

Cures from the Clinic



*Dr. Fred Pescatore's
5 Biggest Breakthroughs for 2021*

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A Note from Dr. Fred

Dear Reader,

What are your health goals right now?

Some of my patients have told me that, thanks to all the challenges and stress of the pandemic, they just don't have energy left to keep up with their healthy habits.

If that sounds like you, too, let me say this:

It's always *my* goal to show you how taking control of your health can be easy.

Your health is too important to put on the back burner.

Life is too short to waste it feeling anything less than your best...

It's too valuable to spend it gritting your teeth and "just dealing with" pain...

And it's just too precious to accept that your situation is "hopeless" and that the way you're feeling right now is the best it's going to get.

In everything I do, my goal is to help my patients and readers live happier, healthier, fuller lives.

Just think...

What if you could live your life without fear of a chronic disease?

What if you could walk, run, dance, play, ski, bowl, garden, golf, knit—whatever it is that you love—without PAIN slowing you down?

What if you could simply *enjoy* your time with your kids and grandkids?

What if you didn't have to lose your vision to cataracts...or your hearing to "age"?

People all across America are rediscovering health at every age. And you deserve it, too.

I hope you find the information in this Special Report useful.

I'm with you every step of the way.



Fred Pescatore, M.D.

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IP-6: The nutrient I recommend to every cancer patient

Powerful compound fights metastasis and helps hit cancer's "reset" button

The fact is, mainstream medicine is completely lacking any truly effective options for cancer. And more and more people are looking for alternatives.

That's why I'd like to talk about an important nutrient that I've been using to treat my own cancer patients for decades. It's one you probably haven't heard much about...but if you or someone you love is facing a cancer diagnosis, it could very well help save your life.

I'm talking about **inositol**.

This nutrient is actually a precursor to a compound called **inositol hexaphosphate**, abbreviated as IP-6 or I-6. Almost all animal cells carry this compound, and it plays a role in regulating cellular function, among other duties.

Because research shows IP-6 is able to block the growth and spread of multiple types of cancer.

A subarctic "Cancer Blue Zone"?

Before the scientific community discovered how IP-6 works, the medical community stumbled on real world evidence that this cancer-fighting powerhouse was at work for a lucky group of people...

Maybe even preventing cancer from taking hold.

Researchers were studying data from a subarctic city that's a bit like a "Cancer Blue Zone"—Kuopio, Finland. It's about the size of Stamford, Connecticut, here in the U.S.

It's not that the people of Kuopio *never* get cancer...but data showed they were getting certain cancers *far less*.

And when researchers compared Kuopio to its regional neighbors in Copenhagen, Denmark...and then to the people on the other side of the world, in Connecticut...the differences were staggering.

Breast cancer rates in Denmark were about 56% higher than in Kuopio...and in Connecticut, the rate was a terrifying 215% higher. Bladder cancer followed a similar pattern.

But here's the one that will make your jaw drop...

The people of Copenhagen had DOUBLE the rate of colon cancer compared to the people of Kuopio.

And in Connecticut...the rate was nearly QUADRUPLED.

Turns out, the people who live in Kuopio had one simple advantage: They ate much more fiber than the other groups. As a result, they got *plenty* of the cancer-fighting compound IP-6 in their food. Researchers noted the most common breakfast cereal in Finland was "puuro," a whole-grain porridge. (See the sidebar on p.9 to find out how you can get more IP-6 into your diet.)

A jack-of-all-trades

When you see some of the science I'm about to break down for you here, you'll agree that IP-6 is a real jack-of-all-trades in the body.

In fact, there is *so* much science behind IP-6, I'm certain it'll become a drug one day. There's no way Big Pharma will rest until it can cash in on what the studies are showing.

It's able to strengthen the immune system by enhancing natural killer cell production—all while lowering cholesterol and preventing kidney stone and blood clot formation.

But its real claim to fame is the promise it shows in preventing cancer and controlling the growth *and* spread of tumors.

Researchers at the University of Maryland described IP-6 as a *broad-spectrum anti-cancer agent*, which means it was effective against a wide range of cancer cells in vitro. Laboratory studies show that IP-6 triggers programmed cell death in a number of cancer cell lines—including leukemia, prostate, breast, cervical, pancreatic, bladder, melanoma, and colon cancer.

Research shows that IP-6 can reduce cell proliferation—the rapid growth that makes cancer cells so hard to kill. And an in vitro study of human breast cancer cells revealed IP-6 reduced cell migration and invasion by as much as 72%.

This nutrient is also anti-angiogenic. This means IP-6 helps restrict a tumor's fuel supply by preventing it from creating new blood vessels.

It also has some of the strongest antioxidant properties in nature, which of course aids in tumor cell destruction. I've described it as similar to what you'd see with a COX-2 inhibitor, like Celebrex®.

(Which, by the way, many people already take for cancer prevention—especially colon cancer. And it makes sense, in theory. As I've said many times before, inflammation is the root cause of all disease, cancer included. But using natural approaches to douse inflammation is always a better, safer approach than relying on a pharmaceutical drug.)

Hitting cancer's “reset” button

One of the most remarkable discoveries about IP-6 is so extraordinary, it could change the future of medicine.

In vitro studies have revealed IP-6 helps *reprogram cancer cells to act more like normal cells*...almost like hitting a “reset” button.

Researchers first uncovered this in 1992—which means this information has been out there for nearly *three decades*. Their work, published in the journal *Carcinogenesis*, reveals this “reset” effect has to do with a concept called *cellular differentiation*.

It sounds technical, but all it means is that cells become specialized *as* they form and grow. They become a nerve cell, a blood cell, a skin cell, and so on. This “differentiation” is a good thing for healthy cells.

What makes cancer cells so dangerous is that they *don't* differentiate well. Without a specialized job to do, they are free to grow and spread out of control. The less they look like normal specialized cells, the more out of control and damaging they are.

And that's where I-6 could play a critical role, according to the researchers. In experiments with human leukemia cells, a high dose of I-6 increased differentiation, so the cancerous cells acted *more like normal cells*.

In fact, I-6 was able to hit “reset” on as many as 36% of the cancerous cells. Can you imagine being the one in the lab that day, witnessing this transformation yourself?

The results were so mind-boggling, researchers tested it again with human colon cancer cells...prostate cancer cells...breast cancer cells...and even a type of rare soft tissue cancer (rhabdomyosarcoma)—and every experiment backed them up.

Secret weapon to fight metastasis

But cancer’s ability to spread also relies on the tumor cells’ invasiveness—and this is a factor that inositol, rather than IP-6, is able to disarm. (That’s one of the reasons why taking it in combination with IP-6 is ideal.)

You see, cancer cells have a secret weapon for driving metastasis: tiny little molecules in your body known matrix metalloproteinases, or MMPs.

Tumor cells spit out MMPs at an alarming rate and use them like a chemical jackhammer. MMPs allow these malignant cells to break through blood vessel walls and enter the bloodstream...so they can spread all over.

But researchers at the University of Maryland discovered IP-6 disarms tumor cells so they can’t smash through the barricades around them.

I’ve seen the benefits in my own patients, particularly for cancers of the prostate, breast, and cervix. In some cases, patients with active disease have shown no evidence of metastasis on their PET scans after as little as three months of taking IP-6 and inositol as a supplement.

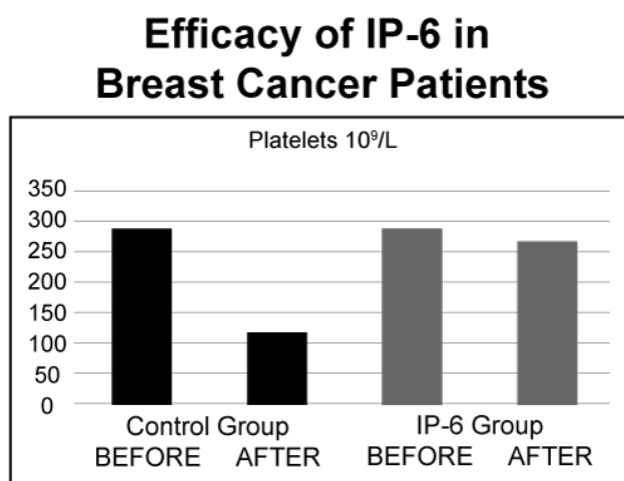
So while it’s incredibly exciting, it’s not particularly surprising that preliminary human studies support IP-6 (in combination with inositol) as a complement to conventional cancer treatment.

Works synergistically with standard chemotherapy drugs

Research shows IP-6 can even enhance the effects of chemotherapy drugs like doxorubicin and the hormone therapy drug tamoxifen to halt breast cancer growth—even in cancer cell lines that are treatment-resistant.

In the 1990s, initial in vitro tests at the University of Maryland revealed a dose of IP-6 given before a dose of the mainstay chemo drug adriamycin created a more powerful effect than the drug alone. And, IP-6 successfully killed off a group of cancer cells known to be chemo-resistant to adriamycin

Plus, IP-6 *prevented* the dangerous immune suppression that so many patients experience during chemotherapy. Here’s a summary of this effect, published in the *European Review for Medical and Pharmacological Sciences*. As you can see in this chart, the control group experienced a sharp drop in platelets while the IP-6 group did not:



The glucose-cancer connection

But here’s why I *really* love this supplement: Inositol also plays a role in insulin and glucose metabolism—so when you don’t get enough inositol, insulin resistance and metabolic syndrome are natural consequences.

IP-6, specifically, can boost insulin receptivity and blood sugar control. And this isn't just a benefit for would-be diabetics.

As I've mentioned dozens of times, there are at least thirteen cancers with clear ties to diabetes and poor blood sugar control. So any supplement that's able to help regulate this pathway is a double-threat against the disease.

Even though it's been around forever, I really believe inositol and IP-6 are the supplements of the future. And I say that because, among IP-6's many exciting qualities, we also know that it works on an epigenetic level to fight disease.

When your body lacks inositol, it activates hundreds of different genes involved in stress and glucose metabolism. This damage triggers a domino effect of repair mechanisms—which is when things start going south quickly.

It's hard to imagine that such a simple supplement could be sufficient enough to avert disaster and prevent disease. But facts don't lie.

Studies show that IP-6's chemo-preventive qualities could earn it a place in most cancer drug categories, making it suitable for almost *all* phases of prevention. There's just one critical difference: Unlike other conventional cancer treatments, inositol supplements pose a very low toxicity risk.

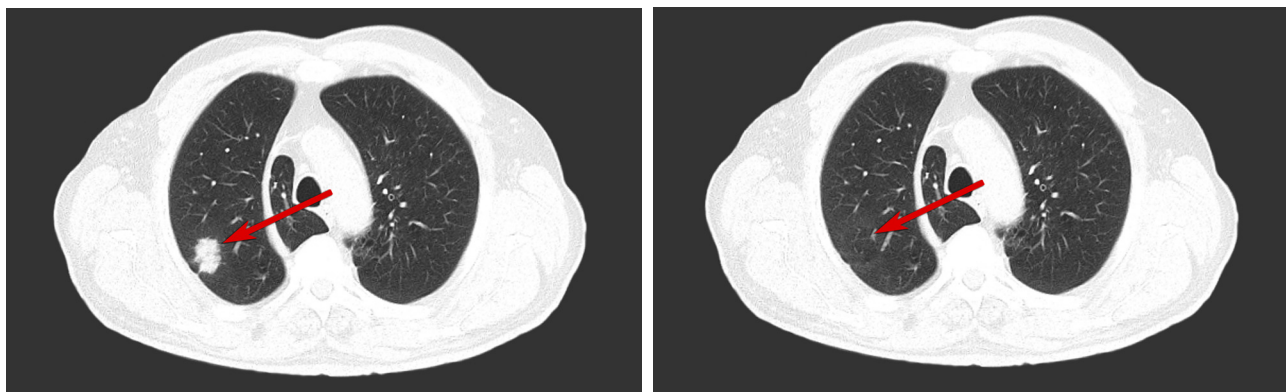
Stunning cases of recovery

A case report published just last year by the world-renowned Mayo Clinic tells of the miraculous recovery of 59-year-old Joseph Caster. (*Name has been changed.*)

In 2012, Joe turned up at his doctor's office with a bleeding mole almost the size of a dime. Two surgeries and three years later, his cancer returned again...and he was diagnosed with metastatic melanoma—stage IV-B.

Joe declined chemotherapy, telling his oncologists he was going to take a combination of I-6 and its precursor, a compound called INS.

Doctors watched in shock as Joe's tumors shrunk before their eyes, scan after scan...with absolutely no side effects. Finally, after two years of taking only this I-6 combination as his treatment...all of the cancer was gone.



Illustrative images. See the original copyrighted scans in Melanoma Res. 2019 Jun;29(3):322-324.

His doctors wrote in the report, "To our surprise, the patient achieved a complete remission and remains in remission 3 years later."

The *Journal of Experimental & Clinical Cancer Research* provides another published report of stunning recovery for one patient, whom we'll call Mary. She was enrolled in a clinical trial including six patients with advanced colorectal cancer.

With advanced liver metastases and a terminal diagnosis, Mary declined chemotherapy and decided to take only a combination of IP-6 and inositol. Sadly, a patient with a case like this who declines chemo is typically said to have just months to live. But Mary didn't turn out to be just another statistic.

At 14 months after her surgery, CT scans revealed the tumor growth rate had slowed dramatically. And in some areas, Mary's advanced tumors had visibly *shrunk*...despite the fact that her case had been considered hopeless. That's the incredible potential of this nutrient.

The best ways to get IP-6

You can get IP-6 from a lot of food sources—nuts, seeds, beans, legumes, cantaloupe, citrus fruits, and fiber-rich vegetables. Wheat bran and flaxseed are two popular foods that are rich in this nutrient. But remember, I recommend a low-carb diet, like my A-List Diet, for overall optimal health. So I don't recommend loading up on wheat bread. See the sidebar for my shopping list of foods rich in IP-6 and inositol.

But there are a lot of factors that can impact your IP-6 levels, such as age, antibiotic use, and even the amount of coffee you drink.

So even though you can get it from food, chances are high you're not getting enough. The good news is that IP-6 is also extremely well-absorbed as a supplement. And after reviewing all of the literature surrounding IP-6, I'm more convinced than ever that it's something we should *all* be taking.

Ultimately, inositol and IP-6 are both very safe and well-tolerated, even when you're taking a lot. This regimen may cause diarrhea at high doses (in fact, doctors often use it as a laxative in babies). But, similar to vitamin C, you can build up a tolerance for larger intakes over time.

I prescribe as much as 6 to 9 grams of IP-6 per day to my cancer patients. But if you're just looking to prevent the disease (and really—who isn't?), 3 grams per day is sufficient. You can find IP-6 supplements online or at your local Vitamin Shoppe.

Dr. Pescatore's Shopping List: Get more IP-6 in your kitchen

- Cantaloupes
- Oranges
- Peas
- Beans
- Almonds
- Walnuts
- Brazil nuts
- Macadamia nuts
- Pecans
- Flaxseed
- Sesame seeds

1 little-known compound that improves memory test scores far better than a leading Alzheimer's drug

Mainstream medicine is still shrugging its shoulders at Alzheimer's. After 300 FAILED clinical trials, they don't have the answers.

But for the past two decades, I've been showing patients how to fight Alzheimer's with food. And it all starts with a concept that is considered quite "controversial."

I'm talking about the ketogenic diet—and a ketone-rich extract I sometimes call HydroFera.

Usually, when I come across an idea so shunned by mainstream medicine and conventional nutritionists, I know I'm onto something.

And ketosis is an idea that mainstream doctors love to hate. If they talk about it at all, it's typically with an air of dismissal. Or even derision. But the fact is, ketosis could be the secret to reducing the risk of *countless* diseases—including Alzheimer's.

I've spent decades studying the science behind ketogenic diets and ketosis. And there's a lot to share. So let's begin...

What is the ketogenic diet?

The body typically uses *sugars* for energy. Ketosis is the metabolic state in which the body starts breaking down *fats* for energy. When you're burning fat and using the byproducts of that process for fuel—molecules called ketones—you're in a state of ketosis.

There are studies to show that ketogenic diets correlate with better brain function in Alzheimer's patients. You may have heard of ketogenic supplements before. One of the most well known is a unique type of saturated fatty acid called medium-chain triglycerides (MCTs).

One of the richest sources of MCTs is a fruit that's scientifically known as *Cocos nucifera*, or coconut. I've nicknamed this coconut-derived MCT extract as *HydroFera*, and here's why it's important...

MCT oil from *Cocos nucifera* is rich in the most brain-nourishing of those ketones, called *betahydroxybutyrate*, or BetaXb for short. And if you intentionally eat a diet very high in fat and very low in carbohydrates that generates BetaXb and other ketones...you're on a ketogenic diet.

The ketogenic diet was first used medically in the '20s and '30s, when it became a treatment for epilepsy in children. But ketosis first made it into the public consciousness with the advent of the Atkins diet. Atkins promoted ketosis as a way to burn fat and lose weight without feeling hungry.

Given the amount of controversy the diet stirred, you'd think it was extremely radical and highly dangerous.

But it's really not.

You see, many conventional dieticians confused *ketosis* with a life-threatening metabolic condition called *diabetic ketoacidosis*. Diabetic ketoacidosis occurs when a diabetic person with insulin deficiency has wild blood sugar swings. Ketones start building up in the bloodstream, and it's an emergency situation. It can also occur in alcoholics and people suffering starvation.

Clearly, diabetic ketoacidosis should be avoided at all costs. But it's entirely unrelated to ketosis, and any "expert" who confuses the two isn't worth listening to.

In fact, as more people in the nutrition and fitness worlds learn that *ketosis* isn't a dirty word after all, we're seeing a resurgence in the popularity of ketogenic diets.

They're great for losing weight, regulating blood sugar, and protecting against cancer. And they can also help prevent and treat neurological conditions—including Alzheimer's disease.

In fact, research has shown life-changing results across all stages of cognitive decline—from those all-too-common "senior moments" to severe cases of Alzheimer's dementia.

Let's look at some of the mounting evidence that a ketogenic diet can help treat Alzheimer's disease. And if it can help *treat* it, it can definitely help *prevent* it.

Stunning improvements in memory test scores

Some of the most exciting research on ketosis and Alzheimer's was just published in *Alzheimer's and Dementia*, the journal of the Alzheimer's Association. A neurologist and neuroscientist at the University of Kansas Alzheimer's Disease Center put 14 of his patients with "very mild" or "mild" Alzheimer's on a ketogenic diet.

The diet was also supplemented with MCT, that unique type of saturated fatty acid rich in the ketone BetaXb. Adding this BetaXb-rich supplement—MCT oil—to the diet allows more room for calories from protein and carbohydrate, making the diet easier to follow.

Nine of the patients were able to stay on the diet and achieve sustained or intermittent ketosis. And after just three months, the scores for those patients on a standard test of cognitive ability were much improved—they had better memory, better language skills, and an increased ability to perform and complete tasks. But one month after going *off* the ketogenic diet (as part of the study), their scores on the test plummeted, ending up right back where they were before starting the diet—proving it was the ketogenic diet, and not some other factor, that was making the difference.

In another study, published in the journal *Nutrition and Metabolism*, doctors studied 152 patients with mild to moderate Alzheimer's disease, dividing them into groups. One received a supplement rich in BetaXb, which induced a state of mild ketosis; the other got a placebo. And after three months, the cognitive test scores of those taking the supplement were improved. The researchers concluded, "ketosis may offer a novel strategy for Alzheimer's disease."

Rewinds the symptoms of Alzheimer's starting in 4 weeks

But there's more. As published in the *International Journal of School and Cognitive Psychology*, 31 subjects with moderate to severe Alzheimer's were treated with BetaXb-rich MCT oil. Significant improvements in brain function and behavior were seen in a whopping 83.9% of patients after 4 weeks. In fact, researchers measured a four-point improvement on a memory test known as the ADAS-cog. What's more, the beneficial effects were still seen 6 weeks later after treatment was stopped.

The true significance of these results become clear when you consider that a leading Alzheimer's drug, donepezil, was found to provide only a two-point improvement on the ADAS-cog. The scores from the MCT oil showed it could be *twice as effective* as this leading drug!

Think of it like a “brain serum” that can make the brain feel and act younger.

Improved memory recall in as little as 90 minutes

Another clinical trial noted better cognitive testing scores in 10 patients with mild to moderate Alzheimer's disease just 90 minutes after taking a single dose.

In a double-blind, placebo-controlled trial, researchers gave MCT extract to patients in their 70s with either Alzheimer's symptoms or a type of memory loss known as Mild Cognitive Impairment (MCI).

Blood samples revealed that taking the extract created a 770% INCREASE of the fuel in their bloodstream. And as a result, their memory test scores shot up—especially for a part of the test called Paragraph Recall—in just 90 minutes.

A brand-new review published in the *Journal of Neurology and Neuroscience* noted positive results in every trial they reviewed involving BetaXb.

Of course, they say it'll take years of more research before they can really say for sure. But the fact is, hundreds of people have already reported reclaiming their memories...their independence...and their LIVES after using it. And my patients aren't the only ones.

For example, in a comment on in a recent article in University Health News about the use of a ketogenic approach similar to what I recommend, a woman named Kelly L. said “Following this diet worked wonders on my mother-in-law [battling dementia]. She regained about 75% of her cognitive function.”

Others have reported impressive results using a supplemental source of BetaXb—coconut oil—which is an MCT as was used in the study above...

Hank J.'s dementia had him bedbound and silent. But after just FIVE DAYS, he shocked everyone by getting up out of bed...walking around the house... recognizing his family...and even doing things he forgot to do for a while.

And then there's Barbara P., whose 90-year-old mother had scored 18 out of 30 on her initial mental exam.

But after one month of supplementing with MCT coconut oil, she scored a 26 out of 30 on the same cognitive test. Even better? She started going to church again and rejoined her old exercise class (both of which she'd been avoiding for years).

How does ketosis help treat Alzheimer's so quickly? In many ways:

Aging brains aren't as good as younger brains in using glucose for fuel. In the plaque-and-tangled riddled brain of a person with Alzheimer's that problem becomes an outright “brain energy crisis.” Providing ketones for fuel—particularly BetaXb—bypasses this problem, reenergizing the brain.

BetaXb and other ketones also energize *mitochondria*, the energy factories in brain and other cells. And they protect brain cells from toxins. Plus, ketones also induce *autophagy*, a kind of cellular cleanup. I'm sure researchers will discover many other mechanisms over time, as more and more studies are done.

How can you achieve ketosis and protect your brain?

At any given time, the body has about 40,000 calories available to it in fat, compared to just 2,000 carb calories. But as long as those 2,000 carb calories are available (which they always are, if you're eating carbs at every meal), you'll keep burning carbs instead of fat. But if you can make those 2,000 carb calories *unavailable*, your body will start burning fat instead. And that's when you're in a state of ketosis.

To tap into those fat stores, you need to stop feeding your body carbohydrates to burn. That means no starchy vegetables, no pasta, no sugar, no fruit, no juice, and no beer or wine. Instead your diet will consist of protein, fat, and non-starchy vegetables.

Here, then, are three simple steps to ketosis:

- 1) Cut sugar—in ALL its forms!** As I said, desserts, starchy vegetables (like potatoes, peas, corn, etc.), pasta, bread, fruit, juice, and beer/wine: it ALL has to go.
- 2) Stick with it!** Yes, the first few days will probably be rough, especially if you're used to eating a lot of carbs. But by the end of the first week, you'll start to notice a big difference in how you feel. And by the end of the second week, your energy levels, mental clarity, and weight loss will all be kicked into high gear.
- 3) Enjoy!** Just because carbs are off-limits doesn't mean you can't enjoy your food. In fact, ketogenic diets are delicious—and downright decadent. You'll get to indulge in all sorts of things you've probably been told by mainstream experts to deny yourself for years, like butter, brie, nuts and heavy cream.

And for an added boost of protection, similar to others in the studies I've discussed, incorporate a couple of tablespoons of BetaXb-rich coconut oil/MCT oil into your daily routine. Stir it into your coffee or incorporate it into a rich, chocolate whey protein shake.

Ketosis by the clock

There's another way to achieve ketosis that's also getting a lot of attention these days. Some people find it appealing because it has quick results. It's not new, but it's gaining popularity in a way I haven't seen before.

I'm talking about fasting—or more specifically, intermittent fasting. By depriving the body of all calories for an extended period of time, say 12 to 16 hours, you burn through all the carbohydrates you have on hand. And when that happens, your body turns to its fat stores for energy, putting you in a ketogenic state.

Does that sound miserable? Maybe at first, but once you get into the routine, it's really not nearly as severe as it sounds. In fact, this is how I eat. I have eaten only one meal a day for most of the past decade, and I feel great.

And if you think about it, it's how we were genetically programmed to eat. We didn't evolve with refrigerators. We had to hunt for our meals, so there would be many hours of the day when we wouldn't have access to food.

Fasting isn't for everyone. But there's growing evidence that ketosis is something we should *all* strive for.

Ketosis is a natural mechanism in our bodies. Don't be afraid to try it. Once you get through the initial adjustment period, your mental clarity will improve, you'll be free of blood sugar spikes and crashes, and you won't feel deprived at all.

Most important of all—you'll be eating what may be the *best* diet to prevent, stop, slow or even reverse the “brain energy crisis” of Alzheimer's.

An important note: Type 1 diabetics and pregnant or nursing women should not follow a ketogenic diet. But for most others, it couldn't be healthier.

The pain-relief miracle that can free you from chronic pain

If you struggle with chronic pain, you're probably well aware of the ways it can hold your life hostage.

So the fact that we're stuck in the middle of an opioid crisis shouldn't really surprise anyone. When you're in pain, you want relief. And a lot of doctors are all too happy to oblige by doling out hardcore prescription painkillers as if they were candy.

I certainly can't blame anyone for wanting to give their patients a pain-free life. And I also understand how living with chronic pain will drive anyone to try almost anything—regardless of the risks.

However, with hundreds of people dying from opioid addiction every day, it's crystal clear that these drugs simply aren't the solution.

But there's good news—and a viable alternative. In fact, today, I'm going to tell you about the most game-changing pain relief treatment I've come across yet. (At least, since I first started out in the business and saw how nutrition could change lives without pharmaceutical interventions.)

This one substance has changed my practice so much (especially in California, where I'm also licensed) that I doubt I'll need to write a single prescription for sleeping pills, anti-anxiety medications, anti-depressants, or pain medications ever again.

So what is this one “miracle” substance? It's a powerful combination of tetrahydrocannabinol (THC) and cannabidiol (CBD)—otherwise known as marijuana or cannabis.

Whether you call it Kono, cannabis, marijuana, CBD—it's all “medicine”

It has gone by many names throughout history—Kono, Má, Hursini, hemp. But here I'll show you why “miracle medicine” is one of my favorites.

This isn't the first time I've mentioned my enthusiasm for medicinal marijuana. Ever since I started prescribing it a few years ago, I've been singing its praises.

Still, I've encountered a fair share of skepticism from patients. And understandably so. For years, marijuana was illegal, even for medicinal purposes. But while most states have now given it the green light medically, its reputation as a recreational drug has been hard to shake.

And that's a real shame, because the truth is that the pharmacological effects of cannabis are as powerful as any drug...and a whole lot safer, too.

FACT: Inflammation drives chronic pain

To understand how marijuana works to relieve chronic pain, it's important to first understand how and why chronic pain happens. And as I'm always telling you, any type of pain, especially chronic pain, stems from inflammation.

Inflammation in itself is a good thing. Without inflammation, wounds and infections would never heal. But this necessary kind of inflammation is acute and generally goes away on its own within a few days.

When it doesn't go away, however, it results in chronic inflammation. And that's the kind that triggers ongoing pain and other symptoms. To make matters worse, research shows it sets off a vicious cycle: Increased pain boosts inflammation, which causes even more pain...and on and on.

So if you want to manage chronic pain of any kind, you have to address inflammation. And guess what? Research shows this is exactly what the natural compounds in cannabis do.

Smoking marijuana lowers CRP significantly

Consider this surprising fact: Marijuana smokers show lower levels of C-reactive protein (CRP)—the notorious inflammatory marker linked to heart disease.

A recent study looked at data from more than 9,000 participants of the National Health and Nutrition Examination Survey (NHANES), collected over the course of five years between 2005 and 2010.

About 40 percent of study participants reported having never smoked marijuana. Meanwhile, closer to 50 percent said that they had done so at least once, but powerful as *any* drug...and a whole lot safer, too.

But get this: People who reported using marijuana most recently had significantly lower levels of CRP than those who reported never using it. What's more, the association held true even after researchers factored in subjects' body mass index (BMI).

This study didn't explore exactly how marijuana manages to achieve these effects. But as it turns out, science has at least one potential answer for that—one that lies within the body's own cannabinoid receptors.

Putting out the fire before it starts

Cannabis contains hundreds of active substances, but only *one* of these—THC—contributes to its ability to get you “high.” The remaining active substances have different, less psychoactive effects—namely, they activate your body's cannabinoid receptors.

These receptors include CB1 and CB2. CB1 deals with the central nervous system. But CB2 has a key role in blocking inflammation within your body's tissues. This means that when CB2 is activated, your immune cells release fewer inflammatory cytokines (molecules that promote inflammation in your body).

And get this: German scientists discovered some time ago that a substance called beta-caryophyllene—which comprises up to 35 percent of the oil from the cannabis plant—directly activates your body's CB2 receptors, *without* activating the CB1 receptor or causing psychoactive effects.

What's more, studies on animals found that 70 percent of mice who received doses of this substance saw inflammatory swelling in their paws subside.

Ultimately, this means that oils from the cannabis plant hold promise not only against chronic pain, but against *any* inflammatory condition—from heart disease to Crohn's to liver disease.

But for the sake of today's discussion, let's get back to what it can do for chronic pain...

A “miracle elixir” for older adults

In my opinion, medical marijuana is one of the best options for patients with chronic pain. (It's also one of

seven conditions for which New York allows me to prescribe it.)

But you don't have to take my word for it. There's plenty of research to support this benefit. In fact, one new study found that medical marijuana users over the age of 75 enjoyed a dramatic reduction in symptoms.

This study featured more than 200 elderly patients, all of whom consumed cannabis products with varying ratios of THC to CBD—most often in the form of tinctures (a concentrated liquid extract typically made by alcohol extraction).

Three quarters of the patients had chronic pain diagnoses. But conditions like cancer, neuropathy, multiple sclerosis, epilepsy, and Parkinson's disease were also represented.

And here are the results:

- Around 70 percent of patients experienced some degree of symptom relief
- 50 percent reported reductions in chronic pain
- Nearly 20 percent reported better sleep
- 15 percent reported reductions in nerve pain
- 10 percent reported anxiety relief

Plus, as you might imagine, nearly *all* of the patients reported improvements in quality of life. And that's not too shabby for a simple plant that—for the most part—hasn't been altered beyond recognition in one of Big Pharma's labs (at least not yet).

Like any treatment, the dosing for medical marijuana needs to be properly individualized. So this study found a few minor side effects, like sleepiness, with treatment. Still, once adjustments were made, only three percent of the subjects had to stop using it.

In this study, a 1-to-1 ratio of THC to CBD proved to deliver the most benefits with the fewest side effects. (This isn't always the ratio that I use—sometimes I'll prescribe more or less of either, depending on the patient and their symptoms). But in the end, the patient *always* benefits, and there's no risk of overdose or abuse.

Which brings me to what might be the most noteworthy finding of this study: One-third of the patients were able to significantly reduce their dependence on opioid painkillers. And this is hardly the first research to draw such a conclusion.

Plus, a 2017 study of nearly 3,000 patients with different types of pain—from fibromyalgia to back pain to arthritis—revealed that **92%** clearly preferred cannabis to opioids for their pain.

There have been other encouraging trials on chronic pain as well. A study of cannabis-based medicine in the journal *Rheumatology* revealed patients suffering from rheumatoid arthritis—a painful inflammatory condition—saw a:

- 15% reduction in disease activity
- 32% drop in morning pain with movement
- 42% nosedive in morning pain at rest

Emerging studies reveal cannabis has also been found beneficial for neuropathy, a stubborn type of nerve pain that's next to impossible to treat.

A safe way to stem the opioid crisis

I've devoted plenty of lip service to the problem with opioids—and at this point, most people are well aware of

the dangers they pose.

To make matters worse, research shows that they don't even work all that well. Previous studies have shown that only 13 percent of users—about one in eight—rated opioids as “very successful.”

The most common answer? “Somewhat successful,” with a whopping *75 percent* of the patients experiencing side effects, to boot. (Including constipation, sleepiness, cognitive issues, and dependence.)

So any substance that promises a way to wean Americans off of this destructive class of drugs *without* compromising symptom relief (and *without* side effects) is a very big deal.

Of course, a lot of patients would pale at the prospect of mixing marijuana and painkillers. The mere suggestion is enough to send more conservative patients running for the door, with visions of drugged up rock stars dancing through their heads.

But if you fall into this category, research presented at the annual meeting of the American Society for Pharmacology and Experimental Therapeutics recently should come as a welcome relief.

Scientists gave monkeys moderate doses of morphine along with a synthetic version of THC. (Again, that's the compound responsible for marijuana's intoxicating properties.) Then, they assessed for factors like impulsivity and memory to measure the mind-altering effects of each substance.

The scientists found that, while both morphine and THC impeded cognitive performance individually, this effect was actually *reduced* when they were used in combination.

Sure, these results are from monkeys—so unlike human trials, they can only tell us so much. But as a model for human cognition, these findings offer a lot of hope for anyone looking to wean themselves off of lethal and addictive painkillers.

And there is a human trial to consider. A new study looked at pain intensity and tolerance among patients who use cannabis.

Researchers recruited subjects who use cannabis more than three times a week and compared them to people who don't use it at all.

Then, scientists gauged pain responses using a cold-pressor task test—where subjects submerge their hand and arm in ice water for a set period of time.

Results suggested that regular cannabis use *doesn't* increase pain sensitivity—a condition called hyperalgesia—the way opioid use does.

Far from pouring gasoline on the fire, it appears as though cannabis may be able to put that fire out *without* incapacitating patients any further. (While also potentially *lowering* any adverse effects.)

Big Pharma's next cash cow?

You should know that Big Pharma has a keen interest in cannabis...and is burning the midnight oil to transform it into the next big prescription drug, with a super-sized price tag.

In fact, the number of patent documents filed on this one plant-based medicine has tripled since 2015. And if they don't succeed in cornering the pain market...they stand to lose \$4 BILLION A YEAR.

Do you think they're going to sit back and let that happen? I sure don't. That's why I'm working to educate my patients and readers about cannabis now, to make sure everyone in pain knows what this natural “miracle medicine” can do.

Natural pain relief that really works

Of course, there's a long list of other drug-free remedies that can help you achieve the pain relief you need—yoga, massage, walking, acupuncture, chiropractic adjustment—all of which have clinical studies to support their use. And all of which I also recommend to my patients.

But in my practice, at least, cannabis will continue to take center stage in the fight against pain. So if you struggle with chronic pain, I strongly recommend you give it try.

You can find out your state's medical marijuana laws online by visiting this website: <https://healthcare.findlaw.com/patient-rights/medical-marijuana-laws-by-state.html>.

And you can find a reliable doctor near you who can prescribe medical marijuana for chronic pain by visiting this website: <https://www.MarijuanaDoctors.com/>.

I should warn you, though—until its use is legalized federally, you'll find that not everyone has full access to this plant just yet.

Luckily, *everyone* can get CBD, and it can be quite effective on its own for helping patients manage chronic pain.

CBD comes in a variety of delivery systems—from inhalation, to edibles, drops, oils, and capsules. There are even CBD preparations that come in creams that you can apply topically.

(I personally use these for dry skin in the winter months, and it completely relieves the dryness—and the itchiness that accompanies it.)

The best form of CBD really depends on the patient, what they are comfortable with, and what gives them the most relief. But the most important message here is that there's *nothing* to be afraid of.

Because no matter what form you choose to try—whether it's pure CBD or a mixture of THC and CBD—cannabis is completely non-addictive with almost no side effects. In other words—this stuff is perfectly safe. And more importantly, *it works!*

The Island Secret that's making these locals nearly heart-attack-proof

The media doesn't take it seriously, but a certain not-so-forbidden island fruit could be one of the easiest-to-follow "prescriptions" on Earth.

I'm talking about cacao—chocolate. Today, I'll tell you about some of the latest hard-hitting research on this natural life-saver.

Scientists originally discovered its power from the people of the Kuna Yala Islands, who live off the coast of Panama. They noticed that the Kuna Indians who moved to the mainland had the same rate of heart disease as the typical Panamanians.

But those who stayed on the island and ate a traditional diet, which was very high in cacao, had a near-zero risk of heart disease. That's when the interest in looking at the benefits of chocolate began.

Since then, there has been a lot of back and forth on the subject of whether chocolate is good for you. Is it or isn't it?

Well, I think there's enough evidence to say that cacao is, in fact, a health food. Let me start with chocolate's most researched benefit: It's one of the surest ways to fend off heart disease.

Fend off heart attacks, diabetes, and deadly strokes... with just two ounces a day

Chocolate is one of the most powerful antioxidants on the planet. It has an ORAC value greater than 10,000—one of the highest scores of any food substance yet discovered. (ORAC is a measure of antioxidant capacity.) Dark chocolate, derived from cocoa beans, is rich in polyphenols, specifically flavanols—sometimes called flavan-3-ols, or 3FO.

And these powerful compounds can lower blood pressure, fight inflammation, guard against deadly clots, and protect your metabolic health.

So the fact that chocolate is good for your heart isn't exactly a surprise. What may be surprising is just how beneficial it actually is.

Here are some of the research highlights. Various human studies have shown it:

- ✓ Nudged blood pressure OUT of the hypertension red zone...
- ✓ Reduced the inflammation marker CRP, according to a study of 20,000 people
- ✓ Reduced the formation of dangerous fatty plaques in the heart
- ✓ Improved blood vessel flexibility in just 4 weeks...

- ✓ Dramatically reduced the risk of heart attacks
- ✓ And activated the ultimate heart protector, nitric oxide

In 2011, the *British Medical Journal* published a meta-analysis in which researchers reviewed seven different studies featuring over 100,000 subjects. And they found that people who ate the most chocolate benefited from significant reductions in both heart disease, diabetes, and stroke—by 37 percent, 32 percent, and 29 percent, respectively.

And these results held even after researchers took participants' age, physical activity, body mass index, smoking status, and other dietary factors into account.

Of course, the main pitfall of this study is that it didn't account for what type of chocolate subjects were eating. And, as you know, there's a world of difference between a Hershey bar and 100 percent pure, unsweetened cocoa powder (more on that below).

Which also raises the inevitable question...

Doesn't chocolate make you fat?

The answer, according to one 2012 study, is *no*. Quite the opposite, in fact: This research found that eating chocolate twice a week is linked with a *lower* BMI. And yet another study from 2013 revealed a similar trend among chocolate-eating teens.

So what's the secret? Researchers generally chalk chocolate's metabolic benefits up to its abundance of flavonols. (Those disease-fighting antioxidant compounds I mentioned earlier.) And there's no question that they're the power players behind cocoa's growing credibility.

But research published in the journal *FASEB* this past February suggests that there may be more to the story than that...

This clinical study featured 44 overweight men who ate just over two ounces of dark chocolate daily for four weeks. But half of these men ate chocolate that was enriched with extra flavonols.

Results showed that dark chocolate consumption made subjects' arteries more flexible. And it also prevented white blood cells from sticking to blood vessel walls (another major cause of heart attacks).

But adding extra flavonols didn't make a difference. Plain old pure dark chocolate was every bit as effective.

Slash your risk of cancer death

As you may have guessed by now, the evidence is piling up in support of chocolate's anti-cancer potential, too.

Once again, this benefit boils down to polyphenols. Back in 2003, a team of Cornell researchers compared the flavonol content of cocoa to other renowned cancer-fighting powerhouses—specifically, green tea and red wine. And the results were a little shocking.

And they were surprised to find cocoa's ability to scavenge for cancer-causing free radicals was the highest. By a *very* wide margin, too. Almost twice that of red wine. Up to three times as high as green tea. And a whopping five times as high as black tea.

Then, just a few years later, the study responsible for really igniting the cocoa craze came out.

Researchers from Harvard joined up with Mars, Incorporated (who else?) to study the Kuna Indians living off the coast of Panama. Among other findings in their study, they discovered that the Kuna who remained on

their island and ate a traditional high-cocoa diet suffered lower cancer rates than the Kuna who migrated to the mainland.

And I don't mean a little bit lower, either. In fact, cancer death rates on the island were 630 percent lower than they were on the mainland.

Granted, these aren't placebo-controlled clinical trials we're talking about. And both laboratory and epidemiological research have their fair share of shortcomings. Not to mention that a lot of the research has been funded by companies like Mars and Hershey.

That said, the evidence is compelling enough for me to recommend chocolate to my patients—and to you. But you still need to be smart about it. And that means consuming wisely—in more ways than one.

How to have your chocolate and eat it too

First, be judicious about the type of chocolate you choose. It's true that many of cocoa's benefits seem to occur independently of flavonol content. But you still want to look for chocolate that's as unadulterated as possible (which means the majority of its polyphenols will be intact). And whatever you do, avoid products with excessive sugar—or worse, high fructose corn syrup.

That means skipping white and milk chocolate in favor of pure cacao—at least 80 to 90 percent. But I recommend going for 100 percent cocoa powder.

Is it going to taste good? Not by itself—I'm not going to lie. But that's easy to fix.

Just mix it with unsweetened almond or coconut milk, along with a little bit of stevia (just enough to cut the bitterness). The resulting concoction is one of my favorite treats.

Healthy, simple... and most definitely delicious.

1 simple secret that improved failing eyesight in just 90 DAYS

My aunt developed age-related macular degeneration (AMD) when I was just a kid. It was a relatively “new” disease then and only starting to gain recognition from the medical establishment. So doctors had little to offer her... and we all watched helplessly as her eyesight steadily and irreversibly slipped away.

Of course, we know a lot more about AMD now. Like how to fight it with targeted nutrition—whether it’s by following an antioxidant-rich Mediterranean-style diet—or by taking therapeutic doses of vitamin C, vitamin E, beta-carotene, zinc, and copper.

These solutions may not sound particularly exciting or cutting-edge. But they work—and that’s a big deal.

Ultimately, diseases like AMD are the reason I’m so adamant about giving old standbys their due. All too often, people write off powerful nutrients as “boring” or “ineffective” just because they’ve been around for a bit.

But every once in a while, you come across that rare ingredient that has it all—the stunning backstory, the sterling reputation, and the support of brand new, breakthrough research. And sometimes, it’s hiding in your own kitchen.

That’s certainly the case with saffron—an exotic, fragrant, delicate spice that’s instantly recognizable to any seasoned foodie. But as it turns out, saffron also happens to deliver a knockout punch to AMD.

From the pirate ship to your pantry

When Hippocrates said “let food be thy medicine,” there’s a good chance he was talking—at least in part—about saffron. That’s how long healers have been using *Crocus sativus*—the flower from which saffron is derived.

Ancient Greek frescoes depict saffron harvests. Alexander the Great reportedly bathed in it after battle to heal his wounds. And sailors would set off on harrowing expeditions just to get their hands on the priceless spice.

In fact, pirates would often ignore silver and gold, and steal saffron shipments instead. It was a symbol of wealth and status, used to dye the robes of royalty.

Of course, nowadays, saffron isn’t starting any wars. But it’s still valuable. And it’s no wonder, considering it takes roughly 80,000 handpicked flowers to yield just one pound of saffron!

This exotic spice is especially renowned in culinary circles—and is used most often to lend flavor to seafood or rice dishes.

But its medicinal properties remain every bit as impressive as they were back in Hippocrates’ time. Perhaps even more so—since now, saffron has the benefit of cold, hard science to back it up.

And while ancient doctors may not have been hip to this benefit, saffron is turning out to be an essential tool for saving your eyesight from the devastating effects of AMD.

The mechanics of macular degeneration

In order to understand what makes saffron so effective, it helps to have a basic understanding of how AMD steals your vision.

As the name suggests, macular degeneration destroys your macula. This is the most sensitive part of your retina, located in the back part of your eye. It's filled with the light-sensing cells responsible for sharp, central vision.

There are two main types of macular degeneration—dry AMD and wet AMD. The former is by far the most common, accounting for roughly 90 percent of all cases. It's a slow-moving disease that causes the critical sensory cells in your macula to break down and die.

Wet AMD is marked by the growth of abnormal blood vessels beneath your macula. This results in a leakage of blood and fluid. Both of which damage the macula a lot more quickly than dry AMD. (Typically, a person will start off with dry AMD, but one in 10 people will progress to wet AMD.)

Research shows that saffron benefits patients in the early stages of both types of AMD—due at least partly to abundant amounts of antioxidant carotenoids **crocin** and **crocetin**. And it appears to work its magic by protecting macular cells against blindness by boosting their sensitivity to light.

Saffron wakes up your retina—and brings the world into focus

Let's start with some short-term findings: As part of a small 2010 study, 25 patients with early, dry AMD received either a 20 mg saffron supplement or a placebo every day for two consecutive three-month periods.

Results from a focal electroretinogram (fERG)—a test that measures the activity of retinal cells in response to light—revealed much higher sensitivity in the macula after saffron supplementation. Saffron also delivered significantly sharper vision at a distance among early AMD sufferers. (Which is no small feat after just 90 days.)

Eager to see what saffron could do over a longer treatment period, these researchers completed a follow-up study in 2012. And the outcome was every bit as promising—with results showing even greater improvements in visual acuity and retinal sensitivity that lasted the full 14-month trial.

In fact, participants' vision improved enough so that they could see two extra lines on the standard eye chart (known as the Snellen chart), which you'd find on the wall at any eye doctor's office.

Also noteworthy? A 2013 trial from the same research team showed that these benefits are consistent among all AMD patients, regardless of any genetic risk factors influencing the disease.

A larger six-month trial from a different group of scientists—this one, published in 2016—shows that the benefits of saffron are no fluke. This time, 60 patients with either wet or dry AMD were given 30 mg of saffron or a placebo daily.

Comprehensive testing after three and six months showed significant increases in retinal sensitivity to light. And among patients with wet AMD, significant decreases in apparent blood vessel abnormalities.

Why cooking with saffron just won't cut it

The one thing you may have noticed from all this research is that the studies relied on saffron in supplement, not spice, form. And there's a good reason for that.

If you've ever cooked with saffron, you know it's not cheap. And like I mentioned earlier, its main purpose is to add subtle flavor to a dish—not to overwhelm the plate. So you're never going to be able to get the full benefit of saffron from cooking with it.

But thanks to high-quality saffron extracts—which are available both in combination formulas and as stand-alone supplements—you don't have to. I recommend taking 30 mg of a standardized extract every day.

The real causes behind erectile dysfunction... and how to cure it at any age

A visit to the doctor for erectile dysfunction (ED) usually results in little more than a prescription for Viagra and a pat on the back. And that, unfortunately, is a tragedy.

Why? Not because Viagra doesn't work. (It undoubtedly does.) But because for as common as ED is, it's not a "normal" part of aging. It's a major warning sign that something else in your body is going very wrong.

And when you ignore this big red flag in favor of little blue pills, that quick fix comes at a higher cost than most men would ever imagine.

True virility starts with your blood vessels

There are two main requirements for reliable erections—strong microcirculation and endothelial cell health. Both ensure ample blood flow to the penis, which you need in order to perform.

Microcirculation refers to the small blood vessels that supply blood and oxygen to our varying body parts. These are the first blood vessels to suffer damage and trigger "age-related" issues. That's because, as collagen and elastin break down, these smallest vessels lose their ability to stay open altogether.

Endothelial cells, on the other hand, comprise the lining of your blood vessels. One of their roles is to release the enzyme necessary for generating nitric oxide (NO)—a chemical that relaxes smooth muscle in the arteries of your penis, increasing blood flow and facilitating engorgement.

Plaque buildup will impair your endothelium—but it's also extremely sensitive to dietary influences. The typical American puts away 155 pounds of sugar per year. And this is a prime blood vessel killer, plain and simple.

If you eat foods rich in sugar—even one bowl of ice cream—this causes damage to the endothelial lining of your blood vessels. And there's no lag time. It's an immediate response. So when I say sugar kills, I mean it in more ways than one. Consume it often enough and you will soon lose your ability to achieve erection for good.

The damage snowballs with continuous exposure. And that's also why all of these problems get worse as we age. And when I say all, I really do mean all.

Problems achieving and maintaining an erection are often the very first sign that something is awry in this department. But ultimately, ED is a harbinger of much more lethal issues. Every part of the body that has small blood vessels is affected—from your heart and your kidneys, to your eyes, fingers, and toes.

You name it, and you're damaging it by neglecting your microcirculation. But there are a lot of other very specific factors that contribute to ED, too. So let's take a moment to review those right now.

Common culprits that sabotage your sex life

Some of these sex-sabotaging culprits are obvious—some not-so-obvious. But if you want to perform well at

any age, you need to have them all on your radar.

For starters, consider your weight. Just being overweight or obese will skyrocket your chances of suffering from ED. Not least of all because it throws off your body's hormonal balance. When you're overweight, your body naturally converts testosterone into estrogen, which is then stored in fat.

And I doubt I need to explain why that's a problem when you're trying to achieve an erection. Low testosterone is a very common cause of ED by itself.

Toxins—both in food and from other environmental sources—play into this as well. If you eat processed foods or commercially raised meats, touch cash register receipts, use certain shampoos or deodorants, even buy a new car, you can pretty much guarantee exposure to xenoestrogens and xenobiotics. All of which will (among other nasty side effects) decrease your testosterone level and leave you vulnerable to an insufficient erection.

Of course, you can't ignore the more obvious smoking guns. Like prescription and OTC drugs, for example.

While many medications can contribute to this problem, beta blockers for high blood pressure—along with most anxiety drugs and other psychotropic meds—are notorious culprits in causing ED. Alcohol, nicotine, antihistamines and even non-steroidal anti-inflammatory meds—most of which American men take routinely—can also contribute to erectile dysfunction.

Excuse the pun, but it's a rock and a hard place men are stuck between here. Because let's not forget that your state of our mind has a direct impact on the state of your penis. When you're stressed or suffering from adrenal fatigue in particular, you may just not *feel* like having sex. And this can absolutely play a role in ED.

The biggest erection killers are hiding in your kitchen

I already mentioned sugar, but it bears repeating: Increased blood sugar destroys your microcirculation, resulting in a shortage of blood to areas of the body that are critical for everyday functioning—including nerves. And as the nervous system it directly involved in stimulating your erections, it's not hard to see how damage to these sensitive nerve endings is a problem.

And that's not all it does. Studies show that testosterone levels can drop by as much as 25 percent after a high glycemic meal (That is, one that's loaded with sugar or carbs, which turn into sugar in your body.) And researchers have also found that soda can interfere with both erectile function *and* sperm count—a risk they associate with its high fructose corn syrup content in particular.

Soy poses another dietary danger to your androgen levels. Even organic, non-GMO forms of this food have documented estrogen-like properties—though in small quantities, it's not likely to pose a problem.

What *is* a problem is the glut of soy products currently saturating the modern food industry. Even if you avoid tofu and other processed soy products—and I certainly advise that you do—if you regularly eat processed and packaged food of any kind, you're likely consuming more soy than you think. And that can suppress testosterone and, in turn, your sex drive and erectile function.

Speaking of the hidden dangers of processed foods, let me remind you that canned foods and plastic bottles and packaging contain BPA. As I briefly touched on earlier, studies have shown that men who are exposed to this chemical are four times more likely to experience erectile dysfunction and seven times more likely to report problems with ejaculation.

But if you recall our discussion in the August 2016 issue, then you'll remember that recent “BPA-free” alternatives have not proven to be any safer in this department.

There are, of course, plenty of other erection killers that may be hiding in your kitchen. Trans fats, for

one, which (alongside sugar) are among the most lethal enemies your cardiovascular system—and by association, your sex life. But even something as simple and innocuous as salt could potentially trigger erectile problems.

I'm not nearly as salt-phobic as most physicians. However, if you eat a lot of processed foods, canned beverages (diet or regular), or fast foods, you're undoubtedly consuming *way* too much sodium. And while sugar is by far the more problematic culprit here, too much salt absolutely can increase blood pressure in some people—which in turn decreases your ability to achieve and maintain erections.

Now that we've covered some of the most common causes, let's start talking solutions. And I'll begin by dealing with the little blue elephant in the room first...

Think twice before you shell out for Viagra

Look, there are at least four prescription medications for ED. I am not going to pretend that they don't exist—or that they won't give you an erection quickly and effectively.

But I will point out that they are merely Band-Aid solutions. They fix a single symptom in the moment—but they do nothing to address the larger problem causing your erectile dysfunction. And they also don't come without their own fair share of side effects.

This list includes, but is not limited to: low blood pressure, dizziness, headache, back pain, muscle pain, nausea, visual disturbances, sudden vision or hearing loss, and cardiovascular events (like heart attack). And let's not forget the very painful condition called priapism, where you can have an erection that lasts four hours or longer.

I realize that may sound like fun on paper. But let me assure you that it's actually excruciatingly painful.

There's also the fact that ED drugs directly contraindicate a lot of medications, one of which you may already be taking, especially if you have diagnosed cardiovascular issues—which leaves you with little choice but to explore drug-free alternatives.

So it's a good thing that, as usual, there are plenty available.

As you've probably guessed by now, what's good for your heart is also good for your penis. That's why two out of the three main cornerstones of lasting, natural virility focus on the exact same strategies you'd use to keep your cardiovascular health locked down.

The three cornerstones of stalwart sexual health

I always start any of my recommendations with a focus on food, so first I'd like to direct your attention to the results of one recent study.

It showed that eating a Mediterranean diet led to an improvement in cardiovascular performance in patients with erectile dysfunction. Conversely, those who didn't adhere well (or at all) to this diet had more cardiac and vascular damage.

The researchers concluded that: "Erectile dysfunction is not a symptom of aging, it is a bad sign from the body that something is wrong with the vasculature. In 80 percent of cases erectile dysfunction is caused by vascular problems and is a warning that patients are at increased risk of a heart attack or stroke."

What more is there to say? This is just one more reason why a Mediterranean-style diet, with a strong focus on high quality protein, fresh veggies, and a lot of healthy fat is really the only "diet" worth following.

Of course, given the strong connection between your heart and your penis, it also won't surprise you that

exercise is essential for maintaining sexual function.

A 2015 study featured in the *Journal of Sexual Medicine* showed that men who exercise more—in this case, a total of 18 metabolic equivalents, or METS—also have stronger sexual and erectile function.

Just for context, 18 METS is the equivalent of about two hours of high intensity exercise, such as running, weekly. It adds up to about 3.5 hours of moderate exercise, like brisk walking—or alternatively, six hours of light exercise, like housework—per week.

I realize that this may seem like a lot of exercise if you’ve been off the saddle for a while. But everyone starts somewhere. There really is no “one-size-fits-all” exercise regimen. And any exercise, even if it isn’t at these levels, is better than no exercise at all where erections are concerned.

Finally, I must mention the obvious role of testosterone replacement when you’re struggling with sexual issues. Many studies indicate that men with low libido and low testosterone levels show more interest in sex and engage in more sexual activity when they undergo testosterone therapy. And this clearly makes sense, as testosterone levels continuously nosedive in men as we age.

You can get the full scoop on T replacement by going back and reviewing the November 2012 issue, where I covered the subject in detail. But needless to say, if you have ED, you definitely want to talk to your doctor about it.

Six supplements that restore lost virility, once and for all

Of course, supplements also play a role in my protocol for reversing erectile dysfunction. But I’ll clarify right now that I’m not talking about the “male enhancement” garbage you’re going to find at the gas station checkout line. (In fact, I urge you to stay far away from those sketchy products.)

Instead, I’m talking about a common sense regimen to shore up microcirculation and keep blood flowing where you need it, when you need it. So some of these recommendations are going to be very familiar:

- **Pycnogenol**—This French maritime pine bark extract is one of my favorite supplements of all time. It’s a must-have for strong microcirculation. And it stimulates endothelial nitric oxide synthase, the enzyme that produces nitric oxide in your artery linings from the amino acid l-arginine. I recommend 200 mg per day.
- **L-arginine**—This amino acid is necessary in order for your body to form nitric oxide, allowing proper vasodilation and facilitating erections. I recommend 3,000 mg twice per day.
- **Icariin**—This natural substance blocks an enzyme called phosphodiesterase-5 (PDE-5) which is tasked with winding down erections. (Viagra and its ilk are pharmaceutical PDE-5 inhibitors.) I recommend 500 mg twice per day.
- **Diosmin**—This is a potent bioflavonoid that supports and promotes a healthy vascular system. I recommend a dose of 250 mg twice per day.
- **Turmeric**—A great anti-inflammatory supplement that is essential for supporting the endothelial lining from attack. I recommend 500 mg twice per day.
- **Vitamin D**—I’ll wrap this list up with a brief mention of a supplement you should be taking already.

Why? Because a recent analysis of data collected from participants in the National Health and Nutrition Examination Survey (NHANES) 2001-2004 revealed a striking trend. Namely, that men with vitamin D levels below 20 ng/mL were 30 percent more likely to struggle with ED than men with levels above 30 ng/mL. (A level that I would consider barely sufficient, at best.)

What's worse, when researchers focused on cases of severe ED, they found the adjusted risk of erectile problems to be as high as 80 percent in men with vitamin D deficiency.

Needless to say, vitamin D deficiency is common. And it's an especially big problem in these short winter days, when—if your schedule is anything like mine—you'll have days when you arrive at and leave the office without exposure to a single ray of sunshine.

Bottom line: Don't neglect your D levels. I recommend a bare minimum of 2,000 to 5,000 IU of D3 daily. But up to 10,000 IU is safe with regular monitoring. Often, it takes that much to get back up to optimal levels.

The good news is, research on ED continues to evolve, and the natural arsenal you can use to combat it continues to expand.

New research reveals a natural antidote for ED that every man needs to know

Many doctors aren't talking about this, but a recent study revealed one additional ED culprit that's relatively easy to remedy: Low melatonin.

This popular bedtime supplement has impressive health benefits that go way beyond a good night's sleep. While this hormone is essential—and best known—for regulating your body's natural wake-sleep cycles, melatonin also offers critical protection against lethal diseases, like cancer and diabetes. Not to mention more than a few non-lethal conditions as well—from migraines to arthritis, and even sunburn. And according to new research, it looks like we can add one more common malady to that list...

The International Brazilian Journal of Urology published a study of 62 men with ED, ranging from mild to severe, and 22 healthy men without ED. Researchers took blood samples from all the subjects, assessing for factors including lipid and melatonin levels.

And they found that, while healthy men averaged around 45 ng/dL of serum melatonin, men with ED had much lower levels—hovering, on average, anywhere between 33 ng/dL and 35 ng/dL. That's about 25 percent lower!

And while this is the first study to expose a link between melatonin levels and erectile function, it's not exactly surprising. Because aside from being a sleep hormone, melatonin is also one of your body's most crucial natural antioxidants. These antioxidants are needed to thwart high levels of oxidative stress and chronic inflammation in the body—two factors that have a major role in the development of ED, as I explained above.

And when you consider the fact that decreased levels of melatonin are common in patients with diabetes and high blood pressure, it only makes sense that low levels might also be the culprit behind ED.

If you've been struggling with ED, you might want to consider adding melatonin to your daily supplement rotation. I recommend a starting dose of 3 mg (but never more than 15 mg) at bedtime. Feel free to experiment over time in order to find the dosage that works best for you.

The simple precaution to take before surgery that could save your life!

With today's modern technology, it's easy to assume that most elective surgery is simple and risk-free.

But with the rise of *superbugs*, nothing could be further from the truth.

Any surgery—no matter how “simple”—comes with risks. And surgical site infections are easily among the most common. They're also among the most dangerous, leading to longer hospital stays, unplanned readmissions, heavy duty antibiotic treatment... and sometimes, sadly, sepsis and death.

Needless to say, this isn't a chance worth taking for anything other than an absolutely necessary procedure. Unfortunately, sometimes you *don't* have a choice. That's why I want to share the results of the following study with you today...

As part of a recent meta-analysis, researchers reviewed the results of 35 trials, featuring more than 3,000 patients. The goal was to look at the effects that probiotics and prebiotics have on the risk of post-surgery complications.

Here's what they found: Patients who supplemented with probiotics benefited from significant drops in key inflammation markers, including C-reactive protein (CRP) and interleukin-6 (IL-6). They also suffered significantly fewer incidences of a wide range of surgical complications—from abdominal distension and diarrhea to pneumonia, sepsis, and urinary tract infections.

Plus, patients taking probiotics required shorter durations of antibiotic therapy. They also experienced shorter fevers, faster introduction of liquids and solid food, and shorter hospital stays.

And it's really no wonder why: Analysis showed that probiotics and prebiotics fortify the body's gut-mediated immune responses by generating an abundance of protective short-chain fatty acids—including acetic acid, butyric acid, and propionic acid.

I've said it before and I'll say it again: Your best defense against bad bacteria is having strong colony of good bacteria.

If the operating table simply can't be avoided, supplementing with a high-quality probiotic could quite literally save your life.

How to take a “bath” in the real-life fountain of youth

They say that age is just a number. But when I tell you that “you’re only as old as you feel,” I mean it *very* literally.

How you *feel*—whether it’s wracked with fatigue or brimming with energy—is always your best barometer for what’s really going on behind the scenes. It also reveals your body’s “age” a lot more accurately than any calendar could.

And, well... I don’t have to tell you that some people get “old” a whole lot faster than others.

The question is, why? The quest for the answer has been dogging researchers for centuries now. But in recent years, modern anti-aging medicine has delivered what might be the best explanation yet.

It turns out, the secret to successful aging lies within your mitochondria.

Good things really do come in small packages

I’ve covered this subject in passing before, but let’s start with some definitions, as a quick refresher: Mitochondria are tiny organelles inside your cells that serve as microscopic power plants.

They use the food you eat and the oxygen you breathe to churn out a chemical called adenosine tri-phosphate (ATP)—your most elemental form of energy. This is the fuel that keeps your body running at the most basic level.

It’s no doubt an important job. ATP keeps many of your basic functions firing on all cylinders—everything from hormone generation to digestion. It keeps your heart beating and your brain thinking. It facilitates every biochemical reaction and every vital biological function imaginable.

Cells that require the most energy to operate—in your skeletal and heart muscles and in your brain, for example—are especially packed with ATP-generating mitochondria.

But when your mitochondria begin to falter, your whole body suffers. And constantly feeling run down, tired, and worn out is just the beginning of the problems you’ll encounter.

That’s because any dysfunction in this department sets off a dangerous cascade of events—one in which mitochondria become their own worst enemies.

What happens when mitochondria go haywire

You see, even when they’re functioning correctly, mitochondria serve as the primary source of oxidative stress within your body. As a reminder, oxidative stress occurs when the body is overwhelmed by the production of free radicals and is unable to regulate them.

And basically, free radicals are the inevitable byproduct of ATP production, or the energy produced by our mitochondria. They’re essentially the leftover waste product from various chemical reactions in the cell. But when they build up, they can wreak havoc in your body.

And unfortunately, mitochondrial DNA is particularly vulnerable to their damaging effects.

Damaged mitochondria generate more free radicals, creating an unstoppable downward spiral. This vicious cycle is the crux of what's called the "free radical mitochondrial theory of aging." And it could help to explain why getting older is so often synonymous with chronic disease.

There are multiple factors that influence the fate of your health as you get older, obviously. But at the end of the day, a growing number of experts believe that it all boils down to your mitochondria.

Both the numbers and the functioning of your mitochondria decline with age. This deterioration leads to decreased ATP (or energy) output. And when your mitochondria can't keep up with your body's energy demands, it leads to some serious problems.

Fatigue, for starters. And not just run-of-the-mill tiredness, either. Mitochondrial dysfunction is one of the main factors behind chronic fatigue syndrome—a truly debilitating condition.

Muscle atrophy and age-related sarcopenia have also emerged as natural consequences of poor mitochondrial function. And the heart muscle is *especially* susceptible to the resulting energy deficit. (In fact, mitochondrial dysfunction is a defining characteristic of heart failure.)

But this is just the tip of the iceberg. Ultimately, research has linked deteriorating cellular power centers not only to heart disease, but to diabetes, Alzheimer's disease, and even cancer. And that's just a short list of the age-related problems with roots in mitochondrial dysfunction.

At this point, it should be crystal clear as to why mitochondria are quite possibly the *most* essential weapon against aging you have. Which raises the question... how do you keep them healthy?

Well, the good news is, it's not nearly as complicated as you might think...

Healthy mitochondria are creatures of habit

First off, it's important to understand that mitochondrial function is very much subject to your body's circadian rhythms. If your internal clock is off-kilter, your mitochondrial network will be too—triggering a marked drop in energy production.

(You can read more about circadian rhythms in the March 2018 issue. To refer back to my archives, simply use your username and password to log into the Subscribers Sign-In via www.DrPescatore.com.)

For starters, it means that getting the right amount of sleep—and just as importantly, sleeping at night—is essential for ensuring proper mitochondrial function. (Sleep disruption is a known hallmark of mitochondrial disease.) For my patients, I recommend seven to nine hours.

It also means that exercise is equally vital. Regular physical activity can effectively restore a disrupted circadian clock. So it shouldn't come as a surprise that those workouts boost mitochondrial health, too.

When it comes to how much exercise is ideal, multiple studies have shown that 150 minutes a week (just 30 minutes, five days a week) has substantial health benefits.

In my mind, *any* exercise is better than none. So, at the risk of sounding cliché, *just do it*. Start slow until it becomes a consistent routine, then as you grow more comfortable, work your way up to longer, more intense workouts.

In fact, high-intensity interval training (HIIT)—where short bursts of intense exertion are separated by lower intensity intervals—is particularly beneficial to mitochondria.

A recent study showed that this type of workout can boost mitochondrial capacity by nearly *50 percent* among younger volunteers—and by nearly *70 percent* among older subjects.

And of course, *when* and *what* you eat also has the power to make or break your mitochondrial health.

For one thing, eating big meals late at night remains a major no-no. But excessive carbohydrate and sugar intake, at any time of day, stresses your mitochondria too. While a ketogenic diet—sugar-free, carb-free, and rich in fats—appears to be one way to revive your body’s power centers. (You can read more about the ketogenic diet in the January 2018 issue of *Logical Health Alternatives*.)

Laboratory models of traumatic brain injury demonstrate that ketones—metabolites generated when your body uses fat instead of sugar for fuel—can reduce post-injury oxidative stress and boost mitochondrial function.

We also know that intermittent fasting—whether it’s restricting calorie intake to eight-hour windows, fasting one to two days a week—can stall aging and reverse metabolic disease. And recent research shows that its effects on mitochondrial networks are at least one major reason why.

Over the years, I’ve seen these anti-aging strategies breathe life into my patients, literally and figuratively. And I’ve felt the results for myself. As with many pathways to better health, lifestyle changes are a large chunk of the equation.

A foolproof protocol for peak mitochondrial function

There are also a number of supplements that I recommend for supporting mitochondrial health—some of which you’ll recognize as old standbys, and some that I’ve only introduced to you recently.

- **CoQ10.** This powerful antioxidant is probably best known as a heart health supplement—and given this muscle’s high energy requirements, it’s easy to see why. CoQ10 is vital for mitochondrial support and metabolism, helping to release stored fat for fuel. That’s why I recommend 100 mg, three times per day.
- **B vitamins.** No energy protocol—mitochondrial or otherwise—would be complete without this vital class of nutrients. B vitamins play a vital role in warding off mitochondrial toxicity and supporting mitochondrial function. They also maximize CoQ10 absorption, so these two supplements are a natural pair. What you’ll find in your average multivitamin really isn’t sufficient. Take a good B vitamin complex daily.
- **Carnitine.** This nutrient helps your body release fat for fuel and powers up your mitochondria—it basically “stokes the furnace.” I recommend taking 500 to 1,000 mg of l-carnitine, three times per day.
- **Robuvit®.** This patented extract from French oak trees features active compounds—including roburins and urolithins—that reduce oxidative stress and enhance mitochondrial function. Clinical research backs this benefit up, showing supplementation can significantly elevate energy levels in patients with chronic fatigue. I recommend 300 mg per day.
- **Lactobacillus fermentum ME-3.** This cutting-edge probiotic is the only known substance that can raise your body’s levels of glutathione—a so-called “master antioxidant” that depletes with age. This decline leaves mitochondria vulnerable and sets the wheels of disease in motion. I recommend 60 mg per day.

Last but certainly not least, I recommend polyphenols—and lots of them.

My top three polyphenol picks for ironclad mitochondria

Polyphenols are antioxidant powerhouses, which of course helps to protect mitochondrial integrity. But research also demonstrates their role in facilitating optimal mitochondrial function across the board. So it really is hard to

imagine a simpler or stronger form of anti-aging support.

I declined to give them their own bullet on the list above, because you have your pick of first-rate polyphenol sources, both in food and supplement form. If I listed them all one by one, this article would turn into a book.

But that isn't to say that I don't have a few preferences. Because based on the research available, I definitely do.

Chocolate probably tops on this list, which may come as a pleasant surprise. Believe it or not, clinical trials show that daily dark chocolate consumption can significantly improve markers of mitochondrial function, while providing a boost in energy levels and endurance.

This assumes, of course, that you're not getting yours with a hefty helping of sugar. Sweeten 100-percent cocoa with stevia to taste, instead. Or you can just take cocoa flavonoids in supplement form. (In this case, I recommend 1 gram, three times per day.)

Then there's EGCG and resveratrol—two polyphenols derived from green tea and red wine, respectively. A recent trial published in the *American Journal of Clinical Nutrition* showed that an EGCG and resveratrol combo supplement was able to boost mitochondrial capacity in obese subjects within just 12 weeks.

To get your EGCG, I typically recommend two to three cups of unsweetened green tea per day—or green tea supplements, if you prefer. (Specifically, 500 mg of an extract that contains 60 percent catechins and 30 percent EGCG.)

For resveratrol, skip the red wine—it's loaded with sugar—and go straight to supplements. I recommend 500 mg of trans resveratrol (the most potent form) per day.

By following the simple recommendations I've laid out for you here, your mitochondria will be equipped with what it needs to keep your body running like a well-oiled machine. And this will not only keep you healthy, but ensure you stay younger, longer.

The scary truth about dental floss

Is *anything* safe in our toxic world?

According to the latest research, simply flossing your teeth could substantially raise your body's levels of something called polyfluoroalkyl substances (PFASs)—widespread chemicals with links to a long list of diseases, including cancer.

Sometimes I feel like we just can't win. But it won't stop me from sounding the alarm. And like it or not, this is yet another daily ritual that we need to pay closer attention to...

When dental floss turns deadly

I've warned about the dangers of PFASs before. These manmade chemicals were introduced to our world 60 years ago. You'll find them in non-stick cookware, food packaging, carpets, furniture, and waterproof coatings.

And because they take such a long time to break down, they remain in the environment for *years*.

PFASs are literally in our water supply, which is horrifying enough. But just when you think you've heard it all, along comes a study like this...

It featured 180 women. And it showed that those who used Oral-B® Glide to floss their teeth had higher levels of a PFAS called perfluorohexanesulfonic acid (PFHxS) in their bodies compared to those who didn't use the floss—by as much as 25 percent.

This is the first study to link dental floss to higher toxic burdens of PFASs. And researchers found fluorine compounds in five other flosses, too.

Needless to say, that should concern us all.

A lot of our exposure to environmental toxins stems from the products we use in our homes every day—our clothes, our furniture, our cookware, our personal care items. (For a full account of just how pervasive these chemicals are, I advise you to check out the Environmental Working Group's (EWG) website at www.EWG.org.)

Over the past few years, I've made a huge effort to purge these chemicals from my personal environment. But let me tell you—it isn't easy. Or cheap.

It is, however, imperative. Because PFASs turn up in 95 percent of blood samples, nationally. And that kind of exposure doesn't come without consequences.

Three ways to minimize the damage

To be clear, research has linked exposure to two forms of PFASs—perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS)—to kidney and testicular cancer, reduced semen quality, and ulcerative colitis in adults. And in children, the chemicals have ties to thyroid disease, immune dysfunction, and disruptions in sex and growth hormone levels.

At the risk of stating the obvious, that's pretty scary stuff. The good news, though, is that knowing which products to avoid can help minimize your exposure.

This study showed that eating prepared food out of coated cardboard containers—think fast food—was linked to higher levels of four PFASs. So eliminating take-out is one way to reduce exposure.

Having stain-resistant carpet or furniture—and living in a city with a PFAS-contaminated water supply—also led to higher levels of these chemicals. So investing in non-toxic home goods and a good water filtration system will also make a difference.

As for dental floss, this study found detectable PFHxS in Oral-B® Glide, as well as five other flosses (three of which were branded as Glide, and two generic products that cited Oral-B® Glide as a comparable product).

So needless to say, brands matter here, too. The EWG can serve as your guide to safer, unwaxed dental flosses. Plus, you can find a floss that is made from organic silk and organic beeswax in most of your common shopping places, including Amazon. But when in doubt, you can always switch to a water pick.

The hidden danger of being naturally thin

Believe it or not, I have many patients who have never suffered with a weight problem. I personally think they are freaks of nature, but that's just the former "fat kid" in me who can't imagine what it's like not to have to worry about weight. One thing I've noticed with many of these people, though, is that just because the number on the scale looks good, it doesn't mean there aren't other health-related red flags. After all, as I explained the other week, weight is only one marker of overall health.

For instance, my thin patients almost always have a harder time making the dietary changes necessary for true, lasting health and longevity. The most common excuse being, "I can eat anything I want and not gain weight so it doesn't affect me."

In fact, one of my "skinny" patients told me last week that he only has one or two cans of Coke per month. So no harm, no foul, right doc?

Unfortunately, that couldn't be further from the truth. Sugar affects us no matter what weight we are.

And I have a new study to prove it.

According to data from 17 observational studies that included over 38,200 people, researchers from the Cambridge School of Clinical Medicine in England found that regular soda drinkers are more likely to develop type 2 diabetes.

No matter how heavy or thin they were.

They know this because researchers did not factor in these people's weight as a criterion.

Specifically, they found that any person, thin or heavy, has an 18% increased risk of developing type 2 diabetes over a 10 year period with every serving of sugar sweetened beverages they consume.

The study authors said these findings were a surprise to mainstream health experts. The consensus has always been that sugar intake promotes weight gain. And then, in turn, body fat contributes to insulin resistance, which is a pre-cursor to diabetes.

But this discovery was no surprise to me. I've been talking for years about how being thin isn't a "get out of jail free" card when it comes to diabetes.

Let's break it down by the numbers, using those two cans of Coke my patient believed were "no big deal"...

A 12-ounce can of Coca-Cola has 39 grams of sugar, which is the equivalent of almost 10 teaspoons. So two of those a month is 78 grams of sugar, or 20 teaspoons. That's almost a 1/2 cup of sugar. Just from two cans of Coke!

Sure, your body can handle this every once in a while. But that ability wears out when your body is forced to do it over and over again (every month, for instance).

This avalanche of sugar also affects digestion by altering the healthy microbial colonies in your gut. And research shows disrupting your microbiome also increases the risk of developing type 2 diabetes.

So what does that mean in the long run? It means that if people continue to consume sugary beverages on a regular basis there could be 2 million new cases of type 2 diabetes in the United States in the next five years. That is on top of the 29 million Americans who already have type 2 diabetes.

Bingo! I've been talking about how sugar kills for over 20 years and finally someone is listening...

Unfortunately—though not surprisingly—the ridiculous American Beverage Association had to chime in and try to denounce this study. They claim that because this study was not based on clinical trials, the findings cannot prove a direct link between drinking sugary beverages and developing type 2 diabetes.

They also said: “Even so, our industry is committed to being part of real solutions to public health challenges.”

What sort of “real solutions”? Well apparently, the Beverage Association is rolling out a new initiative called “Balance Calories” that aims to reduce the calories in beverages by 20% by the year 2025.

Just one-fifth? Seriously?

If you ask me, the Beverage Association should be outlawed as the criminal syndicate and public health threat it really is.

But I digress... The point here is that your waistline isn't the only factor involved when it comes to heading disease off at the pass. If you don't make good choices in terms of what you eat—and drink—you will eventually find yourself on the slippery slope to diabetes and all of its complications.

As I've said many, many times before: Sugar kills. And the sooner you ditch it from your diet, the better.

1 afternoon snack that can help keep you safe from bone-fracturing falls

My top priority is to help you live longer by giving you all the information you need to prevent and reverse chronic disease—whether it’s diabetes, cancer, or heart disease. But there’s one major cause of death that isn’t actually a chronic disease at all...

Fact: One out of every four Americans over the age of 65 falls in any given year. And every 20 minutes, an older adult will die because of it.

Yes, you read that right.

Falls are the leading cause of fatal injury in this population. They’re responsible for more than 800,000 hospitalizations, and upwards of 30,000 deaths annually. To make matters worse, recent research shows that they’re happening to more people—more often than ever before.

Falls are on the rise—but not just in the elderly

Researchers recently looked at fall trends among middle-aged and older adult participants of the National Institute of Aging’s Health and Retirement Study.

In this study, “falling” constituted at least one self-reported fall over the last two years. And results showed that these falls rose from roughly 28 percent in 1998 to 36 percent in 2010.

We’re talking about a 30 percent increase here. And it’s not just the elderly who faced this elevated risk. Researchers identified these increases across *all* age groups. And this isn’t the only study to discover this trend among younger adults.

In fact, another recent report found that fall rates among European women have increased by nearly:

- 10 percent in 40- to 44-year-olds
- 20 percent in 45- to 49-year-olds
- 21 percent in 50- to 54-year-olds
- 30 percent in 55- to 65-year-olds

These findings suggest that efforts to prevent falls need to start a lot earlier than retirement age. And you know what? I couldn’t agree more.

Because just like chronic disease, the problems that precede increased fall risk begin *decades* before the real trouble sets in.

Why the fight against falls starts in mid-life

Sarcopenia is the earliest factor behind elevated fall risk.

As you may recall, it’s just a fancy term for the progressive muscle loss that accompanies aging. But these declines in muscle mass strike earlier than you might expect.

Yes, the elderly *are* at the highest risk for the condition—but only because they have more years of muscle loss under their belts. The scary truth is, muscle mass starts taking a nosedive as soon as you hit 30.

So if you haven't taken measures to prevent major losses by the time you're 70, you could be struggling daily with the fallout (emphasis on the “fall”).

Research clearly shows that older patients with sarcopenia—and related “dysmobility syndrome,” which includes issues like slow walking speed—are at a *significantly* higher risk of both falling and fractures.

Yet we tend to dismiss sarcopenia as a “normal” part of aging. That's only our first mistake. When sarcopenia is paired with obesity—which is the case with around *half* of all older adults—things get especially dangerous.

This deadly combo is called “sarcopenic obesity.” And research shows it's one of the straightest paths to falls, leading to fracture and disability.

Sarcopenic obesity strikes early

A recent study focused on fall risk among older women. Researchers reviewed data from more than 11,000 postmenopausal participants in the Women's Health Initiative (WHI)—including weight, muscle mass, and fall history.

Ultimately, researchers found that sarcopenic obesity posed the greatest fall risk to postmenopausal Hispanic/Latina women. But they also linked the condition to a higher risk of falls in all postmenopausal women younger than 65.

Needless to say, these *aren't* the women you'd expect to be taking catastrophic tumbles. (And given the sharp declines in bone density that often accompany menopause, catastrophe is practically guaranteed.)

Of course, the real tragedy here is that, despite its reputation as an inevitable part of aging, sarcopenia is just as preventable as obesity.

At the most basic level, sarcopenia is just another byproduct of “sitting disease”—a modern plague that ages you from the inside out. In fact, a sedentary lifestyle can rob up to 5 percent of your muscle mass *every year*. But it doesn't take much to fight back against this risk...

As usual, exercise is key

One of the most important things you can do to avoid this debilitating trifecta of sarcopenia, obesity, and falls is to get moving.

I know I always harp on the importance of exercise. But it really is critical. And a new clinical trial published in the *Journal of the American Medical Association* underscores why.

This study looked at nearly 350 adults over the age of 70—all with an average of three prior falls, and generally limited mobility and frailty. Researchers tasked them with simple in-home strength and balance exercises—using basic equipment like free weights—at least three times a week.

Researchers found that seniors who stuck with the program for 12 months reduced their risk of future falls by an impressive 36 percent. They also improved cognitive function markers—another major factor behind fall risk.

In fact, Alzheimer's disease actually *doubles* your risk of falls. And every year, upwards of 60 percent of dementia patients will take a spill. Luckily, research shows that regular exercise dramatically reduces falling in this population, too.

And it doesn't take much to make a difference. Obviously, strength training is important for preserving muscle mass at any age. But studies indicate that even the gentlest movement can have a major impact on fall risk.

A recent review of 35 different studies of English, Chinese, and Korean populations looked specifically at the benefits of Tai Chi—a practice that combines deep breathing and relaxation with gentle movement to increase balance, strength, and mental health.

One 12-week trial included in the review showed that stroke survivors who practiced Tai Chi experienced the fewest falls. (This is important because stroke survivors are actually *seven times* more likely to fall than their healthy peers.)

And a study of older adults in Oregon—all of whom took one-hour Tai Chi classes, twice weekly, at their local senior centers for 12 weeks—also showed dramatic improvements in balance, fall rates, and functional independence. No fancy equipment necessary.

At the end of the day, consistency is still key. So whether it's Tai Chi or a simple daily walk, just be sure you're getting 150 minutes of moderate exercise weekly to reap the rewards.

But of course, exercise is just part of the equation...

Protein matters more than people think

As you may recall, the "A" in my A-List Diet stands for amino acids, which your body needs to do virtually everything. But chief among these biological tasks is building muscle.

This is important because most seniors aren't getting the protein they need to maintain and build muscle.

For years, the medical establishment has been telling us to cut down on protein intake—and I have no doubt that this terrible advice is the primary contributing factor behind the rise in sarcopenia.

In fact, the Recommended Dietary Allowance (RDA) for protein is a paltry 7 ounces of meat per day for the average 130-pound woman. But research consistently shows that the daily dose of protein should be at least *double* this amount, if the goal is to improve muscle mass and reduce frailty and weakness.

Protein at every meal—plus a perfect afternoon snack

I've written about my protein recommendations a number of times before. But here's a quick refresher: Eat your body weight in grams of protein on the days you're not exercising. And eat 1.5 times your body weight on the days that you are.

Now, I realize that may sound daunting. But if you include protein with every meal (in the form of eggs, nuts, and/or meat), you shouldn't have too much trouble reaching this goal.

You can even add a whey protein shake to your routine once or twice daily. Whey protein is an easy—and tasty—way to add 20 or more grams of protein to your daily total.

Just remember there are a few things to consider when choosing a whey protein product. Look for one that has 8 grams of carbs or less per serving. And mix it with plain water. If you like a thicker consistency, add some ice cubes and mix it up in a blender. You can add a tablespoon of macadamia nut oil for a healthy boost of monounsaturated fatty acids (this little trick will also keep you full even longer). It makes a great afternoon snack or a light meal.

But if you're still having trouble incorporating enough protein into your daily diet, order yourself a copy of *The*

A-List Diet for further guidance. Because research shows that eating enough protein can work real miracles for your muscles.

The most important nutrient in your anti-fall arsenal

In addition to upping your protein intake, plenty of research has shown that supplemental vitamin D can reduce the risk of falling among older adults.

In fact, as part of a recent pilot study, researchers set out to assess the benefit of including vitamin D supplements—at a dose of 100,000 IU per month, or just over 3,300 IU per day—as part of a Meals-on-Wheels program.

Testing showed that more than half of the senior subjects were deficient in vitamin D, while fewer than a quarter met the conventional sufficiency threshold of 30 ng/mL or higher.

Monthly supplementation effectively increased these concentrations in nearly all subjects. But more importantly, the seniors taking vitamin D reported half the amount of falls compared to controls who didn't supplement.

Clearly, diet and exercise are key in this fight. But I can never stress the importance of vitamin D enough. Make sure your doctor is checking your vitamin D blood levels regularly. The threshold for sufficiency may be 30 ng/mL, but for optimal health, you need to aim closer to 80 ng/mL.

Proper supplementation will help you achieve these levels. I recommend *at least* 2,000 to 5,000 IU of vitamin D3 daily, but I've also found that higher doses, up to 10,000 IU per day (which is what I take) are often necessary—especially in the winter, when sunlight is fleeting.

7 crucial steps to stopping skin cancer before it starts

Summer is the season I dream about during all the others. And as the weather starts warming up, I can't help but think about the beach. When will I get there—and how many trips can I swing?

I admit it—I'm addicted to the sun and sand. And I know I'm in good company...

But as a doctor, I also know that this penchant poses a unique catch-22. On the one hand, sunshine is your best natural source of lifesaving vitamin D. (As I've reported many times, it's key in preventing—and even reversing—numerous debilitating conditions such as Alzheimer's, diabetes, heart disease, and cancer—just to name a few.)

On the other hand, well, you know the drill... Hysteria over skin cancer risk has long dominated the mainstream conversation about sun exposure. And it's not that there isn't a grain of truth there. Skin cancer can be deadly—and excessive sun exposure is the No. 1 cause.

Still, as well-intentioned as the call to stay in the shade may be, that advice can also shield you from some essential health benefits. And the consequences could prove just as deadly.

So let's shed some light on the topic at hand by first weighing some of the sun's risks and benefits. I'll tell you how you can protect yourself *without* missing out on one of the most powerful forms of natural disease prevention you have.

Sunshine saves lives, in more ways than one

First, let's cut straight to the facts: "Too much" sun actually has its advantages. And they're not exactly small ones, either.

Consider the results of the following study, published in the *Journal of Internal Medicine* in 2016: Researchers observed nearly 30,000 Swedish women for more than 20 years. And ultimately, they found that when it comes to your health and your mortality risk, hiding yourself away from the sun is *just* as dangerous as smoking.

Women who smoked and soaked up a lot of sun enjoyed lifespans on par with non-smoking women who avoided the rays. And overall, the women with the highest sun exposure had a life expectancy up to *two years longer* than women who avoided sunshine.

But that's not all. In this study, sun-seeking women were also at lower risk of heart disease, diabetes, and multiple sclerosis than their sun-avoiding counterparts.

The best part is that these results were dose-dependent—meaning the benefits of sunshine *increased* with greater exposure.

Researchers, however, did find a higher rate of skin cancer in the women who got the most sun. No surprises there. But overall, these cases were actually *less* aggressive—and carried better prognoses—than the cases of cancer among women without as much sun exposure.

To be clear, I'm not suggesting that we all slather ourselves in baby oil and lay out with a makeshift tin foil reflector (as many of us did when we were young). Considering the fact that the American Cancer Society reported 76,000 new melanoma cases in 2016, it's safe to say that skin cancer is still a serious concern.

But there's a right—and a wrong—way to go about preventing it...

Sunscreen isn't a magic bullet against melanoma

Let's start with what *doesn't* work (at least, not as well as we've all been led to believe): sunscreen.

Another recent study, presented at the American Public Health Association 2016 Annual Meeting, enrolled 499 white children. The researchers categorized the children's skin tone as lighter or darker.

Every year, they examined the children for new moles (an indicator of melanoma risk). The children's parents also completed an annual survey detailing the frequency of sunscreen use when kids were outside for more than 15 minutes, thickness of sunscreen application, which parts of the body were protected, and other sun-protection measures.

What they found turns the idea of recommending sunscreen for everyone on its head. Only the high-risk kids—who had the lightest skin tones and experienced at least three sunburns between ages 12 and 14—benefited from sunscreen. Of the kids in that group, those who used sunscreen had significantly fewer moles than those who did not. But for other kids, sunscreen *didn't* offer protection against developing moles.

Now, this study only observed the children until they turned 15, and moles can take much longer than that to start appearing. But as it stands, this is the longest mole study ever conducted. And if the evidence holds true, we need to rethink our sunscreen recommendations.

The notion that sunscreen protects against skin cancer is so widely accepted that it's practically second nature to some. But, as this evidence suggests, the protection benefits might not be as reliable as one might think...

How UV rays can help or harm

One of the reasons sunscreen isn't as protective as expected is that many popular products are only effective at blocking ultraviolet B (UVB)—or “short wave”—rays. Until recently, we thought UVB rays were the only ones linked to melanoma.

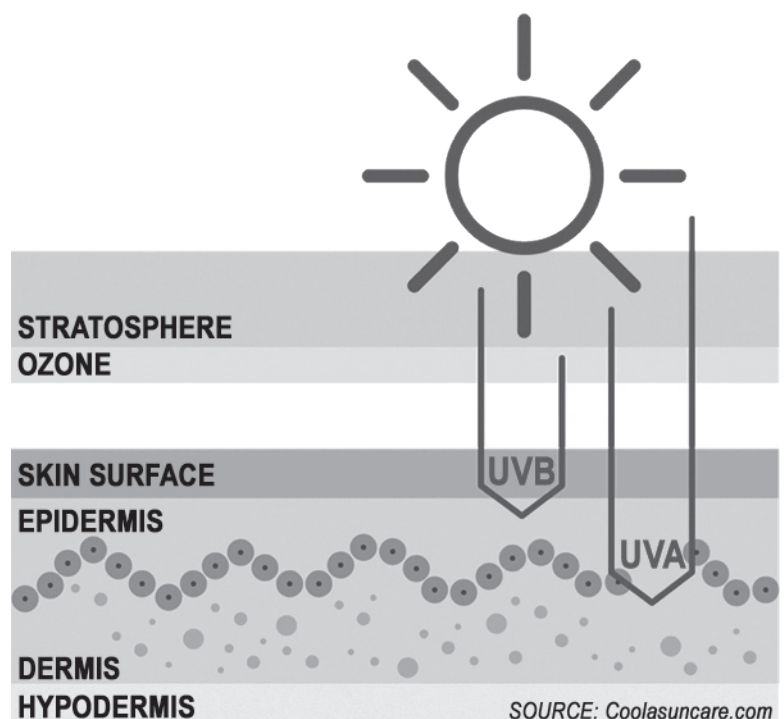
But we now know that ultraviolet A (UVA)—or “long wave”—rays play a role too. We also know that they penetrate deeper into the skin... all the way down to the dermis (the second deepest) layer.

Additionally, UVA exposure is more or less constant throughout the day. So although the sunburn danger wanes when the sun is low in the sky, risk for UVA exposure can remain.

In fact, the damage to your skin can continue for *up to four hours* after you go inside. Even if you're sitting in total darkness.

But fear not—researchers have found that applying a lotion containing vitamin E *after* you've been in the sun can help offset—and potentially repair—some of the damage done by the UV rays. Just be sure to look for a vitamin E product that uses all-natural ingredients (as is the case when choosing a sunscreen—see the box on page 47).

On the other hand, UV rays are responsible for some of the sun's significant health benefits too. And not just as a natural source of vitamin



D, either. They help lower your blood pressure by elevating nitric oxide, a vasodilator that widens blood vessels. This allows your blood to flow more freely—a major key in preventing a heart attack or stroke.

So in the end, moles really can't be prevented with sunscreen. They're the "cost of doing business," so to speak. But that doesn't mean you should ignore them. Quite the contrary... In order to enjoy all the health benefits the sun has to offer, you must be particularly vigilant about its most dangerous risks. More on that in just a moment.

To protect yourself from the sun, you're safer wearing hats, sunglasses, and protective clothing once you've reached your sun quota for the day. (This amount of time varies from person to person, but if your skin looks flushed or feels hot to the touch, you've met your quota.)

Nonetheless, sunscreen (while I think is overrated), can still serve a purpose if you have exceptionally fair skin or plan to be outdoors for a prolonged period of time...provided you're using a quality product with natural ingredients (as is the case with any *after-sun* lotion, as I mentioned earlier). See the box on page 47 for my sunscreen recommendations.

Skin cancer can kill you—but it doesn't have to

As I mentioned earlier, skin cancer is hands down the most common form of cancer in the United States—about 5.5 million cases are diagnosed every year. Even the less deadly forms—the most common, basal cell carcinoma (BCC), and the second most common, squamous cell carcinoma (SCC)—have been steadily rising. (More than 4 million Americans are diagnosed annually with BCC and nearly 1 million with SCC.) And yet somehow, there *still* aren't any solid, consistent guidelines for skin exams and screening.

As for melanoma—the deadliest form of the disease—rates have been increasing at a disturbingly fast pace among the most vulnerable demographics (white men over 55 years of age and white women 49 and younger). According to the Skin Cancer Foundation's website, approximately 178,560 cases of melanoma will be diagnosed in the U.S. in 2018. And currently, one person dies from melanoma each hour.

When you consider the fact that a whopping 88 percent of women say they've *never* talked to their doctor about melanoma—and that only about 30 percent of them conduct their own mole and skin checks—it's easy to see why this is a pretty major problem.

I tend to ask all of my patients if they routinely see a dermatologist for these things. And luckily, most of them do.

Melanoma is a killer that can spread fast unless it's caught early enough. A new or different mole or skin spot can be a death sentence if it goes unnoticed or unaddressed. And surely you've heard how important it is to "know" your body—for a variety of reasons—and in my opinion, this one certainly tops the list.

Fortunately, there are plenty of ways to be proactive about preventing this disease. Perhaps most effective is keeping close tabs on your moles.

Seven crucial steps to stopping skin cancer before it starts

I've mapped out seven crucial preventative measures you can start today to protect yourself from the most common form of cancer among Americans.

1) Visit the dermatologist. (And by that, I mean a practitioner who focuses on medical dermatology, not cosmetic procedures.) As I mentioned above, this is the first and most obvious step—because while your regular doc may inspect your skin, you really need a specialist to give you a closer look. Once again, skin cancer can be *deadly*. Needless to say, you don't want to leave your fate in the hands of someone who's not an expert.

I should also note that people with 50 or more moles are at substantially higher risk than those with fewer. If you fall into this category, have a dermatologist map your skin and make sure you follow up with them at least once a year.

- 2) Share your personal history of sun exposure.** As many as 40 percent of doctors don't even bother asking about this—and I simply can't understand why. Severe sunburns you may have had, even as a child, and your own family history of skin cancer matter a lot. So does any history of tanning bed use—studies show “fake baking” can raise your risk of melanoma by 75 percent. And it can *double* your risk of basal and squamous cell carcinomas. (True story: I was a big tanning bed fan at one point—and had a squamous cell carcinoma removed from the back of my own leg! So believe me when I say that you should always volunteer this information.)
- 3) Strip down for the exam.** It's a scary fact, but nearly 70 percent of all skin checks don't include the genital region. Skin cancer in these areas may not be as common—but rest assured, melanomas can develop there. This is not a time to be shy. At the very least, make sure you look for skin changes in these areas and report any findings to your doctor.
- 4) Don't forget your scalp.** Close to 30 percent of skin exams overlook this area, too. Once again, this isn't a common spot for melanomas—accounting for only six percent of them in fact. But research shows that patients with melanoma of the scalp or neck are 84 percent more likely to die from it. Likely due to the fact that the cancer had gone unnoticed for so long.
- 5) Check your hands, feet, and nails.** Like the pubic area and the scalp, a good 32 percent of exams don't include a thorough look between the toes, soles of feet, or along the palms and nail beds. And speaking of nails, make sure they're polish-free for the exam. Regular manicures that use UV lamps could present higher risk of squamous cell carcinoma—so your doctor will need to get a clear, unobstructed look.
- 6) Know what you're looking for—and when to be concerned.** More than half of all melanoma patients caught their cancers themselves. New spots—especially ones that are changing quickly, are itchy and crusty, bleeding or misshapen, or are oddly colored—are huge red flags.
- 7) Perform monthly self-examinations.** You should make a point to look at yourself in the mirror once a month for new skin spots or changes in any moles. It should take no more than 10 minutes. Just follow steps 3 – 6 from above in front of a mirror at home.

For a detailed self-examination guide, visit the Skin Cancer Foundation's website (www.skincancer.org). Simply click on the “Skin Information Tab” then select “Early Detection and Self Exams.” As they say on their site, “If you can spot it, you can stop it.”

If you do find something, it's important to know what your next steps should be. So let's take a moment to talk about that now.

Before you go under the knife...

Given the statistics, your chances of grappling with suspicious moles at some point—or multiple points—in your life are obviously high.

But despite how common it is, the necessity of removing a suspicious skin mole is still pretty subjective unless you're dealing with something really obvious. Your doctor will be on the lookout for various characteristics, which are typically referred to as the “ABCDE rule.” (You should also use these criteria during your monthly self-examinations.)

A: Asymmetry. The spot isn't a perfect circle.

B: Border irregularity. Edges of the spot may appear notched or “bumpy” rather than smooth and even.

C: Color. A spot that appears mottled or is more than one single shade. (Also, brown and black aren’t the only colors. Melanoma can be pink, tan, or white.)

D: Diameter. Spots over 1/4 inch.

E: Evolution. The spot has grown larger or changed color over time.

If any of your moles meet this criteria, you may need to have it removed. It really comes down to your doctor’s recommendations. But your doctor’s judgment calls don’t end there. And that’s why I want to leave you with one more recommendation.

According to the latest research, cutting a 2 mm margin from the mole’s border is the *most effective* way to remove all potentially cancerous cells and prevent the need for additional surgery.

This is important. Because currently, up to two-thirds of the suspicious moles removed in the U.S. every year—and they number in the hundreds of thousands—end up needing further removal because of cells that were missed on the first attempt.

This may not sound like a big deal to you. But going under the knife for any reason puts you at higher risk of infection and scarring. And nobody wants to waste time or money on visits that could have been prevented in the first place, anyway.

A new study shows that allowing for this 2 mm margin could make a significant difference in this department. Researchers removed 151 suspicious skin moles in 138 men and women. And after a year and a half of close monitoring, they found no further suspicious growths at any of the biopsy sites.

In fact, more than *90 percent* of the moles biopsied had been completely taken care of with these larger removal margins. So don’t think twice about bringing up this research—preferably *before* your doctor raises the scalpel.

Natural sunscreens that won’t cramp your style—or put you at risk

First of all, avoid products that are loaded with chemicals (like the ones you most often see advertised), which can disrupt your endocrine system. Of course, that’s easier said than done. The only totally natural sunscreen is titanium dioxide or zinc oxide—the white paste that lifeguards dollop on their noses. These minerals usually need to be combined with other ingredients to make them spreadable—and transparent—on your skin.

It’s important to choose a product that uses organic or natural ingredients to do that. My personal favorites are sunscreens by Lavera, Aubrey, Earth’s Best, and Soleo.

Some sunscreens may also contain natural botanicals such as licorice, curcumin, aloin, ginsenoside, or epicatechin. Research shows that these ingredients all protect against UV damage. And they have a natural sun protection factor of at least 15.

As with most of my recommendations, all-natural is the way to go, even when it comes to slathering on sunscreen.

URGENT WARNING: New research reveals why diabetics should avoid “diet” products at all costs...

***Plus the one and only sugar substitute that’s safe to use—
and can even help you lose weight!***

Sometimes, my work as a diabetes doctor feels like an attempt to slay a mythical hydra. Every time I think I’ve lopped a head off of this beast, two equally lethal ones always seem to pop up in its place.

And nowhere is this frustrating analogy more appropriate than in my ongoing fight against the deadliest dietary demon of them all: sugar.

There’s no question that I still have a long way to go in my personal crusade against sugar. But the message is getting out there, slowly but surely. And at least we’re no longer living in *complete* denial when it comes to our national addiction.

The public is finally starting to come around to the fact that sugar kills. (Even if they’re still being fooled into thinking that red meat is somehow a bigger threat...or that a “moderate” amount of sugar in your diet is somehow safe.)

So why aren’t I celebrating? Because even as this battle winds down, a new one is just getting started. And once again, the soda business is to blame.

Yet another “diet” product that’s anything but

It’s hard to imagine anyone STILL falling for the line that artificial sweeteners are somehow good for you. These are *chemicals* after all—many of which have spent the last several decades hopping on and off of the list of known cancer-causing agents.

But this hasn’t stopped the beverage industry from peddling their “diet” products as a healthier alternative to sugary drinks. (Leave it to Big Soda to find a way to capitalize on the obesity crisis they had a big hand in creating.)

The problem here isn’t just that these sugar substitutes are potentially carcinogenic, of course. That would be bad enough. Thanks to new research, we’re also finding out (and not for the first time, either) that they may increase your risk for heart disease, too.

A recent review and meta-analysis delivered so-called “mixed evidence” supporting the role of artificial sweeteners in weight loss. (Hardly a glowing endorsement for products that often feature the word “diet” in their names.) But that’s not even the worst part...

Results also showed that consuming artificial sweeteners on a daily basis may actually be linked with weight *gain* over the long haul... and more concerning, a higher risk of cardiometabolic disease.

Meanwhile, nearly *half* of all Americans use these sugar substitutes regularly. (In fact, studies have revealed that a very large portion of people consume artificial sweeteners *without* knowing it. They’re even turning up in the blood and urine samples of people who report avoiding them.)

Just as a reminder, here's why that's a problem: Research has established significant links between non-nutritive sweeteners and gains in body weight, BMI, and waist size. Not to mention elevated risks of high blood pressure, stroke, heart-related events, and type 2 diabetes.

And we're not talking about the results of some tiny one-off study, either. We're talking about big, reputable studies featuring large groups of subjects that researchers followed for a lengthy duration.

One of these is the famous Framingham Heart Study—which showed that people who drank one or more cans of diet soda every day faced *triple* the risk of stroke and dementia, as compared to people who never touched the stuff.³

Granted, one could argue that unhealthy people simply tend to reach for artificial sweeteners more *often*—not that the sweeteners *themselves* do any damage. But a single look at the latest findings flushes that theory right down the toilet... where it belongs.

Recent studies have shown, for example, that artificial sweeteners alter the microbiome in rodents and humans—making it “obesogenic.” In fact, evidence also suggests that regularly consuming these chemicals hijacks the metabolism, paving the way toward high blood sugar, insulin resistance, and weight gain.

That happened to be the exact takeaway of the first human trial on the regular intake of artificial sweeteners. The results made headlines late last year. And needless to say, they *weren't* reassuring.

Fake sugar is fueling the diabetes crisis, too

This new trial found that artificial sweeteners change the way your gut responds to sugar—very much for the worse. It increases the amount of glucose that your body absorbs, as well as its glycemic response. And it also blocks production of a peptide called *GLP-1*.

Among GLP-1's significant roles: increasing the release of insulin (which lowers blood sugar) and blocking the release of glucagon (which raises blood sugar). This is a complex hormonal dance—but one the body is well equipped to handle if we don't mess it up by eating too much sugar and simple carbohydrates.

Or, as it turns out, too much artificial sweetener.

This clinical study looked at healthy subjects and their response to common chemical sugar substitutes like sucralose and acesulfame-K—exactly the kind you'll find in most popular diet drinks. It was two weeks long, randomized, and double-blind. During that time, one group had artificial sweeteners added to their diet, and the other didn't.

At the outset, both groups had similar gut responses to sugar. But it didn't take long for that to change... dramatically. In fact, it only took two weeks.

At the end of the study, the group consuming artificial sweetener daily saw significant uptakes of glucose, both 90 and 120 minutes after eating. A full 20 percent more than the placebo group, to be exact. And their blood sugar levels rose by nearly 25 percent because of it.

And that's not all. Their GLP-1 response dropped by 34 percent compared with placebo—a startling trend, considering how critical this peptide is to proper blood sugar metabolism.

To sum it up: **Artificial sweeteners put your body's blood sugar control into a tailspin**—sending post-meal glucose levels soaring. And they do it in just two weeks!

So, sugar isn't the only “anti-nutrient” fueling the diabetes epidemic. Artificial sweeteners are another clear culprit behind the astronomical rise in both obesity and diabetes—and the fact that they're marketed as “diet-friendly” only adds insult to injury.

The only sugar substitute that doubles as a solution

In general, I think it's best to avoid using sweeteners of *any* kind on a regular basis. Limiting your intake helps to reboot your palate and re-sensitize your taste buds. But that doesn't mean you can't enjoy a treat on occasion. Especially since there are natural sweeteners out there that don't carry the same risks as chemical sugar substitutes.

In fact, one of my favorite picks isn't just safe for dieters and diabetics. It might even play a critical nutritional role in the fight against diabetes.

I'm talking, of course, about stevia—the all-natural, non-caloric sweetener extracted from the leaves of the *Stevia rebaudiana* plant. Its active component, stevioside, is up to 300 times sweeter than regular table sugar (so you need much, much less of it). And people across the world have been safely using it as a sweetener for ages.

Its reputation in the research community, however, is only just heating up. And suffice it to say, recent studies have reached some pretty exciting conclusions...

For example, clinical research presented at the 2016 meeting of the Endocrine Society examined the effects of stevia consumption among a group of 40 subjects with metabolic syndrome. All subjects followed the same low-calorie diet for four months. But they were also randomly assigned to receive either a stevia snack four times a week, or a sweet of their choosing once a week.

Researchers evaluated every metabolic metric under the sun—from BMI and waist size to blood pressure, blood sugar, cholesterol, hormone levels, and liver function. In the end, the control group did lose weight. But only the stevia group had significant reductions in a long list of risk parameters—including blood pressure, fasting glucose, oxidized LDL, and leptin levels.

Another group of researchers published a comprehensive review confirming these health benefits in the *Journal of Medicinal Food* just last year. Among their findings: Stevia's unique glycosides—the compounds that give it its sweetness—are uniquely capable of reducing metabolic risk.

Not only that, but this plant also boasts roughly 100 additional nutrients and phytochemicals with powerful antioxidant and medicinal properties—including phenols and flavonoids.

In other words, the potential benefits of stevia aren't just limited to metabolic health. In addition to being able to stimulate insulin release from pancreatic beta cells, these researchers identified a dizzying list of other potential uses—against anything from heartburn and cavities, to inflammation, fungal infections, and even cancer.

Needless to say, this is one sweetener worth keeping in your pantry.

5 Biggest Breakthroughs for 2021

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