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The *real* culprit behind diabetes—printed in black and white

(Hint: It's NOT fats)

Last month, I outlined common risk factors for heart disease—and what you can do about them. But, in 21st century America, you can't really talk about heart disease without addressing the risk factors for type II diabetes as well.

Sadly, the most common type of heart disease today is cardiometabolic, caused by diabetes and metabolic syndrome.

So it's not a big surprise that the guidelines from the American Diabetes Association (ADA) to prevent and manage type II diabetes and high blood sugar still spout the same nonsense about avoiding cholesterol and fats as the American Heart Association (AHA) guidelines.

Now, the ADA guidelines do have one measly mention about actually cutting back on sugar. But despite reams of compelling evidence that sugar and processed carbs are *the* problem when it comes to managing blood sugar, diabetes, and metabolic syndrome, the ADA has still insisted there's somehow a "debate" about whether fat or sugar is the *real* culprit.

They may have finally settled their fictitious debate a few months ago. But before I get into the details, let's first back up to understand *how* diabetes and other metabolic diseases became such pervasive medical problems…

How did the U.S. diet go so wrong for so long?

As an *Insiders' Cures* reader, you know I look to history to help figure out how things went so wrong with our diet and health.

As a physician and anthropologist, I've studied many historical examples of populations that both subsisted on high-fat and high-carb diets. Generally speaking, populations residing in cold climates had higher meat and fat intake. And people residing in warmer climates could generally grow and consume more carbs in their diets.

Before the early 1900s, generations of carb consumers didn't appear to develop metabolic diseases like they happen to do today. But during the 20th century, carbohydrates became highly processed (when manufactures also started adding artificial ingredients to expand their product's shelf life for mass distribution, and other problems).

Lab experiments have found that some of these artificial ingredients cause increased insulin secretion and high blood sugar. In other words, they're essentially endocrine, hormone, and metabolic disruptors that don't belong in your body.

(Excess calories and excess iron can also cause increased insulin resistance—another reason to avoid iron supplements.)

Why processed foods are so bad for you

The processed foods that became so common in the last half century have dramatically changed the composition and quality of our food supply.

One study found that in 1938, Canadian diets consisted of 24 percent processed foods. By 2001, that number had jumped to 55 percent.[1]

Meanwhile, a 2016 study found that processed foods accounted for 58 percent of Americans' caloric intake.

In this issue:

Marc S. Micozzi, M.D., Ph.D., is a worldwide leader in nutritional and complementary/alternative medicine. He has had a distinguished career as a researcher and physician executive at the National Institutes of Health and Walter Reed National Military Medical Center in Washington, DC, and the College of Physicians in Philadelphia PA. He has published over 30 medical and trade books, and founded and edited the first scientific journal, and the first textbook, on complementary/alternative and nutritional medicine, now available in a 6th edition and continuously in print since 1995.

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Author: Marc S. Micozzi, M.D., Ph.D.
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And a whopping 90 percent of that "energy" was supplied by added sugar.[2]

All of these processed foods are increasing our intake of calories, carbohydrates, *and* fat—contributing to metabolic diseases like obesity and diabetes.

In fact, a 2019 study found that people who ate an ultra-processed diet consumed an average of 580 more calories each day than those who ate a diet of unprocessed foods—even though the diets were matched in terms of carbs, fat, fiber, protein, sodium, and sugar.[3]

Now, let's take a closer look at the ADA debate on fats and carbs…

The skinny on fat, carbs, and metabolic health

At the ADA's 80th Scientific Sessions in June, there was *finally* an enlightened, science-backed presentation—with real data—on the fat versus carbs issue.

Sarah Hallberg, DO, presented a convincing case supporting the metabolic health benefits of high saturated fat and total fat diets, compared with low-fat, high-carb diets.[4]

(The initials "DO" stand for doctor of osteopathic medicine. Osteopathic medical schools tend to include natural approaches like diet and nutrition in their curriculum, whereas regular [MD] medical schools do not. And Dr. Hallberg's DO training certainly showed in her presentation).

According to Dr. Hallberg, studies show that eating more carbohydrates, while correspondingly decreasing saturated fat intake, increases the total amount of fats in the blood.

Meanwhile, eating more dietary fats actually *decreases* the level of fat in the blood. In other words, the amount of fat in the diet is *not* related to the amount of fat in the blood.

In fact, a higher level of saturated fat in the blood is actually a marker for excessive carbohydrate consumption, which can predict future metabolic disorders.

Plus, increasing the amount of fat in the blood at age 50 has been associated with increased C-reactive protein (CRP)— a marker of chronic inflammation—at age 70. And CRP is a key risk factor for heart disease and other chronic diseases, as I discussed in last month's issue.

In addition, excess saturated fat in the blood is a marker for high triglycerides and abdominal fat—which are both major risk factors for metabolic disease.

Looking at the total diet

Other studies show that while a low-carb diet is higher in saturated fats, it actually results in decreased fats in the blood.

Here's how it works: Lower consumption of dietary carbs results in reduced saturated fat synthesis, leading to decreased saturated fats in the blood and a better insulin response.

But higher carbohydrate consumption is associated with increased saturated fat synthesis and storage. That leads to insulin resistance—which can then lead to high blood sugar and type II diabetes. And this effect can take place quickly.

In fact, a study of obese men and women with type II diabetes found that just two weeks of a low-carb diet resulted in lower triglycerides, much-improved 24-hour blood sugar levels, better insulin response, and weight loss as a result of eating less.[5]

And, since this study was published in 2005, the results have been widely replicated in subsequent studies.

The bottom line is that low-carb, high-fat diets are beneficial for your heart, cardiometabolic health, and diabetes prevention. They result in healthy fat levels in your blood and do *not* lead to increased diabetes risk…giving you just one more reason to cut out sugar and not worry about cholesterol, as the science consistently recommends.

Eat clean, not lean

Looking at all of the historical, laboratory, and clinical evidence, it's safe to conclude that humans do not *require* carbohydrates in our diets.

But, as I've often reported, the best way to eat is not to count every calorie, carb, or fat. The key is eating a balanced diet consistent of a variety of whole, natural foods, and avoiding unhealthy, processed foods.

Of course, sugar is the biggest single example of a natural plant product that becomes unhealthy when it's highly processed. And now, "plant-based meats" are quickly challenging sugar for the dubious title of most toxic "foods."

I've written before about how these fake meats combine cheap, processed plant matter with artificial ingredients, creating a frankenfood that masquerades as "healthy." So, again, don't be fooled by these ultra-processed fake meats. They aren't better for you—or the planet—and are actually better off composted in your backyard than consumed in your diet!

If you want to *truly* lower your risk of diabetes and other metabolic diseases, all you need to know is this…

It's not about eating "lean," as in cutting fats, but eating "clean," as in cutting out fake foods. So just say no to unhealthy, processed foods (remember, sugar and processed carbs are the leading culprits), and say yes to healthy, whole foods.

As always, you can't go wrong with a Mediterranean-type diet, which is full of fresh, organic produce, grass-fed and -finished meat, wild-caught fish and seafood, organic, full-fat dairy, and alcohol (in moderation).

Back to the basics: Three simple tips for staying healthy long after the coronavirus pandemic subsides

This year, we've been hearing a lot about wellness. Most everyone is concerned with maintaining their health and supporting their immune systems during the pandemic. But there's a lot of noise surrounding how to do just that. And it can be tough to sort through the nonsensical versus science-backed approaches.

That's because mainstream medicine (and the lamestream media) have been quick to criticize questionable wellness approaches that *don't* work. But we rarely hear from them about all of the natural approaches that *do* work to support our immune systems and general health.

Meanwhile, some shady promoters saw the pandemic as a golden opportunity to get the public to pay for useless "remedies" by pandering to their fears. Sadly, these panaceas are often endorsed by some dense, credulous celebrity. And much of what gets sold in the name of modern-day wellness has little or no evidence of being effective at all.

Of course, that doesn't mean wellness isn't real.

But is also doesn't mean you should stock up on the latest lotions, potions, and pills peddled by a modern-day version of Professor Henry Hill (the likeable con man played by Robert Preston in "The Music Man"). To paraphrase the professor's famous sales pitch: "Yes, we got trouble, right here in River City, with a capital 'T'—and that rhymes with 'P,' and that stands for…*pills*."

Fortunately, through the thick fog of the germ war against the coronavirus, some basic truths are still shining through. And what they reveal is that wellness that *actually works* is basically as simple as committing to healthy, natural practices daily—both as individuals and as communities.

So let's take a look at what you can do to *naturally* support your immune system and general health as the pandemic persists—and cold and flu season begins…

Moderate exercise: Get outside and move

It's well understood that moderate exercise boosts your immune system and helps fight diseases. Various

studies and decades of research demonstrate that a regular, moderate amount of exercise lowers your risk of cancer, dementia, heart disease, and mood disorders and mental illness.

But the key, as always, is moderation. I'm not talking about CrossFit classes, pricey gym memberships, and sweaty group sessions with "coaches." In other words, you don't need to run marathons or do other excessive exercise (what I call "excess-ercise") that can be damaging and dangerous for your bones and joints, heart, gastrointestinal tract, genito-urinary system, and kidneys—as I often report.

All you need is a total of 140 minutes of moderate exercise *per week*. (Not per day, as some deluded "excess-ercise" aficionados suggest.)

In fact, the *best and safest* "return on investment" for healthy exercise is through outdoor activities like gardening, hiking, swimming, and walking. And you don't even need to do these activities every day (although a daily dose of Nature has its own health benefits).

Studies suggest that spending at least 120 minutes of your weekly 140 minutes exercising outdoors in green spaces results in better physical and mental health. Plus, moderate outdoor physical activity allows you to get some sun, which activates the natural vitamin D production in your skin that supports your immune system and many other aspects of health.

If that isn't reason enough to get outside in Nature, remember this: Sunlight and ultraviolet light help disinfect viruses and other microbes, too. And there's evidence that coronavirus spreads less outdoors than it does indoors (like in a sweaty gym).

So when Nature and the great outdoors is your "fitness center," you cover all of your health bases. Just make sure whatever activity you choose is moderate in both exertion and amount of time—remember, aim for around 20 minutes daily, or 2.5 hours total per week.

Mental and emotional health: Stay connected to friends and family

One thing coronavirus has taught us is that our physical and social surroundings affect our health—not only physically, but also emotionally and mentally.

For instance, do you reside in a place that feels unlivable? Now more than ever, you may consider moving away from crazy, costly, competitive, and congested urban areas. If that's not a possibility (or a personal realization yet), again, simply prioritize getting out into Nature—and away from crowds—as often as you can.

But that doesn't mean you should stop nurturing your social relationships. As I discussed in

Selenium: The sensible supplement for immunity

Nutrient deficiencies create fertile grounds for viruses and infections. These "host factors" have been recognized by physicians and medical researchers, primarily in France, for more than two centuries (although Louis Pasteur was a notable exception).

That's why, since the pandemic was first declared in the spring, I've regularly reminded readers about the importance of vitamins A, B6, B12, C, and D for supporting a healthy immune response. And I've mentioned how critical minerals like copper, iron, magnesium, selenium, and zinc are for immune support.

In particular, selenium deficiency is an established risk factor for viral infections. Researchers recently associated the cure rate for COVID-19 in different areas of China with patients' selenium status.

And now, a new study out of Germany reports that selenium deficiency is linked to a higher risk of death from COVID-19.[2]

The researchers studied 33 hospitalized patients with COVID-19 and found they had much less selenium in their blood than healthy Europeans. The patients also had low concentrations and activity of enzymes that transport selenium and incorporate it into cells.

Researchers concluded that selenium may affect COVID-19 severity in several ways. Patients may have had low selenium levels before they got the virus, indicating the lack of the mineral may actually be a risk factor for COVID-19. Selenium levels may also decrease as a *result* of coronavirus, creating a Catch-22 in which the virus may actually erode the mineral that can help fight against it.

This study also sheds new light on why selenium reduced the risk of liver cancer in my study with Nobel Laureate Baruch Blumberg in China in 1987. We found that being a chronic carrier of the hepatitis B virus increases the risk of getting liver cancer by 200 times. (The virus actually caused the liver cells to become cancerous.)

We also found that selenium reduced the risk of cancer in people with chronic hepatitis. We focused on the anti-cancer properties of selenium, but its *antiviral* properties might have had a lot to do with it as well.

(Sadly, the tragic political oppression against Chinese citizens at Tian An Men [Temple of Heaven] Square in Beijing ended collaboration between the U.S. and China, and our research was interrupted—permanently, as it turned out. This year, we've seen more tragic political oppression by the Chinese Communist Party in the once-great city of Hong Kong, not to mention the rise of the coronavirus pandemic. One has to wonder whether they're related.)

So, to help support your immune system, I recommend 100 mcg of selenium a day. Look for supplements that contain selenomethionine—the organic form of the mineral, which is better absorbed and metabolized in the body.

last month's issue of *Insiders' Cures,* studies show that loneliness and isolation play a major role in physical and mental health—especially in the age of coronavirus.

And being in a big, crowded urban area certainly doesn't assure you still won't *feel* lonely and isolated. In fact, a seminal book published in 1950—*The Lonely Crowd* by David Riesman, Nathan Glazer, and Reuel Denney—describes how crowded social conditions actually create or contribute to loneliness and isolation.

(Even though the phrase "alone in a crowd" is well known, the words "lonely crowd" don't actually appear in the book. Instead, they reportedly were chosen for the title by the publisher.)

So, take a look at your community connections. While you might need to socially distance due to coronavirus, that doesn't mean you can't be—and stay—connected to your loved ones. You can still "reach out and touch someone" via phone or online video chat. Or use your corona downtime to develop a new hobby, and connect to a new group of friends online who share that same hobby.

Diet and nutrition: Eat healthy, balanced meals

We all know that what we eat has a major impact on how well our immune systems are able to combat viruses and diseases. I can't stress enough just how important a balanced diet with a variety of whole foods is to good health.

So when it comes to diet and nutrition, here's my checklist for optimum immune health:

- **Avoid sugar and refined carbs**. Studies show these ingredients can hinder the development and effectiveness of the white blood cells that help fight viruses, microbes, and infections.
- **Stay away from processed foods**, including plant-based fake meats and fake milks (see page 6). Many of these products lack vital nutrients and are loaded with toxic fillers that can wreak havoc in your immune system.
- **Don't overlook mineral supplements**. We often hear about the importance of vitamins in a healthy diet, but we don't hear as much about minerals. And that's a serious omission, because most Americans are deficient in a variety of minerals.

  In particular, Americans have low blood levels of calcium and iron (which should come from food like grass-fed and -finished meats, not supplements), as well as iodine (which you can obtain naturally from sea salt), zinc, and selenium (key minerals found in egg yolks).

  (For insight about how selenium is connected to COVID-19, see the sidebar on page 4).

- **Choose your dietary supplements carefully.** You won't be able to fix a poor diet solely with supplements. But dietary supplements *can* help fill in the gaps that exist in even the most balanced diets.

  However, it's important to remember that not all supplements are created equal. Some popular, run-of-the-mill dietary supplements are formulated without any real basis in nutritional science—especially when it comes to ingredient sourcing, manufacturing methods, and efficacious combinations of ingredients You're not going to find information like this on a supplement label, so make sure to only buy brands you trust. (Preferably one with a 100% customer satisfaction guarantee!)

Getting back to the basics

The bottom line is that when it comes to wellness, the immune system is key. And to support a healthy immune system, you don't need to rely on phony pills and potions pushed by pandemic panickers.

One upside of the coronavirus pandemic

There's not much good news circulating when it comes to COVID-19. But one new survey reveals that the pandemic has led to a large majority of people adopting healthier lifestyles—at least in France.

France's National Syndicate of Dietary Supplements surveyed more than 2,000 people, and this is what they found[1]:

- 80 percent changed their personal habits as a result of the pandemic
- 62 percent prioritized better health and immune system support
- Nearly 50 percent improved their diet and nutrition
- 36 percent began consuming more dietary supplements and natural products

Vitamin and mineral products were the most popular dietary supplements being consumed, with 37 percent of the people surveyed adding them to their wellness regimens. Another 28 percent tried omega-3 fatty acid supplements, and 23 percent opted for herbal or other botanical supplements.

Most of the French consumers reported that their supplement purchases were encouraged by health practitioners and pharmacists (which, sadly, is hardly the case here in the U.S.).

Data from Italy, which was initially hit hard by the pandemic, mirrored the findings in France. So, when all is said and done, I hope that you, too, can turn the negatives of this pandemic into a positive—at least where healthy living is concerned.

All you need to do is go back to the basics: diet, exercise, and lifestyle. Because when all is said and done, these three staples will continue to help keep you healthy, long after this pandemic has passed. IC

Got milk? Find out where popular plant-based milks land on the totem pole

I've been warning against "fake milks" for years now. They're highly processed, plant-based, fake foods that aren't good for your health *or* for the health of the planet.

These so-called "milks" are made from soybeans, almonds, oats, coconut, rice, hemp, and other plants. And the thousands of gallons of water needed to grow these plants, along with the energy requirements of the industrial processing needed to make a gallon of this kind of milk, burdens the environment.

Plus, they're often touted as "better for you" when compared to cow's milk, but there has never been *any* science-backed advantage of plant-based "milks" in terms of human diet and nutrition.

In fact, a new analysis of 115 different plant-based milks shows they're actually *lacking* in vital nutrients when compared with authentic dairy foods.[1] And this was particularly true for women over the age of 50 and teenagers, who require higher intake of these nutrients for bone health.

The "discovery" we already knew about

The researchers who conducted this analysis described their findings as a "disconcerting discovery," since consumers tend to perceive plant-based milks as somehow rich in nutrients.

But I'm not at all surprised. In fact, what's really disconcerting is why they are only now "discovering" this, after *decades* of pushing these highly processed, fake foods onto credulous consumers.

Perhaps this study will turn the tide, though. The researchers, who are based in Australia, said that, "due to the high proportion of consumers selecting plant-based milk alternatives for non-dietary reasons," they recommend that regulators add warning labels to these "milks"—especially for older women and adolescents.

Now, let's take a closer look at the findings that led to this sensible, yet long-overdue conclusion.

Even fortified plant milks lack key nutrients

In late 2019, the researchers visited grocery stores in Sydney and Melbourne, Australia, and scanned the nutrition information panels on refrigerated and non-refrigerated plant-based milks.

Of the products analyzed, 48 were made from tree nuts (like almonds) and seeds, 27 were from legumes (like soy), 19 were from grains (like oats), 11 came from mixed sources, and 10 were made from coconut.

The researchers observed that plant-based milks are particularly lacking in vitamin A, vitamin B12, protein, calcium, iodine, and zinc. Which is especially egregious when 57 percent of these milks claimed to be fortified with nutrients. What a sham!

Specifically, all of the single-ingredient products contained little to zero vitamin B12, whereas cow's milk contains 5 to 8 micrograms per liter. And the protein content of the plant milks ranged from zero to 42 grams per liter, whereas cow's milk has 32 to 47 grams per liter.

Not to mention, none of the plant milks were fortified with iodine *or* zinc. (Iodine is needed for thyroid function and metabolism. Yet many plants contain factors that *interfere* with iodine absorption in the thyroid. And zinc is essential for general health—including immune health, as I discuss on page 5.)

Plus, only one-third of the products contained amounts of calcium

Lactose intolerant? You can still enjoy *real* dairy

Many people lose the ability to metabolize lactose (the sugar in milk) after infancy. Consequently, they become "lactose intolerant" as adults.

But the solution is not to drink "fake milks" like almond milk, which require more environmental resources to produce than cow's milk. Instead, if you're lactose intolerant, opt for other dairy products like cheese and yogurt.

These products contain probiotic bacteria that metabolize the lactose and reduce or eliminate the sugar content—and the associated digestive and metabolic problems, too.

Plus, probiotics in dairy products improve the health of your entire gastrointestinal microbiome, and they also naturally preserve cheese and yogurt, without the need for added chemical preservatives.

similar to cow's milk. This is key because, as I always point out, it's important to get calcium from dietary sources alone—as calcium supplements can actually create *too* much of the mineral in your blood, contributing to heart disease and dementia.

Why plant milks are particularly dangerous for older and younger people

In addition, as I mentioned earlier, researchers also considered the impacts of plant-based milks on growing children, ages 12 to 18, and women older than 50. People in these groups experience special physiological demands, such as bone health, that typically require dairy foods and meats.

The researchers reported that among adolescents, regular dairy consumption—including cow's milk—can fulfill 64 to 90 percent of daily protein requirements, while typical plant-based products supply only 4 to 23 percent. (Since legumes like soybeans contain more protein than other plants, these milks supply 55 to 78 percent of an adolescent's daily protein needs.)

The same trend was observed for protein requirements in older women. Of course, protein is also critical for maintaining muscle mass in both older women and men—which is a key factor for health and longevity.

It's the processing that matters

Remember, the problem with fake foods like plant-based milks (and meats) is the *processing*. Indeed, processed foods are finally emerging as the *real* culprit when it comes to hindering human diet and health.

The bottom line is, there's no health or environmental benefit to eliminating entire categories of whole foods, such as dairy.

So don't be fooled by supposedly healthy plant milks, no matter how much propaganda you're exposed to. Instead, eat a balanced, healthy diet full of fresh, whole foods…one that includes two servings of full-fat, organic *real* milk or dairy per day—and get your vital nutrients the way Nature (not processed food manufacturers) intended.

Goosebumps: An eerie phenomenon explained by science

As All Hallows' Eve approaches, you may find yourself reacting to the holiday's inherent creepiness with goosebumps. But have you ever wondered what's behind this physiological phenomenon that makes your skin pucker up like a plucked bird?

I like to joke sometimes that goosebumps are a reaction to my writing. And indeed, goosebumps *are* associated with a wide range of strong feelings and emotions. We get goosebumps not only when we're scared, but also when listening to great music, being spiritually aroused, or reading or watching something exciting.

Of course, we can also get goosebumps simply because we're feeling cold. And I recently came across some fascinating new research out of Harvard that explains just how (and why) this occurs…

Getting the chills

Goosebumps, or goose pimples, are known scientifically as piloerection. They're caused by a contraction of small muscles attached to hair follicles in your skin. This action pulls on the surface of the skin, causing the tiny hairs to stand up straight and create goosebumps.

But here's the really interesting part: The Harvard researchers found that this process leads to new hair growth by stimulating stem cells in the hair follicles.[1] So if you're often chilled, you could eventually grow more hair to keep warm.

This evolutionary process protects animals with thick fur from the cold, and has been preserved as a response in humans (which have been called the "naked ape").

Historically, many humans had thicker hair, and pushing it upright created a zone of insulation around the skin to help keep the body warmer (like the principle behind a wetsuit). It also made the silhouette of the body look bigger, which might be interpreted as a threat to a predator or competitor.

But what about the goosebumps caused by strong feelings?

How emotion leads to goosebumps

There's evidence that the skin muscle contractions that cause goosebumps can be stimulated by the release of the hormones that occurs when we have higher stress or arousal (good or bad)—the so-

called "fight-or-flight" process.

In other words, you can *emotionally* "get the chills" just like you can physically—which leads to the same goosebump process the Harvard researchers described.

One study found that women experience goosebumps more often than men. The researcher noted that when animals are separated from their parents, the babies cry or call out. These sounds may trigger chills in the mother, enhancing her motivation to find her lost children. This "separation call hypothesis" may explain why female animals (including humans) may more often get goosebumps.[2]

Another study involved 20 college students who listened to several pieces of music. Half of the students felt "shivers" or goosebumps. The researchers conducted brain scans on the participants, and found that the people with goosebumps had more fibers connecting their auditory cortex to the areas of the brain associated with emotional processing—suggesting all of those areas communicate better.[3]

The researchers concluded that people who get the "chills" may simply have an enhanced ability to experience strong emotions.

What you can do about goosebumps

The skin is the interface between the body and the outside world. It's the largest organ in the body and it responds to emotional as well as environmental stimuli. In fact, people are called "thin skinned" or "thick skinned" depending upon how they process their feelings.

So it makes sense that a skin-related phenomenon like goosebumps can be caused by both physical and emotional factors. Still, some of the comings and goings of goosebumps remain mysterious (and can simply be a response to something that feels mysterious, or majestic).

If you're concerned about goosebumps, you might want to stay away from the frightful aspects of Halloween this year. Or put on a sweater as the temperatures drop.

You can also consult my book, *Your Emotional Type,* to learn how to identify your emotions and discover which mind-body therapies will work best for you. (You can order yourself a copy from the "books" tab of my website: www.DrMicozzi.com.)

Citations for all articles available online at www.DrMicozzi.com

NEWS BRIEF

Add this healthy berry to your pickling and canning process this fall

As we approach the end of the harvest season, I always advise pickling and preserving fresh, organic produce. That way, you can enjoy the healthy foods and nutrients of summer throughout the fall and winter!

Of course, cucumbers are the traditional pickling food, but there are plenty of other fruits and vegetables you may not think of as pickling candidates, like beets, blueberries, blackberries, cranberries, pearl onions, and watermelon. (All of which I discussed in last November's issue of *Insiders' Cures*.)

But another of my most favorite pickled delicacies are capers.

These tiny buds of the caper bush make tangy, tart additions to dishes like *pasta alla puttanesca* and *caprese* salad (tomatoes with mozzarella, olive oil, and fresh basil). You can also add pickled capers to a toasted bagel with smoked salmon or whitefish (a good source of omega-3 fatty acids), full-fat cream cheese (a good source of calcium), tomatoes (a good source of lycopene), and onions (a good source of antioxidants). Plus, pickled capers are sometimes substituted for olives to garnish a martini.

A quick history lesson on capers

Capers have been discovered in middle and late Stone Age dwellings from Greece, Israel, and Syria. And archaeologists have discovered that people have consumed them for at least 10,000 years, during the period when agriculture arose.

Capers have also been used in traditional folk medicine for centuries. And now, new research shows that quercetin, a compound commonly found in pickled capers, supports brain and heart functions.[1]

Researchers discovered that quercetin influences potassium flow in the body. (Potassium is a major electrolyte that modulates cellular membranes, making it critical for nerves, muscles, the heart, and other tissues.)

For the new study, various plant extracts were analyzed for their ability to influence potassium channels. The researchers found a 1 percent extract of pickled capers activated channels important for brain and heart activity. That may not sound like a lot—but if something as simple, and delicious, as eating pickled capers can offer *any* sort of health protection…well, I'm all ears.

It's easy to obtain these health benefits by pickling your own capers this fall. You can likely find them at your local grocery store or farmer's market. Begin by soaking fresh capers in water for three days. (This leaches out the berries' natural—and unpleasant—bitterness.)

Then, for every half cup of caper berries, make a brine with half a cup of apple-cider or white-wine vinegar, half a cup of distilled water, and 1 tablespoon of salt. Place the capers and brine in a glass jar for at least three days—or until you like the taste of your pickled capers. Finally, you have free range to enjoy them however you please—including my personal favorites, as I mentioned above.