¹ And considering how the American diet has deteriorated since then, I suspect today's numbers are substantially higher.

In fact, modern science shows that a multitude of people—of *all* ages—are deficient in vitamin B12... and for a variety of reasons I'll tell you about a little later. And this deficiency can contribute to serious, even *deadly*, health problems.

We've known that vitamin B12 deficiency can lead to anemia, neuropathy, myelopathy (spinal-cord disease), and depression.

And a number of newer studies have shown that people who don't get enough B12 are also at higher risk for a slew of very serious conditions including cardiovascular disease, bone health issues, dementia, and general cognitive decline.

Of course, you can get vitamin B12 from your diet. But here's the truly

shocking news:

Nearly one-third of people over the age of 60 can only obtain sufficient B12 from supplementation, regardless of their diet.²

Why are we deficient in vitamin B12?

It's becoming clearer that susceptibility to B12 deficiency changes throughout the lifecycle. Developing fetuses and older adults have the highest risk of dangerously low B12 levels.

There are several reasons why people—especially those over the age of 50—don't get enough vitamin B12, which include:

Gastrointestinal issues. Absorbing B12 from the GI tract is a highly complex process that becomes less efficient with aging.

B12 absorption involves the stomach, small intestine, and pancreas—all of which are dependent on having a healthy GI system, including the microbiome (probiotics). But even in healthy younger adults, only about *half* of vitamin B12 in the food they eat actually gets absorbed into the blood during digestion.³

And things can go downhill from there. All of the B vitamins are carried in the proteins in food. The stomach relies on gastric acid and the enzyme *pepsin* to break out these vitamins from protein. But the older we get, the less stomach acid we produce.

Atrophic gastritis, or inflammation of the stomach lining, also reduces acid secretions. And it can create excess bacteria that bind to B12 and use it for their own purposes. Atrophic gastritis is a real problem for older adults—it's been estimated that up to 30 percent of people over age 51 have this condition.³

Antacids. The modern epidemic of taking daily antacid drugs interferes with your normal stomach acid production. So it's no surprise that research shows these drugs are part of the problem with vitamin B12 and other nutrient deficiencies (not to mention many other health problems)—especially as we age.³ Which is why I've told you over the years to avoid drugs to treat indigestion.

Antacids like Pepcid, Tagamet, and Zantac may exacerbate your ability to absorb vitamin B12, but they rarely are the sole reason for deficiency.

In this issue:

- Forget what you've been told about raw produce4
- Don't fall victim to dietary deception6
- Nature's two tried-and-true "anti-aging" secrets.....7

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Dr. Micozzi's *Insiders' Cures* is published monthly by OmniVista Health Media, L.L.C., 100 W. Monument St., Baltimore, MD 21201 for \$74 per year (\$6.16 an issue).

POSTMASTER: Send address changes to *Insiders' Cures*, 100 W. Monument St. Baltimore, MD 21201.

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However, proton pump inhibitors (PPIs) like Nexium, Prevacid, and Prilosec *block* the secretion of gastric acid and pepsin digestive enzymes. And, as we just learned, the fewer stomach acids and pepsins there are, the fewer the opportunities are for B12 to be extracted from food proteins.

It's important to note that PPIs *don't* block the absorption of vitamin B12 from dietary supplements, since the supplement isn't bound to protein and is free to be absorbed when it enters the intestines. So if you choose to take a PPI (and, again, I recommend against it), at least you know it won't interfere with your B12 supplements.

Metformin. This diabetes drug is specifically known to deplete vitamin B12 stores in the body. Despite all of the benefits of metformin for reducing blood sugar, increasing longevity, and lowering your risk of cancer and obesity, it's critical to supplement with B vitamins when you take this drug.

Amazingly, irresponsible doctors still debate whether there's a need to prescribe B vitamin supplements whenever they prescribe metformin. If only doctors were as willing to recommend dietary supplements as they are to push prescription drugs...

Vegetarian or vegan diets. Vitamin B12 is almost exclusively found in animal sources like meat, fish, poultry, eggs, and dairy. So not only do vegetarians have trouble getting adequate supplies of this vitamin (without supplementing), but they can be deficient in fat-soluble vitamins like D and E as well.

In a moment, I'll tell you more about the food sources of vitamin B12 and whether they're adequate even for people who aren't vegetarians. But first, let's look at the research linking B12 deficiency to cognitive issues, cardiovascular disease, cancer, and other health problems that increase with age.

The risk factor for heart disease, cancer, and osteoporosis your doctor WON'T check for

As you know, sadly, most of the attention for heart disease goes to the misbegotten theory of cholesterol accumulation. Yet more and more people are being prescribed cholesterol-lowering statin drugs in a futile effort to prevent deaths from heart disease. This practice has only contributed to the epidemics of dementia, diabetes, eye disease, and other health problems we are experiencing today.

But unlike cholesterol, vitamin B12 deficiency is a *real* risk factor for heart disease. Why? Because B12 prevents accumulation of homocysteine in tissues.

This naturally occurring amino acid has been linked to hardening of the blood vessels, which contributes to high blood pressure—one of the chief risk factors for heart attacks and stroke.

And high homocysteine levels have also been shown in studies to be a risk factor for cancer⁴ and reduced bone-mineral density⁵—which can lead to fractures and osteoporosis.

Unfortunately, most doctors are so fixated on cholesterol, they never test—or even consider—patients' vitamin B12 levels. During your next checkup, ask your doctor for a simple blood test to determine these levels. Many doctors have differing opinions as to what constitutes vitamin B deficiency. According to my research, a level of 200 picograms per milliliter (pg/mL) or lower is deficient. Ideally, you want your B12 level to be above 500 pg/mL. (These are very small, but important levels.)

How B12 affects cognitive function and dementia

In addition to preventing and reversing the real cause of

cardiovascular disease—the U.S.'s No.1 killer—vitamin B12 also plays a critical role in the growing epidemic of Alzheimer's disease and dementia.

In fact, B12 deficiency is increasingly recognized as a contributing factor in all types of cognitive decline, from mild memory impairment to full-blown dementia.

Numerous clinical studies have shown that B vitamin deficiency, combined with elevated homocysteine levels, creates severe risk factors for cognitive impairment.

How? Well, imaging studies have shown that vascular impairments from B vitamin deficiency causes vascular impairment. In turn, this impairment leads to insufficient cerebral blood and oxygen supply. And depriving the brain of blood and oxygen are major contributing factors in the onset and progression of dementia.

In addition, high homocysteine levels from B12 deficiency may also be neurotoxic.

Why you may not be getting enough B12 from food alone

Because vitamin B12 (like all B vitamins) is water soluble, your body stores very little of it. Consequently, you need to get adequate B12 doses every day.

And you can't really rely on symptoms to let you know if you have insufficient levels of this critical vitamin. B12 deficiency is often missed in older adults because the most common symptoms—fatigue, anemia, weakness, constipation, loss of appetite, neuropathy, cognition problems, or walking difficulties—may be attributable to other chronic health conditions.

You might think you're getting enough B12 from food, especially if

you regularly eat meat, poultry, eggs, and dairy. But, as I mentioned earlier, research shows that because of drug effects and GI issues, over 30 percent of older people can't get sufficient vitamin B12 from their diets alone.

That's why the Institute of Medicine recommends that people over age 50 get their vitamin B12 mainly from supplements, rather than food.⁶

Better to have "too much" B12 than too little

To avoid deficiency (200 pg/mL or lower), I recommend taking a daily high-quality B complex that includes 12 mcg of B12 (that's easy to remember—12 of 12).

Of course, this is much more than the 2.4 mcg (micrograms) recommended by the government—but we all know the federal nutrition standards are woefully low.

My scientifically-backed B12 recommendation is based on the fact that everyone is different, so it's key to make sure that each person gets an adequate amount of the nutrient. If it turns out you absorb B12 better than other people, you'll simply excrete the excess in your urine—since the nutrient is water-soluble and the body uses only what it needs.

If you want to know if you're getting too much or too little vitamin B, try this experiment. Skip your B complex for one day. If you typically had bright yellow urine while taking a supplement (an indicator of excess vitamin B), you'll notice how the color goes away. And when you start vitamin B again the next day, your urine will remain colorless that day. That shows you didn't get enough the day before, and your body is rebuilding stores.

Since vitamin B has been shown to be extremely safe, even in high doses, I

firmly believe it is better to get a little "too much," and excrete the excess harmlessly in the urine, than to never get enough.


And if you have trouble absorbing vitamin B, there's no cause for alarm. You can correct even severe deficiencies with B12 injections—simply ask your doctor. Injections are very effective, as they bypass the GI tract and directly enter your blood stream. A typical course of treatment for deficiency includes an injection every one to two days for about two weeks, and then reduced to monthly treatments.

Why B is as crucial as D for promoting optimum health as we age

For overall health, I recommend that your B vitamin supplement contain approximate amounts of the following:

- B1:** Thiamine—50 mg
- B2:** Riboflavin—50 mg
- B3:** Niacin/niacinamide—50 mg
- B4:** Choline—50 mg
- B5:** Pantothenic acid—50 mg
- B6:** Pyridoxine—50 mg
- B7:** Biotin—100 mcg
- B9:** Folic acid/folate—400 mcg
- B12:** Cobalamin—12 mcg

A daily dose of vitamin B complex will ensure you have adequate stores of these crucial vitamins. In fact, the B vitamins may be second only to vitamin D for preventing and reversing virtually every modern disease, promoting health, and increasing longevity.

The epidemic of vitamin B12 deficiency, in parallel with the modern epidemics of cardiovascular disease and dementia, tells us that it should be a "no brainer" for all adults—and especially those over age 50—to supplement with a high-quality B vitamin every day. 

Forget what you've been told about raw produce

Why it isn't always the most nutritious option

You may have heard about the “benefits” of eating uncooked vegetables, fruits, and herbs. A growing number of raw food gurus believe that heating plant foods above a certain temperature “kills” vital nutrients.

But this ridiculous theory ignores basic biology, which tells us that understanding the nutrient composition of foods is just *half* the battle. The other half relates to how the nutrients in foods are digested in the gastrointestinal tract, absorbed into the bloodstream, and transported throughout the body's tissues.

A new study on a rather innocuous subject—involving the type of dressing you should put on your salads—reminded me of this key point. What it illustrates is that “raw” food doesn't necessarily translate into the most nutritious food.

Why digestion is crucial, especially with plant-based foods

Science continues to reveal the nutritional constituents and other active phytochemicals in plant foods. And one thing researchers have discovered is disheartening, to put it mildly.

Over recent decades, analyses by the United States Department of Agriculture revealed steadily declining nutrient levels in conventionally grown produce. This unfortunate turn of events is primarily due to industrial-scale agricultural practices (use of chemical pesticides, over-farming, etc.) that deplete the soil.

Mass-produced foods have also been selected and bred over the years for appearance, abundance, shelf life, and other commercial factors, without regard to the most important factor:

nutritional value. And this trend was in place long before the latest disaster of genetically modified foods.

Which is why now, more than ever, it's *vital* to ensure the nutrients remaining in plant foods are adequately absorbed by the people eating them.

But modern medical science has only recently begun focusing on digestion and all the related factors that influence virtually every aspect of health and illness.

So researchers are now “discovering” what the ancient traditions of Ayurvedic and Chinese medicine have known all along. In order for plant foods to act as medicines, they need to be digested properly.

Breaking down bacteria's role in digestion

In basic terms, raw plants have the highest levels of raw nutrients, but they're typically hidden behind the strong double-walls of plant cells. These walls allow plants to withstand being in nature 24/7. They can't come in from the elements, or into the shade from the sun because they often *are* the shade.

In woody plants and grasses, strong cellulose fibers provide great and enduring strength. That's why humans use lumber to build structures or grasses to weave baskets—because these materials stand the test of time.

Cellulose is also found in plant foods. But neither humans nor animals can digest this substance, which is perhaps the most prevalent carbohydrate in nature. However, there are certain bacteria that can break down cellulose.

Termites and other insects that “eat”

wood have this type of bacteria in their GI tracts.

Grazing animals (like cattle, sheep, and goats) also house bacteria in their stomachs that can digest cellulose. Which, in turn, converts an indigestible plant product into highly nutritious and bioavailable meat and dairy for human consumption.

Additionally, grass-fed dairy and meat products are associated with lower rates of heart disease and other illnesses (contrary to politically correct agendas to label meat as unhealthy).

Probiotic bacteria can also break down cellulose in vegetables for human consumption. (Fruits don't usually need to be broken down that much for digestion.)

These bacteria ferment cellulose-rich plants like cabbage into foods such as sauerkraut or *kim chi*, so their high content of vitamin C and other nutrients can be easily digested and absorbed into the human bloodstream. I often think of these kinds of foods as “prebiotic,” since they support a healthy microbiome in the GI system.

So probiotic bacteria acting *outside* of the GI tract, in nature, is just as important as probiotics *inside* the GI tract.

The most nutritious ways to cook plant foods

There's another way to break down vegetables' hard-to-digest, double-walled cells: cooking. But when it comes to preserving nutrients, not all methods of cooking are equal.

You can boil the heck out of cabbage, onions, and carrots and *still* have some nutrients left in these hardy vegetables—but it's otherwise not

recommended for more delicate vegetables.

Excessive heating over prolonged periods (like boiling) breaks down *all* of the contents of many plants—including nutrients. But it's possible to heat these plants just enough to break down the double-walled cells to allow the nutrients to get out, without completely destroying them.

For example, quickly sautéing vegetables in a saucepan, or in a Chinese wok, preserves delicious flavors, and enhances the bioavailability of nutrients for digestion. Quick steaming is another good option.

But what about salad greens that *are* typically eaten raw? There's yet another important consideration about how to prepare them if you want to be sure you're getting the most nutrition. Which leads me to the new study I mentioned earlier.

All dressed up and going places

You already know that leafy green vegetables are high in nutrients. But in order to absorb their abundant lutein, lycopene, and other carotenoids (including vitamin A), as well as vitamins E and K, you need to eat your greens *with some fats*, like cheese or oils.

Remember, these are fat-soluble nutrients, meaning the body can only absorb them in the presence of fats. (That's also why you're wasting your time trying to get vitamins A, D, E, or K in supplements that don't include some oils in the formulation—they must be softgels or liquid preparations. One reason to steer clear of those worthless, one-a-day multivitamin pills.)

The new study found that eating a salad with soybean oil allowed the body to better absorb the fat-soluble nutrients I mentioned above.¹

Furthermore, the study showed that the more oil is added, the more nutrients are absorbed.

The study involved 12 healthy women between the ages of 19 and 39. They were asked to consume foods that weren't good sources of carotenoids and fat-soluble vitamins for four days. On the fifth day, they ate a salad of spinach, romaine lettuce, carrots, and tomatoes. It was dressed with differing amounts of soybean oil—0, 2, 4, 8, or 32 grams.

The researchers then measured the women's blood-nutrient levels. They found that the women who consumed the most oil on their salads had the highest levels of carotene, lycopene, and vitamins A and K.

The lead researcher stated: "The best way to explain it would be to say that adding twice the amount of salad dressing leads to twice the nutrient absorption."

Please note that these researchers used soybean oil, which I'd never recommend. Instead, use traditional olive oil. The study only showed the short-term benefit of this vegetable oil without observing the long-term hazards of soy—including genetic modification. But since the study was done at Iowa State University, the researchers were apparently more interested in supporting a local cash crop (soy) instead of olives, which aren't grown there.

Nevertheless, the principle is the same—a vegetable oil dressing helps people better digest the nutrients naturally present in raw greens.

My favorite uses for plant oils

The current U.S. dietary recommendation is about two tablespoons of plant or vegetable oil per day—and I always recommend a high-quality olive oil. Of course, research on the Mediterranean diet

shows that higher levels of olive oil are not only safe, but highly beneficial for your health as well.

When your pantry is well-stocked with olive oil, there's never any reason to resort to bottled salad dressings full of sugars and other unhealthy ingredients. A simple dressing of olive oil with vinegar, or lemon juice, will do the trick. You can also add some mustard, pepper, and other herbs to taste. Keep olive oil on hand at all times for sautéing as well.


But do not be taken in by false claims about the quality of olive oils. I gave you a guide about which brands to choose in a November 2016 *Daily Dispatch* ("The scandal sweeping through supermarket aisles all across the country.") You can access this in my archives at www.DrMicozzi.com.

To ensure your olive oil stays fresh, don't buy more than what you would consume in about three months' time.

This Spring, make your veggies tasty and nutritious

As Spring gets underway, take advantage of all of the healthy, fresh, locally-grown plant foods that begin to appear. Make sure you make the most of them when planning your meals. I recommend stocking up at your local farmer's market or even planting your own garden (which is also great for exercise and soaking up precious vitamin D).

So whether it's arugula or zucchini, don't assume you're doing yourself any favors by eating raw or undressed vegetables. Your body needs some help to absorb the healthy nutrients in these and other plant foods.

Give it a quick sauté or steam, and add some healthy olive oil. Not only will your food taste better, but you won't get a "raw deal" when it comes to your nutrition. 

Don't fall victim to dietary deception

The politically correct nutritional guidelines you should ignore and why

The *Washington Post* recently ran an article about “how to fix the American diet,” according to Michael Jacobson—the man who coined the term “junk food” in the 1970s¹. Jacobson is retiring as executive director of the self-styled consumer protection group Center for Science in the Public Interest (CSPI).

Jacobson's message? “A good diet is rich in fruits and vegetables, beans, nuts, seafood, low-fat proteins like chicken, and low-fat dairy products.” He also applauds the growth in whole-grain products and the gradual decline in meat consumption in the U.S.

These recommendations pose a dilemma and are, in some ways, actually *worse* than what the government has been recommending since the 1970s. Here's why...

Half of CSPI's recommendations are wrong. But which half?

When it comes to the government's nutrition recommendations, we know they've been all wrong, all along. But in the case of CSPI, it's actually more difficult. While CSPI has some very good recommendations, it also has some very bad ones...

About half of what Jacobson and CSPI say is supported by science (hence the “science” part of their name), but the other half is just more modern medical mythology and political correctness. This bad advice falls in line with other self-styled “consumer protection” groups such as the American Heart Association.

And the problem is, if you put your faith in CSPI, you will never be quite sure which half of its recommendations to believe—unless, of course, you're one of my readers.

In just a moment I'll explain the good and bad in Jacobson's message. But

first, a little background.

How CSPI sank into the swamp

In the 1970s, consumer advocate Ralph Nader encouraged recent MIT graduate Michael Jacobson to begin researching the food industry, findings on food additives, and the health costs of bad nutrition. At the same time, Nader encouraged Sidney Wolfe to start doing the same thing with the drug industry.

While these staffers have done a lot of good work, the problem with CSPI (like other Nader groups) is that it has grown into its own bureaucracy, where survival of the organization and the careers of those who work there become paramount. They also fall victim to political correctness, being surrounded by the Washington D.C. swamp.

In fact, for all intents and purposes, especially when it comes to funding, CSPI has become part of that swamp. So now, half of what it does is “science,” and the other half is “swamp.”

And that sad reality is reflected in Jacobson's recommendations purporting “to fix the American diet.”

Where CSPI gets it wrong

As I mentioned earlier, Jacobson favors a diet high in fruits, vegetables, beans, nuts, and seafood. That's a good start, but then he gets bogged down with his recommendations for “low-fat proteins like chicken, and low-fat dairy products.”

Why “low-fat proteins like chicken?” First of all, chicken isn't necessarily low-fat, depending upon how it's prepared. And also, isn't Jacobson familiar with the overwhelming science of the last several years—which reveals that when it comes to

the American diet, it's *not* fat that's the problem. It's sugar and carbs!

Also, recommending chicken as your meat of choice is wrong for another reason. According to lots of careful research, high-fat meats aren't the problem—rather, it's *processed* meats.

In fact, when research is done correctly, as I've reported, it shows that neither fresh chicken, pork, nor beef pose a problem for your health. So Jacobson's endorsement of the party line recommendation to cut back on meat consumption—specifically beef and pork—is dead wrong based on the real science.

And that's also true when it comes to the next item on Jacobson's list: low-fat dairy.

Doesn't he know about the science showing low-fat dairy is the problem, not full-fat butter, milk, or cheese, again, as I've reported numerous times? The proliferation of low-fat dairy has been another disaster for the American diet. But Jacobson actually applauds it.

Jacobson also is pleased with the number of whole-grain products on the market today. While whole grains are better than refined grains, the real message should be to *eliminate* grains and carbs altogether.

Where CSPI gets it right

One aspect of Jacobson's argument that *is* correct is his point that the real problem when it comes to salt is with processed foods—which typically have added salt, sugar, and unhealthy artificial fats.

He recommends getting around this problem by cooking at home with fresh ingredients, which we can all endorse.

So the real message should be to

avoid processed foods—whether they're grains, fruits, vegetables, beans, nuts and seeds, dairy, or meats.

CSPI's most unhealthy recommendation

But perhaps the most dangerous of Jacobson's recommendations is his advice to "rely on sources" like the American Heart Association (AHA), whom he says "aren't grinding some industry ax."

Where has CSPI been when it comes to the scandalous practices of the AHA? Together with the American College of Cardiology, the AHA relentlessly pushes the agendas of big food, big pharma, and big medicine. That's why I call them the "delusional duo of heart disease."

This blindness actually bothers me the most about CSPI. There's some honest debate about some of the science, especially as it evolves over the years. But if these guys don't recognize the mythologies pushed

by the AHA, as well as its gross oversights, then they are part of the problem themselves.

The fact is, the AHA is completely bought off by the food industry. So I can't help but wonder...Is CSPI in the same boat?

Government to the "rescue"

Needless to say, Jacobson and CSPI see big government as a solution. They fight for sugar taxes, soda taxes, and even higher alcohol taxes.


Again, why isn't CSPI following the science on moderate alcohol consumption—which (as I pointed out in the December 2017 issue of *Insiders' Cures*) is the vast majority of actual consumption?

Jacobson criticizes typical big-city Democrats for being in the pockets of beer distributors (after all, what would the urban mob be without cheap alcohol). And he castigates Republicans for being against more taxes—imagine that!

He concludes by admitting that the private sector and consumers hold the ultimate solutions, but then points to half-baked, politically correct nutritional guidelines that he claims "are great for health, and they have nothing to do with the government."

CSPI claims to be a friend to the consumer. But with friends like these, who needs enemies?

CSPI looks like just another sinkhole in the Washington D.C. swamp it has become part of. But that's just *this* month's contribution to public health from the "fake news" mainstream media. There will undoubtedly be more where that came from.

My advice? Ignore mainstream headlines touting ANY sort of nutritional recommendation. Stay tuned here, to *Insiders' Cures*—and to my *Daily Dispatch* e-letter—for the truth behind the headlines, and the commonsense, science-backed advice you *really* need to live a long, healthy life. 

Nature's two tried-and-true "anti-aging" secrets At last—forget expensive creams and painful surgeries!

I recently saw a headline about a new study that was quite notable for its findings, but presented some very skewed views about how things *really* work in the human body.

The headline said that two of my favorite botanicals, ashwagandha and ginseng, were "found to mimic off-label anti-aging effects of two drugs"—metformin and rapamycin.

So how is this incorrect? Let me count the ways, and then I'll tell you more about the study.

Three reasons why botanicals are superior "anti-aging" alternatives to drugs

First, botanical remedies don't mimic

the effects of drugs. It's the *other* way around. **Drugs typically attempt to mimic the effects of botanicals.**

After all, the human body and physiology developed in a terrestrial environment surrounded by plants—which provide food, nutrients, and medicines. As a result, the whole human cellular system is "wired" to respond to phytonutrients from plants. So the best drugs work when they "mimic" the effects of botanicals—especially in the increasingly rare cases when drugs are effective and safe.

Second, "off-label" effects are meant to indicate all of the other activities that a drug has, beyond the single purpose for which it was approved by the FDA.

It's important to note that there are *always* off-label effects for everything.

As my pharmacology professors (who remembered the origins of drugs from botanical remedies) taught, "Any drug can have any effect." When those effects are negative, they're called side effects. When they're positive, they're called "off-label" effects.

The same is true for plants. If one kind of human cell responds to a botanical (or drug), other cells can also respond in other ways. All of the cells in the body come from the same basic DNA, and develop in specialized ways to perform their specific roles—but still share many common functionalities.

What “anti-aging” really means

The third reason I took umbrage with the study headline is better stated as a question: What exactly are the “anti-aging” effects found in these botanical remedies that supposedly mimic metformin and rapamycin?

Usually when we hear about “anti-aging,” it’s to tout some novel product or ingredient without any real science behind it. That’s why I prefer to focus on “healthy aging” instead, which simply means staving off various chronic conditions that become more common as we age.

I always say the most basic measure of the success of any treatment is to reduce mortality, which in turn, means increasing longevity. After all, what better “anti-aging” effect is there than to live longer?

I’ve developed entire in-depth protocols around these natural disease-fighting approaches for cancer (my *Authentic Anti-Cancer Protocol*), heart disease (my *Heart Attack Prevention & Repair Protocol*), and diabetes (my *Integrative Protocol for Defeating Diabetes*). For more information on these online learning tools, visit learning.omnivistahealth.com or call **1-866-747-9421**.

Not to mention the fact that I’m currently putting the finishing touches on a brand new protocol devoted entirely to natural approaches specifically for extending longevity—and living a *longer, healthier* life. (I’ll be sure to let you know as soon as it’s ready. Stay tuned to my *Daily Dispatch* e-letter for the latest updates.)

How certain drugs mimic botanicals’ longevity effects

Now that we know the *correct* order of the story at hand, there are two drugs that have “anti-aging” effects due to their ability to mimic the healthy effects of botanicals.

It’s no surprise that one of these

drugs is metformin. I often report on research showing how this diabetes drug can also help prevent cancer, Alzheimer’s disease, and cardiovascular disease (along with reducing blood sugar and the complications of diabetes in the eyes, heart, kidneys, and peripheral nerves).

Metformin is originally derived from a European folk remedy called French lilac (or goat’s rue)—and that’s the reason it’s such a safe and effective “drug,” with all of its “off-label” benefits.

The new computer modeling study I mentioned earlier looked at the genetic-level actions of metformin (and the second drug, rapamycin) when used in an “off-label, anti-aging scenario,” as the researchers described it.¹ (Rapamycin is used to help prevent organ rejection in patients who have transplants, especially kidney transplants.)

The study looked specifically at what is called the mTOR pathway in the human body. This cell-signaling network is important for cellular growth and proliferation, but can cause problems in later life. If the mTOR pathway isn’t suppressed after the period of growth and development during youth, it can contribute to cellular disease and decline.

In other words, this cell pathway that is responsible for youthful vigor actually has the opposite effect later in life. Meaning that anti-aging talk about restoring “youthful” functions to your cells is often nothing more than dangerous hype. For many cells, those youthful functions are exactly what they *don’t* need as they get older.

Why ashwagandha and ginger promote healthy aging

When the scientists screened substances for their ability to suppress mTOR, they found that metformin and rapamycin were effective. But so were withaferin A from ashwagandha, and ginsenoside from ginger.

Ashwagandha (which literally means “mare sweat,” from the aroma of the whole root) is an Ayurvedic remedy that’s also known as winter cherry. Ginger is a common spice from the *Zingiber* family, which also includes turmeric (curcumin).

I have long recommended ashwagandha as one of my three ABCs for joint health (along with boswellia and curcumin). And ginger is increasingly being studied for its gastrointestinal benefits and ability to lower blood sugar.

Other top mTOR-suppressing compounds in the study included allantoin (a healthy ingredient found in comfrey, beets, turnips, tea, coffee, and wheat) and apigenin (an antioxidant and anti-inflammatory ingredient found in chamomile, celery, and many other plants).

Of course, the real purpose of this research was to find botanical ingredients that “mimic” older drugs, so they can then be developed as expensive new, patented drugs.

But as you can now see, the researchers had it all backwards. Stick with natural botanical remedies and ingredients, and you won’t need to rely on “anti-aging”—or any other—drugs.

As for a daily healthy aging regimen, I recommend supplementing with 400 to 500 mg of ashwagandha daily. As for ginger, be sure to keep raw ginger root in your fridge to add some tang to your cooking—I prefer to use it when cooking Asian dishes or as a garnish with fish, meat, or vegetables. Another one of my favorite ways to use raw ginger is to incorporate it into herbal teas with some honey and lemon. If you’d prefer a supplement instead, I recommend up to 2,000 mg daily of ginger root. You can easily find these botanical remedies in your local pharmacy, grocery store, or health supplement retailer. 

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