

Alternatives

For the Health Conscious Individual

What's Old Is New Again

I 'm sure you've heard the saying, "What's old is new again." I can't think of any place where this saying is more apropos than in the area of health care. It seems to go handin-hand with "not-invented-here syndrome"—which is what I call the rejection of research and solutions by institutions, companies, or cultures solely



because they weren't the ones to develop or discover them. Examples within the health care community could fill volumes.

In January of this year, I participated in a Facebook Live event to discuss the benefits of probiotics and answer any questions that participants had about them. Unfortunately, there were some technical glitches and the event was terminated before I was able to get to many of the questions.

One of the participants I wasn't able to respond to wanted to know if probiotics could possibly help with her rheumatoid arthritis. The answer to this question is a prime example of both ideas I mentioned earlier: What's old is new again and the not-inventedhere syndrome.

In late 1993, I received a letter from a dentist, Dr. George Meinig. He had just written *Root Canal Cover-Up*, a fascinating, well-documented book with vital health information. In it, he chronicled the earlier work of Dr. Weston Price, a Canadian dentist, who, for 25-plus years, documented a direct connection between root canals and a long list of degenerative issues like heart disease, kidney and bladder problems, and arthritis.

At the risk of greatly oversimplifying their findings, these health pioneers reported how pathogenic bacteria thought to be trapped within the tooth and oral cavity actually entered the bloodstream and triggered numerous degenerative diseases throughout the body. (I highly recommend reading Dr. Meinig's book and also studying the work of Dr. Price, if you have the opportunity.)

Dr. Price's research was performed in the 1900s, and he published his amazing work around 1922. At the time, he was ridiculed by both dental and medical associations. And 70 years later, when Dr. Meinig published his supporting research, he was also ridiculed by both communities. I even caught flak for promoting such "quackery."

On a positive note, I suspect there are tens of thousands of individuals who subscribed to this "quackery" and reduced their risk of various diseases and even dying prematurely. How can I say this? Because the latest research continues to support what these early health pioneers were trying to tell everyone.

I never knew Dr. Price. He died before I was born. I did have the pleasure of knowing Dr. Meinig and speaking with him many times before he passed in 2008. Unfortunately, neither lived long enough to receive the apologies and recognition they deserved from the dental and medical communities. Not that I truly believe that would really have ever happened—after all, conventional medicine, with the backing of the pharmaceutical industry, suffers from incurable not-invented-here syndrome.

Granted, dental and sterilization procedures practiced a hundred years ago were far from ideal. Contamination was obviously far more of a problem than it is today. The techniques and technology used today have helped minimize many of these

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concerns. However, the idea that pathogenic bacteria from the oral cavity can travel throughout the body and cause serious, chronic, and even life-threatening disease has now been shown to be fact. Whether the bacteria come from a contaminated root canal or cavitation, as illustrated by Drs. Price and Meinig, or from periodontal (gum) disease, the result can be just as crippling.

Probiotics and RA

So, to answer the lady's question from Facebook: Yes, probiotics can certainly be one of the key components to help deal with rheumatoid arthritis (RA). A quality oral probiotic can help restore and maintain the balance of healthy bacteria in the oral cavity. Periodontal disease occurs when pathogenic bacteria become established in the oral cavity.

Studies have found that individuals with RA are eight times more likely to have periodontal disease compared to those without RA. (*Arthritis Res Ther* 2016;18(1):161) (J Periodontal 2008 Jun;79(6):979–86)

One of the main forms of bacteria responsible for periodontal disease is *Porphyromonas gingivalis (P. gingivalis)*. Studies have shown that just before someone starts to experience the onset of RA symptoms, the concentration of antibodies against *P. gingivalis* begin to increase. Additionally, *P. gingivalis* leads to earlier onset, faster progression, and greater severity of RA, including increased destruction of bone and cartilage tissue. (*Connect Tissue Res* 2012;53(4):327–33)

One of the latest studies in this area, published in October 2018, found a connection between RA and tooth loss. The more teeth you lose, the greater your risk of developing RA and experiencing increased joint inflammation. (*Korean J Intern Med 2018; kjim.2018.093*)

A full set of adult teeth, including wisdom teeth, numbers 32. A study involving 540 patients with very early-onset RA found that 24 percent had 10 or fewer teeth, 15 percent had 11 to 20 teeth, 36 percent had 21 to 27 teeth, and 22 percent had 28 or more teeth. The RA of those with the fewest teeth (10 or less) progressed the fastest. These people experienced higher rates of inflammation and more swollen and tender joints as the disease progressed. They also had the least positive response to any type of therapy.

Patients with fewer than 20 teeth have also been found to have eight times the risk of having at least one swollen joint compared to those with all 32 teeth.

Early in my studies, I remember reading that Hippocrates suggested pulling teeth could cure arthritis. The procedure wasn't that uncommon a century ago. Fortunately, periodontal disease can be treated and controlled, and removing teeth isn't required to treat RA.

It stands to reason that if periodontal disease and its accompanying inflammation either causes or exacerbates RA, then getting it under control is a good way to treat RA. And research shows that's exactly the case. If you get rid of infections and inflammation in the mouth, it will subdue it in the joints.

Researchers at Case Western University tested this theory on 40 patients with severe RA. Half the people were given deep, nonsurgical dental cleanings, while the other half were given instructions from a dentist on how to keep their teeth clean at home.

Within six weeks, those who had the professional cleanings had significantly less pain and morning stiffness and fewer swollen and painful joints than the group that cleaned their teeth at home. Not surprisingly, the researchers also found that those receiving the

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Dr. Williams works with Healthy Directions, LLC, to develop his unique formulations that supply many of the hard-to-find nutrients he recommends. Dr. Williams is compensated on the sales of these nutritional supplements and health products, which allows him to continue devoting his life to worldwide research and the development of innovative, effective health solutions.

professional deep cleanings had far less of the inflammatory proteins that trigger joint inflammation in their blood. (*J Periodontol 2009 Apr;80(4):535–40*)

In all of the studies that I reviewed, there was never any reference to the early health pioneers I mentioned. I seriously doubt they were looking for any praise anyway. Their goal was to help as many people as possible, and it's a shame it has taken about 100 years for this to start happening. But again, what's old is new again.

If you have RA, eliminating periodontal disease is a no-brainer. If your doctor hasn't mentioned this, then maybe it's time to look for a new one. Regular dental cleanings and care should be part of every RA treatment program.

Beyond RA

Arthritis wasn't the only condition found to be associated with pathogenic bacteria in the oral cavity. Various forms of bacteria are known to attack and damage not just the joints, but also the heart, nervous system, kidney, liver, and brain. While I've primarily discussed joints, more and more "new" discoveries are linking many of our most prevalent diseases to oral pathogens as well.

Periodontal disease increases the risk of cardiovascular disease by 19 percent (and that number jumps to 44 percent for those 65 and older) and heart attack by 78 percent. Type 2 diabetes patients with severe periodontal disease have 3.2 times greater mortality risk compared to diabetics who do not.

Pathogenic bacteria from the oral cavity also appear to be linked

to many forms of autoimmune disease. If you suffer from any chronic inflammatory condition, don't overlook periodontal issues as a contributing cause or factor.

Finally, in what may be one of the most important studies to be released so far this year, researchers have identified *P. gingivalis* in Alzheimer's patients and discovered that this bacterium appears to drive the brain destruction associated with the disease. The ramifications of these findings could be a gamechanger in both the prevention and treatment of this horrible disease. (*Science Advances 23 Jan 2019*. *DOI: 10.1126/sciadv.aau3333*)

While there have been other infectious agents implicated in the progression of Alzheimer's, prior to this study there hasn't been any convincing research to pinpoint exactly what causes the disease.

This latest research was performed at the University of Louisville. The researchers discovered that in animal models, an oral *P. gingivalis* infection led to brain colonization of the bacterium, along with increased production of the telltale amyloid plaques commonly associated with Alzheimer's disease.

The research also went a step further and revealed that the toxic enzymes specifically produced by *P. gingivalis* (gingipains) were present in the nerve cells of patients with Alzheimer's. These are the neurotoxins that lead to the destruction of nerve cells in the brain and the formation of amyloid plaques.

The researchers were testing synthetic drug compounds that

could block the action of these toxic enzymes. Although their focus wasn't on methods of preventing Alzheimer's, their work has spotlighted periodontal disease as a cause of the brain condition. As a reader of *Alternatives*, you're one of the first to learn about this connection.

Alzheimer's is a horrendous disease. More than 5.7 million Americans have it, and over the next 30 years that number is expected to rise to 14 million. Between 2000 and 2015, deaths from Alzheimer's have increased 123 percent. It is currently the sixth leading cause of death in the United States, killing more people than prostate and breast cancer combined. None of this is that surprising when you look at the corresponding prevalence of periodontal disease in this country.

The National Health and Nutrition Examination Survey assessment in 2009–2010 determined that the rate of periodontal disease in the general US population over age 30 is 47.2 percent, with 30 percent being moderate and 8.5 percent being severe. In adults 65 and older, prevalence rates increase to 70.1 percent. (*J Dent Res 2012 Oct;91(10):914–20*)

Living with chronic periodontal disease is a recipe for longterm disaster. As I've said in the past, periodontal disease is the equivalent of having a constant intravenous drip of toxins entering your body on a 24/7 basis. If you don't have a health goal this year, resolving or preventing gum disease would be a very worthwhile one. •

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Calming an Irritable Bowel

Question: For the last year or so, I have been treated for irritable bowel syndrome (IBS). My diet has been restricted considerably, and I'm taking probiotics and trying to consume more fermented foods and a variety of fruits and vegetables for more roughage. While I do seem a little better, I'm still having most of the same issues I started with. I've lost several pounds, but continue to have abdominal pain, indigestion, gas, bloating, heartburn, and bouts of diarrhea. I seem to be constantly tired and more recently I've noticed that I tend to bruise fairly easily. I'm also starting to get arthritis pain in several of my joints, which is due to my age (late 60s). I know IBS often takes time to resolve, but I'm not sure if my doctor and I are missing something that could help speed up the process. Any ideas? — D. Tyler, West Allis, WI

Answer: Based on the limited amount of information I have about your condition, it's highly possible that in addition to IBS, you also have a lack of digestive enzymes.

I suspect that your body may not be digesting adequate amounts of protein. This can result from having inadequate amounts of hydrochloric acid from the stomach and lower levels of pancreatic enzymes from the pancreas. Deficiencies in either or both of these can result in a protein deficiency.

Individuals with lower hydrochloric acid (HCL) production will tend to have excess flatulence. Protein digestion starts in the stomach. If it isn't fully digested, protein begins to putrefy, which encourages the growth and activity of gasproducing bacteria. When combined with an alkaline gut environment (commonly found with an unbalanced microbiome), the gas tends to be especially odiferous and offensive. Since these particular gas-producing bacteria can't readily survive in a more acidic environment, gas is one indication of poor protein digestion. (Further confirmation can be made by measuring the pH of the rectum with pH strips. It should have a slightly acidic pH between 6.0 and 7.0.)

Hydrochloric acid production typically peaks in our 20s and then begins to decrease with age. One study found that, by age 50, the stomach produces only about 15 percent of the amount of hydrochloric acid it did at age 25—and 35 percent of individuals over age 65 do not secrete any at all. This is one reason young people tend to have more of a cast-iron stomach and can eat just about anything, but older people experience more digestive issues.

Hydrochloric acid products are readily available and most commonly combined with betaine HCL. You will also often find them combined with pancreatic enzymes, and there's a good reason for this.

The pancreas produces and secretes digestive enzymes that are "triggered" by the acidity of the chyme (partially digested food and gastric juices from the stomach) entering the small intestine. In cases of low HCL production, or excessive protein intake, the digestive capabilities of the pancreas will be inadequate. This aggravates digestive problems. This can occur even if the pancreas is functioning normally.

If there is very little or no pancreatic function, then it may be necessary to take stronger pancreatic enzymes, and there are many products of varying strengths available. That's something that your doctor can help with.

However, I tend to favor a digestive enzyme product that focuses more on HCL with only some supplementary support for the pancreas. Inadequate HCL production is very common, but most people don't need heavy doses of pancreatic enzymes. Rather than try to completely replace pancreatic function with high enzyme levels, I believe the goal should be to naturally stimulate pancreatic function and allow the organ to return to its normal activity. This can usually be done by increasing HCL levels and supplying the raw materials needed by both the stomach and pancreas to increase their acid and enzyme production.

The production of bicarbonates by the pancreas and hydrochloric acid by the stomach are dependent on zinc. Zinc deficiencies are also more common as we age. It doesn't take a lot to correct a deficiency and I would be careful to not overdo it. A daily maintenance dosage of 10–20 mg should be enough to prevent a deficiency, but to resolve an existing deficiency, you might require 20–30 mg daily for a couple of months before switching to that maintenance dosage.

It's also important to keep in mind that aspirin and other NSAIDs and acid-suppressing drugs block the absorption of zinc. The antacids are also working to neutralize what HCL you currently have. While they may give temporary relief, they can stop the digestion of protein before it is complete and trigger an acid rebound, resulting in acid reflux, bloating, and indigestion.

Keep in mind that undigested protein and fermented carbohydrates can also create havoc when they reach the large intestines as well. Undigested proteins are often recognized by the immune system as foreign proteins and trigger an inflammatory reaction. Chronic inflammation of the intestinal wall leads to localized destruction and leaky gut syndrome. Openings in the gut wall allow these undigested proteins to enter the bloodstream and travel throughout the body, creating all types of health problems. The inability to digest and properly assimilate protein from food could very well be linked to your IBS. And without adequate protein, it will be difficult for the colon to ever heal properly.

Until you get things resolved, you (and all acid reflux sufferers) may find it helpful to avoid mixing animal proteins with grain-derived carbohydrate foods in the same meal. (Unfortunately, these are some of the popular food combinations in our diet sandwiches, pizza, spaghetti and meat balls, etc.)

Here's why. The stomach prefers to empty its contents only after gastric digestion is complete. Animal proteins take longer to break down than grain-based carbohydrates. As such, while it continues to work on animal proteins, it will often keep holding on to carbohydrates that have already been processed adequately. The ongoing HCL exposure causes these carbs to ferment and produce gas, resulting in bloating, pain, acid reflux, etc.

B vitamins are also necessary for the pancreas to produce digestive enzymes. Either take a multivitamin that includes all the B vitamins, or take a separate multi-B complex.

You might also find it interesting that some of the other health issues you say you have could be directly linked to a lack of HCL and pancreatic enzymes.

Low levels of the fat-soluble vitamins A, D, E, and K are some of the associated signs of pancreatic

digestive enzyme deficiencies. There are many symptoms related to these deficiencies, including bruising, diarrhea and subsequent weight loss.

Additionally, the inability to digest/assimilate protein can translate to numerous issues, one of which is joint problems. Our bodies constantly need protein, not just for growth and constant repair, but also for the production of hormones and various enzymes. Whenever there is a shortage from the diet (or from poor digestion/assimilation), the body will "rob" it from one area to help another ("robbing Peter to pay Paul"). The joint surfaces are a prime area from which to rob protein. The synovial membranes that line the joints surfaces are loaded with protein that is easy to snag. Depending on where the protein is stolen, that's where you'll start to experience problems.

When protein is stolen from the joints, arthritis results. A lack of protein makes the joint surfaces more vulnerable to irritation and injury. In an effort to strengthen and protect the area, our bodies will start to deposit calcium in the areas where protein has been removed. As the calcium begins to build up, the joint surface becomes rough and less mobile. Cartilage destruction, stiffness, pain, and restricted range of motion follow. Eventually, the excess calcium can totally immobilize the joint.

When it is stolen from the colon, you can experience colitis or ulcerative colitis. When stolen from the stomach, it can result in ulcers. When stolen from bursa, you can expect bursitis. When stolen from the skin, you can end up with dermatitis. If this persists for a longer period of time, the skin becomes very thin and almost transparent, and you can see the inflamed, protein-depleted epidermis below. This is so common that bruising and thin skin is considered to be completely normal in our elderly.

When the body lacks adequate protein, the health issues can be systemic and localized. Any growth or repair of tissue is retarded. Hormone production becomes impaired. Enzyme synthesis is hindered. The list is endless.

So, based on your symptoms, I recommend that you take a high-quality digestive enzyme, particularly one that contains betaine HCL and possibly a small amount of pancreatic enzymes. Take the recommended dosage with each meal, and half the recommended dosage with snacks. I believe you'll start to see a huge improvement in the problems you're experiencing.

NEWS TO USE from around the world

Air-Purifying Plants

SEATTLE—Researchers at the University of Washington have genetically modified the common household plant pothos ivy in such a way that it can effectively remove chloroform and benzene from the surrounding air.

Chloroform and benzene are hazardous organic compounds commonly found in homes. Chloroform is present in chlorinated water and is released during showering or boiling water. Benzene is a component of gasoline and can build up in homes from lawn mowers and cars in garages.

After two years of work, the researchers were able to genetically modify pothos ivy so that it removes these pollutants from the surrounding air and transforms them into harmless compounds they utilize for food and growth.

They compared the ability of the modified plants to remove these hazardous compounds to normal pothos ivy. The different plants were placed in glass enclosures, and benzene and chloroform gas were introduced.

With the modified plants, the concentration of chloroform dropped by 82 percent after three days, and it was practically undetectable by day six. Benzene levels also dropped, but at a slower rate. By day eight, benzene levels had dropped by 75 percent.

Levels of neither benzene nor chloroform gas were reduced by the unmodified plants during the entire 11 days of the study.

Pothos ivy was a great plant to use for this purpose. First, it doesn't flower in temperate climates, so the genetically modified plants aren't able to spread by pollination. And second, pothos ivy is one plant that grows and survives under all kinds of adverse conditions. It seems to be the one plant everyone can grow indoors with the least amount of pampering.

While the modified plants have been approved for sale in Canada, they will have to get USDA approval to be sold here in the US. Apparently, since pothos ivy grows wild in Florida, they want to make sure it won't affect the native plant population. The researchers told me they expect the process to take about two years.

While waiting for the approval, the researchers are trying to tweak the ivy now so it can also remove the formaldehvde molecule. This would make them very beneficial for those people with environmental sensitivities to this compound. Formaldehyde is present in tobacco smoke and also a component in many composite, wood-based building materials. These include plywood, particle board, fiberboard, cabinets, laminate flooring, insulation, etc. They can also be found in some cleaners, paints, and textiles.

Rather than trying to remove these airborne compounds with elaborate, expensive filtration systems, in a couple of years we can do it with pothos ivy.

On a somewhat related note, a group of neuroscientists at the University of Alberta found that higher levels of oxygen encourage the brain to remain in the deepest level of the sleep cycle. When oxygen was administered, the test subject's brains switched from active sleep (rapid eye movement, or REM) and remained in a deactivated, slow-wave sleep state the entire time.

Keeping the brain in this slowwave sleep is not only the deepest stage of sleep, it is the stage where waste products are cleared from the brain, muscles grow, and proteins reform. It is the time when memories are consolidated and healing is better able to take place in both the brain and the body. This slow-wave sleep, where the brain oscillates at an extremely slow, once-per-second rhythm, is essential for continued health. The neurologists I spoke with feel administering oxygen during sleep could provide a therapeutic tool for treating a wide range of health problems.

I wanted to mention this research because I am certain there will be a lot of information out there saying that you can increase the oxygen levels in your bedroom with plants. But house plants do not increase oxygen levels in your home. That's a myth. I think keeping plants in the house is a great idea. They can help purify the air and add life and energy to a home, but they don't boost oxygen levels.

It has been well-documented that adult humans use about 550 liters of oxygen per day. And we all know that through the process of photosynthesis, plants absorb carbon dioxide from the air and release oxygen as a byproduct of making their primary energy source, sugar. The rate of photosynthesis is dependent on numerous variables, such as temperature, available water and nutrients, light exposure, the size

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and age of the plant, whether the plant is fast or slow growing, etc.

The botanist Marco Thorn has provided an estimate of the amount of oxygen a plant releases using basic math and assumptions. Assuming 80 percent of the fresh weight of a plant is water and 40 percent of the rest is carbon, he calculated that for every 150 grams of plant tissue grown, 32 grams of oxygen are released. Using this formula and knowing the total weight of your plant, you could calculate the amount of oxygen it would release during its entire life. Using this formula, for a plant to produce the amount of oxygen needed by one human per day, the plant would have to increase in weight by 3.75 kilograms (8.26 pounds) every single day.

Thanks to NASA, we also know that our air contains 20.95 percent oxygen and 0.04 percent carbon dioxide. If you were able to fit enough plants in your bedroom to convert all the carbon dioxide into oxygen, the oxygen levels would only increase from 20.95 percent to 21 percent. This is far too small of a change to make any difference whatsoever.

Short of breathing 100 percent oxygen, opening a window (or moving your oxygen-breathing family members and any pets out of the house) is probably the best way to marginally improve oxygen levels.

Essential Oils and Lyme Disease

BALTIMORE—Researchers at Johns Hopkins University have identified certain essential oils that are able to eradicate the bacterial species known as *Borrelia burgdorferi*, the tick-borne parasite that causes Lyme disease. (Antibiotics 2018;7(4):89)

While most Lyme disease patients can be cured with a 2to 4-week course of antibiotics, as many as 20 percent continue to suffer chronic disease. The reason seems to be that *Borrelia burgdorferi* forms what are called "dormant persisters."

Dormant persisters are bacteria cells that avoid eradication by going into a sleep mode, only to return when the threat of removal has passed—similar to an adult child who lives in his parents' basement and refuses to find work and leave home.

I've been following the work of these same researchers for some time now. In this study, they screened 35 essential oils and found 10 oils that had strong activity against these dormant persisters. In an earlier study, they identified three other oils. (*Front Med (Lausanne) 2017 Oct* 11;4:169)

While essential oils can be beneficial for a wide variety of conditions, there aren't that many that have been shown to be "food safe" or safe for consumption. What got my attention with this latest study was the fact that one of the oils actually has been labeled by the FDA as GRAS (generally recognized as safe). This doesn't mean you can ingest all you want or that the FDA endorses its ingestion. It just indicates that the oil is generally recognized as safe for its intended use, which is ambiguous, government-derived, gobbledygook that can mean just about anything.

Although the food industry uses essential oils in lots of different

foods we consume daily, no one seems to want to go out on a limb and suggest you can ingest them for therapeutic reasons. And frankly, very few essential oils are even considered food safe. I'm sure part of the reason stems from the fact that the industry that produces these oils is unregulated. I've personally witnessed the adulteration that frequently occurs in the manufacturing and distribution channels of the essential oil industry, both here and abroad. However, there are also legitimate sources for these products.

The researchers in this study, like most medical studies, actually seemed more inclined to determine which specific compounds in the oils were the active components. This would allow drug companies to synthetically produce patentable components that could be sold as drugs. That's where the profit is—not in natural products that cannot be patented.

Among the oils that worked best at eliminating these dormant persisters were garlic, oregano, and cinnamon bark. Of these three, cinnamon bark oil is the only one that I'm aware of that has GRAS status with the FDA, and also whose active component, cinnamaldehyde, has an acceptable daily intake limit set by the Council of Europe. (In 1992, the Council of Europe set the acceptable daily intake level of cinnamaldehyde at 1.25 mg per kilogram of body weight.)

The above study had first tested cinnamon bark oil and found it was effective at eliminating the dormant persisters of *Borrelia burgdorferi*, and then they tested the component in cinnamon bark,

NEWS TO USE from around the world (continued...)

cinnamaldehyde, and found it to be just as effective.

Since their tests were performed using very weak dilutions on bacterial cultures in petri dishes, there's no way to effectively determine what oral dose in humans might be effective. In the lab cultures, cinnamon bark oil was effective at 0.25 percent and cinnamaldehyde was effective at even 0.05 percent, totally destroying the dormant persisters by 21 days.

(In fact, at a concentration of 0.1 percent, garlic, allspice, cumin, palmarosa, myrrh, hydacheim, amyris, thyme white, *Litsea cubeba*, lemon, eucalyptus, and cinnamaldehyde were all effective, more so than the most potent antibiotic being used, doxycycline.

While not as potent as doxycycline, the following essential oils at a concentration of 0.2 percent were still shown to be effective as well: commint, fennel sweet, ho wood, birch, petitgrain, and head ease.)

If had personally had Lyme disease that couldn't be cleared with antibiotics, I would definitely be consuming larger amounts of these spices in my diet. I would also be taking a *single drop*, no more, of cinnamon bark oil daily, diluted in hot water or a cup of hot tea...or added to my morning protein shake.

The need for diluting cinnamon bark oil cannot be overstressed. Cinnamon bark oil can cause skin or mucous membrane irritation in some individuals, especially undiluted. Keep in mind that it was effective in the above study at only 0.05 percent. To achieve a 0.05 percent solution using hot tea as the carrier, would roughly be one drop of oil in 3 1/3 ounces of tea. A "normal" serving of hot tea is considered 6 ounces, and I think one drop of oil in 6 ounces would be my daily dosage, provided I didn't experience any irritation or allergic reaction. I would continue this for three to four weeks and then discontinue.

The researchers in this study obtained their cinnamon bark essential oil from a company called Plant Guru in Plainfield, New Jersey. I like their essential oil products. Their prices are reasonable and they don't promote some multilevel marketing program, like many other sellers of essential oils. In my opinion, these programs drive up the cost of products. I've yet to see in the supplement business where they provide any meaningful benefit to the consumer. Plant Guru can be reached at (877) 788-0530 or online at theplantguru.com.

It's important to mention that there are two forms of cinnamon essential oil. One form extracts the oil from the leaves and twigs and is referred to as cinnamon leaf oil. Leaf oil only contains between 0.6–1.1 percent cinnamaldehyde. The other form utilizes the inner bark to get the oil, and the bark oil contains 63.1–75.7 percent cinnamaldehyde.

Since the study found that cinnamaldehyde was the active ingredient and responsible for eliminating the dormant persisters, I personally would only use cinnamon bark oil and not cinnamon leaf oil.

Until next month,

Dr. David William

This Month Online

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