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Revealed: At least 80% of women diagnosed with breast cancer can skip aggressive treatments

Plus, my 4-step, natural approach to preventing DCIS in the first place

I've often reported that some conditions considered "pre-cancerous" typically never lead to cancer. For years, doctors and researchers have pointed out that these frequently innocuous health issues get treated as cancer precursors—even though they don't behave like cancer at all.

This practice has led to an epidemic of overdiagnosis and overtreatment of "cancer." And this overdiagnosis epidemic has created unnecessary costs, confusion, and worry. Not to mention very real, very negative side effects from unnecessary treatments.

This is particularly true for certain conditions related to the skin, thyroid, prostate, and breasts.

One of the biggest culprits is something called ductal carcinoma in situ (DCIS). Basically, DCIS is defined as "abnormal" cells discovered by a mammogram within a woman's breast ducts.

The American Cancer Society reports that about 60,000 women were diagnosed with DCIS in 2015, accounting for almost 20% of all new breast "cancer" cases.[1]

Mainstream oncology calls DCIS the earliest sign of breast cancer, and typically treats it as a medical emergency. Oncologists will order a lumpectomy within two weeks after diagnosis, followed by radiation.

Cancer organizations say this aggressive treatment of DCIS saves thousands of lives. But a new study on more than 100,000 women found that DCIS was associated with only a 3.3% rate of breast cancer deaths after 20 years.

That's similar to what the American Cancer Society cites as the risk of an average woman dying of breast cancer.[1] In other words, you're *no more likely* to die of breast cancer if you're diagnosed with DCIS than someone without this diagnosis.

And, considering a five-year survival rate is the typical benchmark for success in treating cancer, DCIS hardly qualifies as the medical emergency so many clinicians treat it as.

In fact, surgery and radiation does not appear to be necessary at all for the vast majority of women with DCIS. It is only warranted in a small number of cases.

Assessing your own DCIS risk profile

Researchers analyzed 108,000 cases of DCIS diagnosed from 1988 to 2011.[2] As I mentioned above, they found that 20 years after a DCIS diagnosis, the average death rate from breast cancer was only 3.3%—which was somewhat lower than previous findings.

However, depending upon other risk factors, some women who are diagnosed with DCIS have a much higher chance of eventually dying from breast cancer.

For example, the researchers found that women under age 35 who were diagnosed with DCIS had a breast cancer death rate of 7.8%. That's likely because women that young typically have much more aggressive forms of cancer growth than do older women.

Looking at the characteristics of the breast tissue cells in DCIS is also important. Risk factors to watch include the cells' response to estrogen (estrogen receptor status), size, appearance (grade), and whether there's surrounding tissue death. Women with higher-grade DCIS cells were 1.9 times more

In this issue:

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likely to die compared to women with lower-grade cells.

Finally, the researchers noted that African-American women with DCIS also had a higher mortality rate—7%.

Overall, 20% of women with DCIS had one or more of these other characteristics that placed them at higher risk of eventually succumbing to breast cancer. These are the women whom researchers said probably should have lumpectomies and radiation if they're diagnosed with DCIS.

For the other 80% of women with DCIS, the researchers discovered something quite surprising.

Aggressive treatment doesn't improve chances of survival

The 80% of women in this category who had a lumpectomy plus radiation, or even a mastectomy, were *no less likely to die* from breast cancer than women who didn't have those surgeries and treatments.

The main goal behind aggressive DCIS treatment has always been to prevent the "cancer" from spreading within the same breast. Of course, if breast cancer becomes invasive, it dramatically increases the risk of death. For example, the researchers noted that the risk of dying was 18 times higher in women whose cancer had spread within the same breast.

The researchers found that, as expected, women with DCIS who had a lumpectomy plus radiation reduced their risk of abnormal cell recurrence after 10 years—from 4.9% for women who didn't have treatment to 2.5% for women who did have treatment.

But the researchers were surprised to discover lumpectomy and radiation didn't lower the women's chances of dying from breast cancer.

Even the more radical surgery of mastectomy didn't reduce breast cancer mortality.

In fact, the death rate among mastectomy patients was higher (1.3%) compared to lumpectomy patients (0.8%). The researchers believe that's because women who have mastectomies tended to have higher-grade cancers in the first place

These findings all run counter to the dogma that DCIS is a precursor to cancer. And that more invasive cancer therapy leads to better outcomes.

To recap, the researchers found that 80% of DCIS diagnoses are low risk, and could be best treated by "prevention strategies."

You read that right. Mainstream medicine is finally talking about prevention rather than "early diagnosis" (i.e. overdiagnosis) and "aggressive treatment" (i.e. overtreatment). Of course, that's something I've been talking about for 30 years. But better late than never.

My own personal experiences have shown me that an ounce of prevention is indeed worth a pound of "cure"—especially when it comes to cancer.

In 1977, my 82-year-old grandmother, a life-long resident of France, was diagnosed with DCIS.

She had never once in her life had surgery of any kind, and refused to have surgery then. Instead, doctors treated her with radiation to the chest. The cancer never spread and was "cured," but the radiation severely damaged her lung tissue. She developed respiratory failure and died in 1983.

I remember traveling to France after my grandmother's radiation treatments to try to find appropriate long-term care for her. She was living in Provence, but I had to meet with a government physician in Paris to start the process. (Since the time

of Napoleon I, 200 years ago, the French government has been highly centralized in Paris).

I remember the female government physician arrived for our appointment late, wearing a fur coat. (Admittedly, the French government offices were not well heated.)

And I wondered just what I was going to have to do to get her attention.

Shortly thereafter, I began professional research on risk factors for breast cancer, and eventually completed my Ph.D. dissertation on the topic. Even then, the evidence pointed to nutrition, growth, and development during childhood, and reproductive factors during early adulthood, as the keys to whether a woman was likely to develop breast cancer. All of the attention at the National Cancer Institute on adult weight and dietary factors, such as fat intake, was completely misplaced.

My dissertation results were published in the medical and scientific literature 30 years ago. But aside from a few colleagues such as Walt Willett at Harvard, nobody paid attention. Certainly not my bureaucratic government bosses who were busy wasting money pursuing every naive theory about breast cancer (and other cancers).

Ironically, last summer, after 30 years and hundreds of millions of dollars in research funding, I read how a career cancer expert had just "discovered" we need to look at factors during childhood to control the breast cancer epidemic!

Noninvasive, effective steps you can take to lower your risk of breast cancer

It's clear that mainstream medicine has been way off in its approach to breast cancer—from useless mammography screenings, to mistaken assumptions about the dangers of DCIS, to largely ignoring childhood experiences, and the real dietary factors, and refusing to confront the reality of all the reproductive factors.

So what can you do to lower your risk of breast cancer? Here's my 4-step, evidence-based approach.

1. Load up on fruits and vegetables. A new study of 1,042 women found that carotenoids—alpha-carotene, beta-carotene, lycopene, lutein, and zeaxanthin—may help prevent breast cancer.[3] Not only are carotenoids powerful antioxidants that can protect against DNA damage, but the researchers noted that they may even help keep normal cells from mutating into cancerous cells.

Alpha-carotene is found in orange foods like pumpkin and carrots. Beta-carotene is also found in carrots, along with leafy greens and peppers. Lycopene is what makes foods like tomatoes, watermelon, and grapefruit red. And you can find high doses of lutein and zeaxanthin in leafy greens.

2. Take your daily vitamins. Of course, all of the fruits and vegetables I mentioned above are also high in B and C vitamins. But I also recommend taking a high-quality B-complex vitamin every day, along with 250 mg of C twice a day.

A variety of studies have shown that vitamin E can also help prevent breast cancer. I recommend 50 mg per day.

And it's no surprise that the wonder vitamin, D, has been shown in numerous studies to be protective against breast cancer. Or if you are diagnosed with breast cancer, a long-term study involving 4,443 women shows that taking higher levels of vitamin D improves quality of life and doubles your chances of survival.[4] I recommend 10,000 IU of D3 every day.

3. Eat calcium-rich foods. Research shows that calcium and vitamin D together are protective against breast cancer. It's essential you get calcium from your diet, as calcium supplements are ineffective and dangerous. So make sure to eat plenty of seafood and healthy meat and dairy.

4. Supplement with selenium. Research shows this mineral can help suppress a protein involved in tumor development, growth, and metastasis. In fact, an analysis of nine studies involving more than 150,000 people found that selenium supplementation cut the risk of all types of cancer by 24%.[5]

I recommend 50-200 mcg of selenium each day.

Bottom line: If you have a breast biopsy that shows DCIS, be sure to consult with your doctor about *all* your options—not just invasive surgery and radiation. The new research shows that when it comes to treating breast cancer, for the vast majority of women, less is more.

Citations available online at www.DrMicozzi.com

Your 3-step DCIS risk-assessment checklist

To assess your own DCIS risk, answer the following questions:

1.) Are you age 35 or younger?

❑ YES ❑ NO

2.) Are you African American?

❑ YES ❑ NO

3.) If you've been diagnosed with DCIS, are your DCIS cells higher-grade? (If you aren't sure, ask your oncologist)

❑ YES ❑ NO

If you answered "YES" to any of these questions, more aggressive treatment may be warranted if you're diagnosed with DCIS. If not, chances are there's no harm in "watchful waiting."

Vitamin D takes on the No. 1 cancer killer in America—and solves the single biggest shortcoming of mainstream medical treatments

Mainstream medical researchers keep doing a land-office business in new studies on the health benefits of vitamin D. But for some reason, they continue to act surprised when D shows dramatic effects beyond the old, well-known requirement for bone health.

If these researchers really understood how vitamin D essentially functions as a hormone in every cell in the body, they would not be so surprised at finding its many other health benefits. In fact, a large new study shows that D can address the single biggest shortcoming of mainstream medical approaches and treatments.

I'm talking about solving the problem of lung cancer—the No. 1 cancer killer in America.

Real answers—beyond tobacco

I've reported before how real research on biology, prevention, screening, and treatment for lung cancer was stalled for decades in favor of pursuing the government's politically correct campaign against tobacco. Government bureaucrats touted smoking cessation as *the* (only) solution for stopping all lung cancers. The result of this misguided government initiative? Today, 60% of lung cancer victims are former smokers. And another 18% have *never* smoked at all.[1]

That's 78% who already did the only thing the government has to offer—and got lung cancer anyway.

So what are these victims supposed to do?

Well, fortunately after decades of neglect, lung cancer screening and early detection is a reality again. As I wrote in the December 2014 issue of *Insiders' Cures*, there is a safe and effective new MRI lung-cancer screening test that the government has finally approved. I recommend it for anyone—especially former smokers—who might be concerned they're still at risk for this deadly disease.

And even better, there's a simple way you can substantially reduce your chances of ever getting lung cancer.

All you have to do is take my recommended dose of 10,000 IU of vitamin D3 every day.

How the sunshine vitamin fights lung and other cancers

A new analysis of 12 studies involving nearly 300,000 men and women found that people who had the highest levels of vitamin D in their blood had 17% less risk of lung cancer compared to people with the lowest levels of D.[2]

The researchers believe that vitamin D may not only help keep people from developing lung cancer, but it could also help prevent cancer cell metastasis and spread in those who already have lung cancer.

And that's not the only type of cancer this amazing vitamin can fight.

Another new study demonstrates that pancreatic cancer may well be linked to insufficient vitamin D.[3]

The researchers analyzed the incidence of this often-fatal cancer in 107 countries. They found that people who live in areas with increased cloud cover and at higher latitudes (further away from equatorial sun) are *six times* more likely to be diagnosed with pancreatic cancer.

Why? Well, the more sunshine you can soak up every day, the more likely your body is to produce sufficient levels of vitamin D.

Interestingly, multiple sclerosis has also been observed to be more common in areas where there is less sun. I have long suspected that lack of vitamin D is a key factor in this disease as well.

D can help ensure a smooth and successful surgery

While I was analyzing the new vitamin D cancer studies, another research review caught my eye.

Scientists evaluated 31 studies on a total of 16,195 patients. They found that in a whopping 84% of the studies, people who had low levels of vitamin D in their blood had at least one adverse outcome after having major surgery.[4]

For instance, in one of the studies the researchers reviewed, people who had pre-surgery vitamin D levels lower than 30 ng/ml were three to four times more likely to get an infection of their incision sites while they were in the hospital. (For optimum health—whether or not you're having surgery—I recommend the D levels in your blood be at least 30 ng/ml).

Another study reported that people who had a kidney transplant had an 8% higher risk of cancer for each ngl/mL decrease in their vitamin D level. And yet another study found

that lung transplant patients with low D levels at the time of surgery, and for one year afterwards, had a death rate nearly *five times higher* compared to people with normal vitamin D status.

The authors of this study noted today's widespread deficiencies of D—due to the perfect storm of poor diet, lack of supplementation, and avid sun avoidance. They recommended that anyone about to have surgery boost their vitamin D intake.

So why are healthy D levels so important when you go under the knife? Well, surgery is a major stress on the body. And the more vitamin D you have circulating in your blood, the better your body is equipped to meet the demands of trauma and the requirements for healing.

Can you overdose on vitamin D?

Despite all of the evidence, some mainstream doctors and researchers cling to the myth that vitamin D may be toxic since it is fat soluble. The argument is that, unlike vitamins B and C, which can be excreted in your urine, if you have more D than your body can use, too much could theoretically build up to toxic levels in your body's fat and liver stores.

This concern is laughable given the actual data, and compared to the toxicities of the modern drugs that are doled out. And biologically, the reason the body stores vitamin D because it needs it!

Hopefully a big new Mayo Clinic study has finally put the mythical concerns about vitamin D safety to rest once and for all.

The researchers analyzed 20,308 vitamin D tests collected from patients over a 10-year period. Eight percent of those people had D levels that were considered high—over 50 ng/ml. Less than 1% had even higher levels over 80 ng/ml.[5]

Too much vitamin D in your blood can lead to a condition called hypercalcemia, or high blood calcium. Hypercalcemia has been associated with some cardiovascular diseases. (Which is one of the reasons why I recommend you never take calcium supplements. But rather get optimal levels of this vital mineral from foods like butter, eggs, meat, and seafood.)

But the Mayo Clinic researchers found there was no increased risk of hypercalcemia in any of the study participants—even the ones with high D levels.

In fact, out of the nearly 2,000 people with elevated vitamin D, only four of them had temporary, *mildly* elevated calcium levels within three months before and after testing.

This study just reinforces that vitamin D toxicity is one of the rarest of all observed medical conditions—and typically due to intentional intake of extremely high doses of vitamin D.

So how much D should you take? I recommend 10,000 IU of D3 a day, especially this time of year.

If you live north of the latitude of Atlanta in the east, or Southern California in the west, the sun does not get strong enough to activate vitamin D synthesis in your body each year from November to March. So while I recommend supplementing with D3 year-round, it's particularly crucial not to miss your daily dose of D during these winter months.

Citations available online at www.DrMicozzi.com

The common pain "cure" that can increase your risk of heart attack and sudden death

Over the past couple of years, I've told you about highly significant research showing that knee replacements are not the easy, effective procedures that conventional medicine seems to think they are.

And now, a large new study shows that knee replacement surgery is actually much more dangerous than many people thought.

In fact, getting your knee or hip replaced can substantially increase your risk of having a post-surgery heart attack. And it can also make you more susceptible to potentially fatal blood clots for years after the procedure.

Let's take a closer look at this shocking new research. And then I'll tell you how you can improve your joint health without surgery.

Trauma to your joints can cause trauma to your heart

Researchers analyzed data from 27,698 people, age 50 or older, who had been diagnosed with knee or hip osteoarthritis between 2000 and 2013. Half of those people had knee or hip replacement surgery, and half didn't.[1]

The researchers compared heart attack incidences in the two groups. They discovered that 306 of the people

who had knee or hip replacements had a heart attack in the month following surgery. But only 286 of the nonsurgical group had heart attacks during the same time frame.

To put it another way, people who had knee or hip replacements had a 5% greater chance of having a heart attack than people who didn't have the surgery.

The heart attack risk in the surgical group lessened over time. But what didn't lessen was the likelihood of blood clots after surgery.

Specifically, the people who had knee or hip replacements had increased risk of blood clots forming in their legs. And this risk persisted for years after the procedure.

Now, you don't have to be medical a specialist to understand that for blood to properly circulate in your body, it must be able to flow freely through the veins back to the heart. If blood flow gets blocked or slowed in the veins it has a tendency to form clots—especially in the legs.

And here's the really frightening part. Blood clots in your legs can travel to your lungs. And that can create a pulmonary embolism—which can kill you. In fact, pulmonary embolism is a leading cause of sudden death.

So how do knee or hip replacements help create these blood clots? Well, first of all, they're major surgical procedures. I'm talking about cutting and displacing muscles, tendons, ligaments, and bones—using the surgical equivalent of saws, hammers, and chisels.

It's hardly surprising that this causes immense damage to leg tissues, including blood vessels. And when blood vessels have been pummeled like this, or even cut out or cut off, there are major problems with blood circulation and drainage.

Voilà—increased risk of blood clots and pulmonary embolism, persisting for *years*.

All risk, no reward

So, thanks to this new research, we now know that knee or hip replacements can substantially increase your risk of dying from a heart attack or a pulmonary embolism—not at all surprising.

And, as I told you in the Aug. 26, 2014 *Daily Dispatch*, there's a good chance that undergoing this surgery won't even make your knees feel or work better at all.

Researchers found that only 44% of knee replacement surgeries are "appropriate." Twenty-two percent were "inconclusive." And a whopping 34% were considered "inappropriate" in the first place.

That means the patient didn't meet the proper medical criteria needed for a joint replacement—but got one anyway. Often, these people only had slight or moderate pain or loss of mobility in their knees, and were younger than 55. But an orthopedic surgeon went ahead and did surgery anyway.

As if that weren't bad enough, in the January 2015 issue of *Insiders' Cures*, I told you about a major study of 3.3 million people that found that 10% of all knee replacements simply don't work or wear out. Meaning those poor people had to have another dangerous surgery to repair the first botched surgery.

So basically, when it comes to knee replacements, you have about equal chances of having an inappropriate procedure, an ineffective procedure, or an effective procedure.

And betting on one out of three is not good odds when it comes to having major surgery. As this new study has taught us, you may be literally betting your life.

First of all, there's always a real risk of major complications anytime you undergo general anesthesia and major surgery. And, as we just learned, the post-operative recovery period can be incredibly dangerous. Especially because hospitals and surgical centers are increasingly pushing patients out the door more quickly after surgery (driven by ever-worsening health insurance policies under Obamacare).

Supplement your way to healthier knees

Putting it all together, at least two-thirds of the people who are considering, or being encouraged to get, joint replacements should not rush to surgery.

Not only because these procedures may not work, but because they also increase the short-term risk of heart attacks and the long-term risks of blood clots and pulmonary embolisms—all of which can be fatal.

So if you have aching knees or loss of mobility, what should you do instead?

Well, as I've often reported, don't bother with glucosamine and chondroitin. Real science shows these tired old joint supplements simply don't work. That's because they use the wrong model for rebuilding joint cartilage.

The first step in naturally rebuilding cartilage is to reduce joint inflammation. But glucosamine and chondroitin can't stop that inflammation.

Fortunately, there are supplements that can. I like to call them the ABCs, or the "three wise men" of joint health.

I'm talking about ashwaganda, Boswellia, and curcumin.

Ahswaganda and Boswellia come from ancient South Asian trees, and both are important treatments in Ayurvedic medicine. Ashwaganda is derived from the winter cherry tree,

while Boswellia is a tree gum resin that's better known as frankincense. And curcumin is the active ingredient in the well-known medicinal plant and common spice turmeric.

Research shows that each of these natural substances is effective at reducing inflammation and pain. And when you put them all together, they are a formidable trio for joint health.

Based upon scientific studies, the individual doses of my ABCs of joint health are 400 to 500 mg each of ashwaganda, Boswellia, and curcumin. But there is good evidence that all of these botanicals have synergistic effects with the others when taken in combination, beating even the most potent (and dangerous) drugs.

So be like the Wise Men who brought these gifts to the Messiah on Epiphany (January 6)—and don't be caught without an effective joint remedy this year. JC

Citations available online at www.DrMicozzi.com

Avoid antibiotics, fight gum disease, and more with the all-natural little blue wonder

It's too late to pick blueberries this year. But given all of the impressive research that has been published recently on the health benefits of this tiny fruit, it's well worth seeking out a high-quality blueberry supplement. (Indeed, blueberry extracts, supplements, and water-soluble powders are now available year round.)

We already know blueberries are helpful for memory and cognition, and research shows they also help protect against cardiovascular disease, diabetes, and obesity. Research has even uncovered the beneficial effects of blueberries on dental health and reducing the use of antibiotics.

It's quite an extensive array of benefits, considering this berry has only recently come under scientific scrutiny. So today, let's review some of the basics about blueberries—as well as the latest findings.

Wild blueberries are three times better for you than farm-grown fruit

There are two major types of blueberries that grow in the U.S. The low-bush blueberry, which is the wild variety (*Vaccinium angustifolium*) and a high-bush variety. High bush blueberries have been cultivated to grow at a higher elevation than wild blueberries would typically grow in their rocky native soil.

Blueberries are rich sources of phenolic acids, which have both antioxidant and anti-inflammatory properties.

Using the kind of HPLC-MS analytical technology that I helped develop for the NASA astrobiology program in the last 1970s, eight major phenolic acids have been found among the two species of blueberries.

Of course, the reason that plants produce bioactive phenols and other constituents is to protect them under the strenuous conditions of the wild. Cultivated plants have it "easy" by comparison and need to produce far fewer phenolic and other bioactive compounds for their growth and protection, as demonstrated by the contrasting amounts of chlorogenic acid in these two varieties of blueberries.

Research shows that total phenolic content is over three times higher in the wild compared to the cultivated varieties. Which means wild blueberries are three times better for your health.[1]

Beyond phenols, there are many other constituents in blueberries that contribute to their total antioxidant capacity.

For instance, blueberries also have abundant anthocyanins, which give them their characteristic dark blue color. Like phenols, anthocyanins have anti-inflammatory properties and act as natural antioxidants.

Heart benefits that rival pharmaceutical drugs

One study looked at the benefits of blueberry anthocyanins at protecting the linings of blood vessels from damage.[2]

Blueberries have also been studied for their ability to prevent atherosclerosis, or hardening of the arteries.

One study looked at the effects of wild blueberry powder on **fat accumulation in white blood cells**—which is one of the culprits in atherosclerosis.[3] The researchers found that even low concentrations of blueberry anthocyanins reduced fat accumulation. And two other blueberry components—syringic and gallic acid—were also found to be effective at lowering fat accumulation in white blood cells. (As I wrote in an April 2013 *Insiders' Cures* article, gallic acid is a common, natural compound that has many beneficial health effects).

Best of all, the concentrations of blueberry anthocyanins found to be effective in these studies are readily achievable in your everyday diet with proper supplementation.

Another clinical trial showed that daily blueberry consumption improved

blood pressure and **arterial stiffness** in postmenopausal women suffering from early-stage high blood pressure.[4]

The study involved 48 participants who received either 22 grams of freeze-dried blueberry powder or 22 grams of a placebo powder daily. After eight weeks, the blueberry group's blood pressure was significantly lower. Systolic pressure dropped from 138 to 131 mmHg, and diastolic pressure dropped from 80 to 75 mmHg.

An effect that significant may very well allow older individuals to opt for blueberry supplements instead of blood pressure drugs to treat hypertension.

Biochemical measurements were also done on the study participants. The women who ate blueberries had increased production of nitrous oxide, a very powerful relaxant of blood vessels. Basically, nitrous oxide widens the vessels and reduces blood pressure, while supplying good blood circulation to the brain and other tissues.

To recap, in terms of cardiovascular benefits, research shows that blueberries do it all—reducing the oxidation and inflammation that damage blood vessels, curtailing the accumulation of fats that causes atherosclerosis in damaged arteries, and lowering blood pressure and arterial stiffness—which are both major factors for heart disease.

But the benefits of blueberries don't stop with the heart.

The new "brain food"

Other research shows that whole, fresh, high-bush blueberries (*Vaccinium corymbosum*) help reduce the **oxidative stress** that can lead to **age-related brain damage**.

In one study, lab animals that ate blueberries were protected from oxidation and destruction of brain cells. And their brain tissue was actually able to repair damage due to age-related changes.[5]

Biochemical measurements also demonstrated that blueberries supported antioxidant activity in a number of the animals' cellular functions. In addition, key neurotransmitter activity was increased in the animals' brain and nervous tissues.

Tiny berries offer big immune benefits

For the immune system, one study showed that six weeks of daily ingestion of blueberry powder **increased natural killer cells** (T cell counts) in sedentary men and women.[6] These white blood cells are key to protecting the body from infections, cancer, and other diseases. My colleague Dr. Jerry Thornthwaite discovered natural killer cells back in the 1970s, and their importance continues to be uncovered.

An unexpected weapon in the war against obesity and diabetes

Based on the research I reported above about reducing fat accumulation, you might be wondering if blueberries have a role in preventing obesity. Indeed, scientific research shows blueberry anthocyanins can help **prevent weight gain, support weight loss, and help prevent the metabolic complications of obesity like diabetes.**

When certain white blood cells (macrophages) infiltrate fat tissue, they contribute to complications like type 2 diabetes. But anthocyanin-rich fractions from blueberries were found to reduce inflammation and fat tissue formation in one study.[7]

These compounds also restored insulin and glucose uptake of fat tissue.

Wild blueberry consumption also showed benefits regarding glucose metabolism in a lab animal model of metabolic syndrome and diabetes.[8]

The important advice your dentist won't give you

The latest research demonstrates how blueberries can help fight **gum disease** (periodontitis) and also **reduce the use of antibiotics**.[9]

Gum disease can result when dental bacteria build up plaque on teeth, causing the gums to become inflamed. Researchers found that wild blueberry extract (remember, wild blueberry is about three times more potent than domestic) helps prevent dental plaque formation, providing a new natural therapy for periodontitis and reducing the need for antibiotics.

Blueberry polyphenols have already been shown to work against foodborne disease-causing bacteria, so the scientists tested whether they also fight a microbe called Fusobacterium, which is one of the main culprits in periodontitis.

In the lab, they tested extracts from the wild, low-bush blueberry and found they inhibit growth of this bacteria and its ability to form plaque. The blueberry extracts also blocked a molecular pathway involved in causing inflammation.

The researchers believe the best approach would be to develop a special oral device to slowly release blueberry extract into the mouth and onto the teeth after deep dental cleaning. But you don't necessarily have to wait for development and FDA approval of expensive treatments with new device, or a trip to the dentist for an unpleasant deep cleaning.

Blueberry extract is available in a water-soluble, powdered form that can be added to any beverage. It's designed to be swallowed so it can be absorbed in the blood and tissues. But you can also hold the beverage in your mouth for a while to savor the flavor before swallowing—and do some good for your teeth and gums too.

Look for a dietary supplement or water-soluble powder containing 400 mg of blueberry extract.

Citations available online at www.DrMicozzi.com