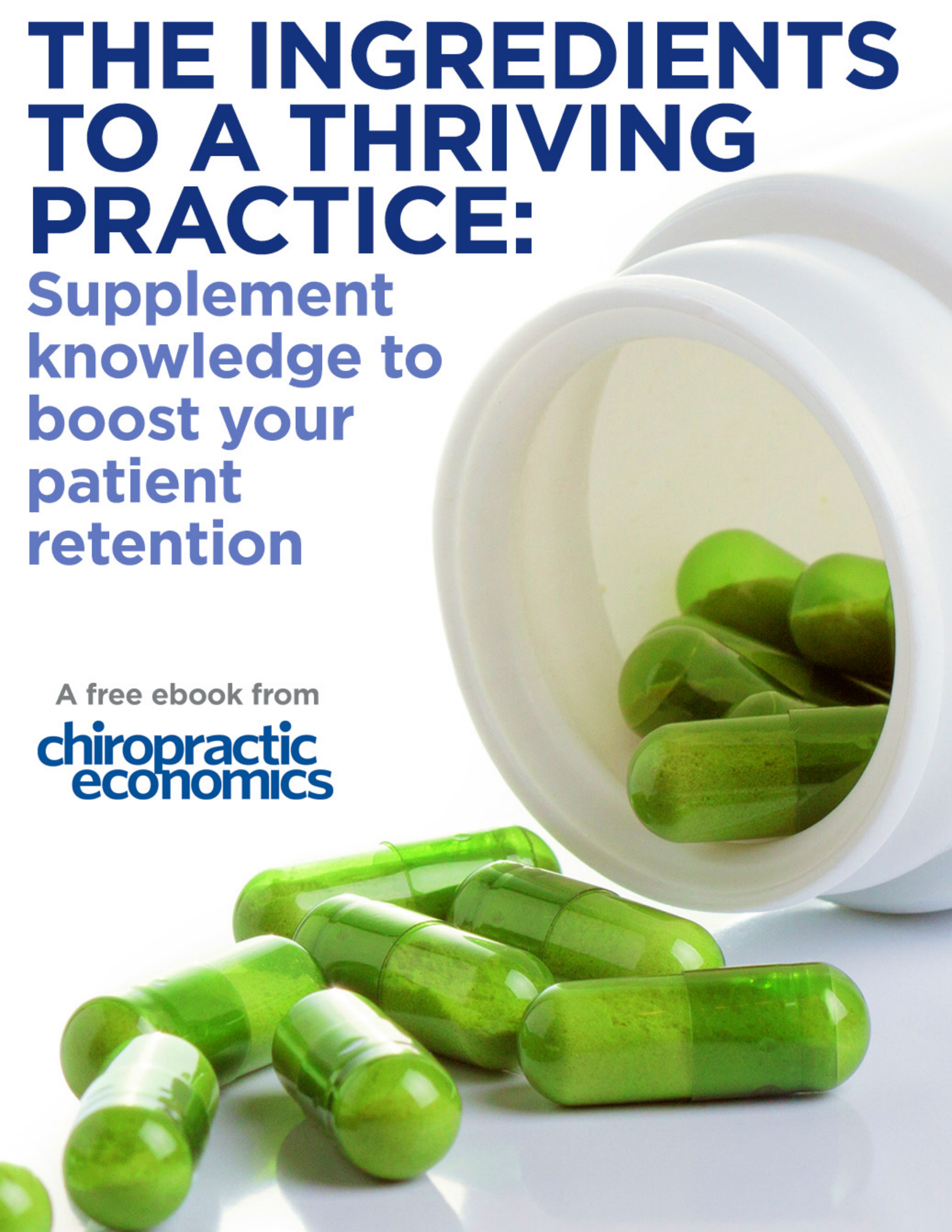
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WHAT IS *SCELETIUM TORTUOSUM* AND WHY IT MATTERS TO DCs



By Christina DeBusk

In 2007, the *Journal of Chiropractic Medicine* published a survey that involved 125 chiropractors, reporting that four out of five provided patients with some form of nutritional counseling.[1] Furthermore, one-half of these practitioners felt that nutritional counseling was a "very important part of their practice."

This survey also delved into the types of nutritional counseling this sector of health practitioners offered. What they discovered was that almost 90 percent of the respondents shared that they prescribed vitamins to their patients. In fact, this was the most widely used form of nutritional counseling conducted, with diet and weight loss secondary to supplementation recommendations.

If you fall into this large category of DCs who regularly talk with your patients about taking supplements for greater levels of health, then it's likely that you may have recently heard about *Sceletium tortuosum* (also known as Kanna) and are wondering if it may be a good fit for some of your patients. To help you answer this question, there are some things you need to know first, enabling you to make a more informed decision and, possibly, recommendation regarding this supplement in particular.

WHAT SCELETIUM TORTUOSUM IS AND HOW IT WORKS

The journal *Neuropsychopharmacology* published an article in December of 2013 which discusses *Sceletium tortuosum* at great length, citing several pieces of research done on this supplement specifically.[2] For starters, it shares how *Sceletium tortuosum* is derived from a South African plant and has been used for ages to help individuals relieve stress, anxiety, and depression. It does this by its effect on the central nervous system.

Neuropsychopharmacology reports that *Sceletium tortuosum* blocks the body's intake of serotonin (5-HT) and phosphodiesterase-4 (PDE4), resulting in an anti-anxiety effect similar to that which occurs by taking prescription medications created to do the same.

Thus, it offers a more natural option

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for helping relieve anxiety, an issue of struggle for roughly 40 million Americans according to the Anxiety and Depression Association of America.[3] But how well does it work?

SCELETIUM TORTUOSUM'S EFFECTIVENESS

According to Examine.com, an "unbiased source of nutrition and supplements," there's a high level of evidence to suggest that this supplement, which is traditionally chewed like hunter-gatherers did years ago, is effective at reducing anxiety.[4] Other positive effects found consistently across various studies include improvements in cognition, executive function, and quality of sleep.

However, it's also important to note that these positive findings have been listed as "minor," or limited in statistical significance. Additionally, studies involving *sceletium tortuosum* and its effects as related to blood pressure, heart rate, memory, reaction time, and subjective well-being have collectively yielded no measurable and consistent results.

SCELETIUM TORTUOSUM SAFETY

Because *Sceletium tortuosom* is generally thought of as a type of psychoactive supplement, there is often concern that it will produce a high similar to other drugs, possibly even resulting in an addiction to this supplement based on its beneficial effects on stress and tension. Yet, Examine.com reports that studies have found neither of these claims to be true.

Furthermore, both the *Neuropsychopharmacology* piece and Examine.com indicated that toxicity is not an issue when taking *sceletium tortuosom*, especially if you adhere to certain dosage limits.

For instance, Examine.com states that that taking "8mg or 25mg of a 2:1 Kanna extract daily for three months in otherwise healthy adult subjects did not appear to be associated with any alterations in cardiovascular parameters (blood pressure, pulse or breathing rate) or subjectively reported side-effects." *Neuropsychopharmacology* adds that this lower dosage amount also helps reduce any chance of nausea or vomiting, two negative side effects which are most commonly noted with this particular supplement. ■



It offers a more natural option for helping relieve anxiety, an issue of struggle for roughly 40 million Americans according to the Anxiety and Depression Association of America.

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WHAT YOU DON'T KNOW ABOUT HEMP OIL AND CBD SUPPLEMENTS

By Christina DeBusk

More and more people are searching for all-natural ways to remedy the conditions which ail them.

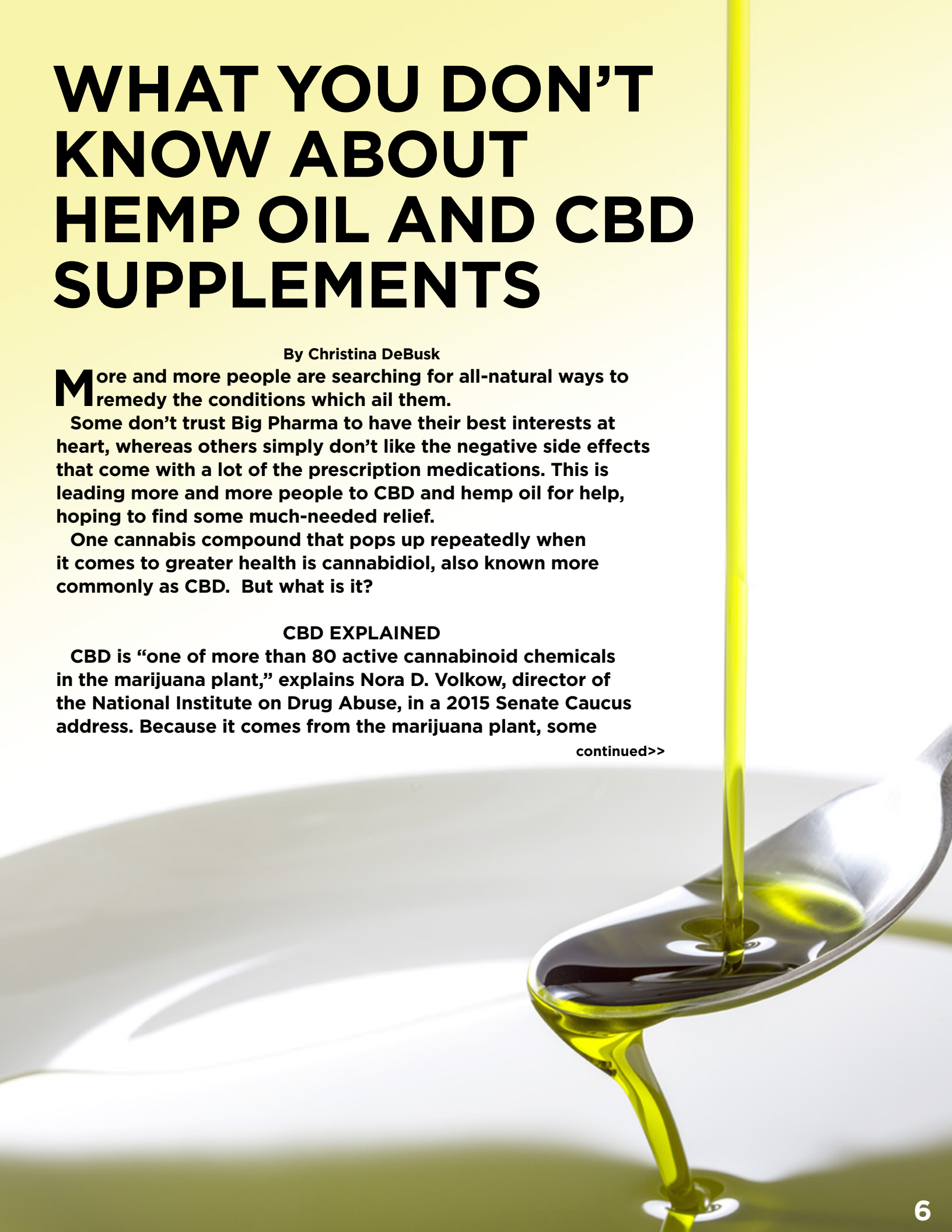
Some don't trust Big Pharma to have their best interests at heart, whereas others simply don't like the negative side effects that come with a lot of the prescription medications. This is leading more and more people to CBD and hemp oil for help, hoping to find some much-needed relief.

One cannabis compound that pops up repeatedly when it comes to greater health is cannabidiol, also known more commonly as CBD. But what is it?

CBD EXPLAINED

CBD is "one of more than 80 active cannabinoid chemicals in the marijuana plant," explains Nora D. Volkow, director of the National Institute on Drug Abuse, in a 2015 Senate Caucus address. Because it comes from the marijuana plant, some

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people worry that CBD-containing products will produce the high normally associated with this drug. However, Volkow says that is not correct.

According to Volkow's explanation of this compound, CBD doesn't provide the same brain-based response as tetrahydrocannabinol, or THC, the psychoactive ingredient found in the cannabis plant. Instead, it simply interacts with the body's CB1 and CB2 receptors in a way in which "alterations in thinking and perception caused by THC are not observed...."

Additionally, in this same address, Volkow advised that, although more research needs to be conducted, "there is significant preliminary research supporting the potential therapeutic value of CBD."

What types of benefits do hemp oil and CBD supplements provide? Before that question can be answered, one must first understand the difference between the two.

CBD AND HEMP OIL DIFFERENCES

Aimée Gould Shunney, ND, is a Licensed Naturopathic Doctor at Santa Cruz Integrative Medicine, where her specialty is in women's health, and she explains that "CBD or cannabidiol is one of over 120 cannabinoids found in hemp oil." Shunney goes on to say that, unlike CBD, "hemp oil also contains fatty acids, plant sterols, terpenes, flavonoids, vitamin E, and chlorophyll."

There are also differences in hemp oil based on how it's sold, says Shunney. "When hemp oil is sold as a food, it contains very low amounts of CBD," she says. "In the supplement aisle, hemp-derived CBD oil is available with higher amounts of CBD for additional health benefits."

HEMP OIL EXTRACTION PROCESS

High quality controlled extraction processes, such as liquid chromatography and CO2 extraction of hemp seed oil, ensures purity and safety from unwanted solvents and psychoactive components vs. uncontrolled, unproven methods.

CBD doesn't provide the same brain-based response as tetrahydrocannabinol, or THC, the psychoactive ingredient found in the cannabis plant. Instead, it simply interacts with the body's CB1 and CB2 receptors in a way in which "alterations in thinking and perception caused by THC are not observed."

HEMP OIL ABSORPTION

VESIsorb technology allows the lipid-based, natural, hemp oil product to be delivered in a water soluble form with no loss in bioefficacy or absorption. The patented VESIsorb delivery system is a naturally self-assembling colloidal droplet delivery system that has been clinically proven to increase absorption of nutritional supplements.

BENEFITS OF HEMP OIL AND CBD SUPPLEMENTS

Shunney says, "I use oral hemp-derived CBD frequently in my practice for anxiety, sleep, and stress resilience." Scott Giannotti, founder of the Cannabis and Hemp Association (CHA), add to this by stating that supplements containing CBD and hemp are also good "for

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neurological conditions such as OCD [obsessive-compulsive disorder], PTSD [post-traumatic stress disorder], and inflammatory conditions such fibromyalgia." Research confirms this.

For instance, one 2013 study published in the journal Fundamental & Clinical Pharmacology found that CBD interferes with the serotonin agonist meta-chlorophenylpiperazine and its effect on 5HT1A, 5HT2C, and 5HT1D receptors, thus resulting in reduced obsessive-compulsive behaviors. Another 2013 study, this one published in the journal Current Clinical Pharmacology, reports that preclinical CBD studies "indicate promising results in affecting the fear conditioning process and thus improving PTSD core symptoms."

Giannotti also says hemp oil and CBD supplements show positive results for people struggling with "auto-immune disorders and bacterial infections such as colds, flu, and tuberculosis." An article published in Future Medicinal Chemistry in October of 2009 looked at a variety of studies on this very topic before ultimately concluding that CBD helps suppress the inflammatory response.

The authors of this piece went on to explain that CBD testing on "autoimmune disorders such as multiple sclerosis, rheumatoid arthritis, colitis and hepatitis and have been shown to protect the host from the pathogenesis through induction of multiple anti-inflammatory pathways." They even cited positive effects of CBD when it comes to cancers that are instigated by constant and consistent inflammation.

Finally, Giannotti shares that CBD "has been shown to eliminate plaques which obstruct organ functionality." The Higher Path, a collective in Sherman Oaks, California, agrees, stating that CBD is beneficial for Alzheimer's because of this, essentially helping to restore communication between the brain and the rest of the body.

Topicals are great for dermatological conditions (such as eczema), arthritis, joint pain, sciatic nerve pain, and general back, neck, foot pain, etc., however, with all medicine, you want to have the most localized delivery. Here is where supplements such as tincture, capsule, suppositories, and vapor come in.

HEMP OIL AND CBD SUPPLEMENTS VS. TOPICALS

While some patients prefer CBD and hemp oil topicals, Giannotti says that there is some added value in choosing supplements instead. "Topicals are great for dermatological conditions (such as eczema), arthritis, joint pain, sciatic nerve pain, and general back, neck, foot pain, etc.," says Giannotti, "however, with all medicine, you want to have the most localized delivery. Here is where supplements such as tincture, capsule, suppositories, and vapor come in."

In essence, supplements make it easier to reach the root cause of conditions not associated with the skin or directly below the skin. Thus, if the condition has origins deeper within the body, CBD and hemp oil supplements provide greater value. In this case, greater value equates to greater relief. ■



ARE YOU GETTING THE MOST OUT OF YOUR MULTIVITAMIN?

A good multivitamin should be designed to provide essential vitamins, minerals and other nutrients as well as include proprietary blend containing standardized fruit and vegetable extracts.

Many doctors understand the need for a multivitamin as an "insurance policy" to help bolster an already healthy diet. Many patients understand this need as well, but often the typical multivitamin is challenging for everyday use due to factors such as size, odor, taste, and dosage.

Numerous studies show that a significant portion of the population may not be receiving all of the necessary nutrients on a daily basis. A well formulated multivitamin can provide adults with the necessary vitamins and minerals for overall general health as well as maintaining healthy skin, eyes, bones, cellular function, and immune support. Here are some key ingredients of a well-rounded multivitamin.

A well formulated multivitamin can provide adults with the necessary vitamins and minerals for overall general health as well as maintaining healthy skin, eyes, bones, and immune support.

VITAMIN A

Vitamin A is well known for its key roles in eye, skin and immune health. Vitamin A should be included in two forms as natural

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beta-carotene which can be converted into vitamin A by the body as well as providing additional antioxidant protection and as preformed vitamin A, providing the body with the readily used form of vitamin A in a smaller amount.

VITAMIN B12

Vitamin B12, a crucial nutrient needed for neurological and blood cell production, should be provided in its better-absorbed coenzyme B forms, cobamamide and methylcobalamin. Other active forms of B vitamins, riboflavin-5-phosphate and pyridoxal-5-phosphate, ensure the body is able to readily use these nutrients to support numerous biochemical processes. Minerals and other nutrients should be provided in bioavailable forms to ensure optimal utilization and gastrointestinal tolerance.

FOLATE

Folate plays crucial roles in cell division and DNA synthesis and supports healthy methylation and neurological health, among many other roles. An active form of folate known as 5-methyltetrahydrofolate (5-MTHF) is the preferred form to achieve the best results. Research has shown that a significant part of the world's population has a genetic mutation that makes them unable to convert the folic acid often found in supplements and fortified foods into 5-MTHF. 5-MTHF is a unique, well absorbed and water soluble form of folate with a proven safety and absorption profile. Stabilized with vegetable derived glucosamine, studies show that this form may offer superior utilization compared to folic acid or the calcium salt version of 5-MTHF.

CAROTENOIDS

A good multivitamin also contains important carotenoids to support the body's antioxidant processes. Lutein and zeaxanthin are well regarded for their roles in macula and skin health.

Natural lycopene, the red pigment found in tomatoes, can support cardiovascular and prostate health.

Astaxanthin has been studied for its supportive roles in skin health, exercise recovery, eye health, and free radical scavenging. Resveratrol has received an increasing amount of attention for its possible roles in supporting normal aging and optimal cardiovascular function.

Additionally, a proprietary fruit and vegetable blend, containing blueberry, strawberry, pomegranate, and elderberry extracts as well as organic spinach, should be included to provide additional protection against free radical damage. ■

A significant part of the world's population has a genetic mutation that makes them unable to convert the folic acid often found in supplements and fortified foods into 5-MTHF. 5-MTHF is a unique, well absorbed and water soluble form of folate with a proven safety and absorption profile.



KEEP YOUR PATIENTS HEART HEALTHY WITH VITAMIN D

By Christina DeBusk

According to recent research, promoting the value of vitamin D is also of great importance, especially when it comes to their cardiac health.

In April 2016, *Medical News Today* shared research results provided by the Intermountain Medical Center Heart Institute regarding a study involving 4,200 people between the ages of 52 and 76. The goal of the center was to determine what effect vitamin D levels had on each person's cardiac health.

After comparing levels with cardiac incidences, they reported that "individuals with low levels of both total vitamin D and bioavailable vitamin D were at greatest risk for heart attack, stroke, heart failure and even cardiovascular death, compared with people whose levels of these vitamins were high."

In other words, the lower a person's vitamin D, the more he or she risked issues relating to poor cardiac health.

This echoes results found by a similar study, again performed by Intermountain Medical Center Heart Institute, which was released in late 2015. This one involved the study of 230,000 patients from the center whom they followed over the course of three years.

Upon its conclusion, the findings revealed that individuals with vitamin D levels below 15 ng/ml had higher rates of "cardiac events, including death, coronary artery disease, heart attacks, stroke, and incidents of heart or kidney failure."

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INCREASING VITAMIN D INTAKE

Based on these types of results, encouraging patients to raise their levels of this key vitamin can help them enhance and protect their cardiac health. And there are several ways they can do it.

One option is simply to take a vitamin D supplement. Should your patient choose this option, Mayo Clinic indicates that the "recommended daily allowance (RDA) is 600 IU for those 1-70 years of age and pregnant or breastfeeding women, and 800 IU for those over 71 years of age." However, they should always consult with their physician before taking this or any vitamin to ensure that it won't counteract any of their other medications or adversely affect any known health conditions.

Because it is a fat-soluble nutrient, vitamin D can be limited in its usefulness by poor absorption by the body. Studies show that the patented VESIsorb delivery platform, which is a naturally self-assembling colloidal droplet system, dramatically improves absorption and bioavailability of fat soluble nutrients by up to six times.

Another alternative that is beneficial to increasing their intake is by eating foods that are rich in vitamin D. Some of the best options, according to the National Institutes of Health, are cod liver oil, swordfish, salmon, tuna, orange juice, and Vitamin-D fortified milk. Other foods that aren't quite as high, but still contain a decent amount of vitamin D are yogurt, margarine, sardines, liver, eggs, ready-to-eat cereal, and Swiss cheese.

It also helps to spend more time in the direct sunlight as this helps the cells make their own vitamin D. Because too much time in the sun can raise a person's risk of skin cancer, one article published in the American Journal of Clinical Nutrition suggests engaging in "sensible sun exposure," which they define as 5-10 minutes two to three times per week.

Increasing your patients' knowledge about the cardiac benefits of vitamin D can help them realize the importance of taking this nutrient when it comes to their heart health. By also providing information about alternative ways to get it, you're giving them the tools they need to look after their own health, both now and in the long term. ■

An alternative that is beneficial to increasing patient's intake is by eating foods that are rich in vitamin D. Some of the best options, according to the National Institutes of Health, are cod liver oil, swordfish, salmon, tuna, orange juice, and Vitamin-D fortified milk.



SHOULD YOU RECOMMEND RED YEAST RICE SUPPLEMENTS?

By Abby Kass

Red yeast rice is an ancient Chinese dietary food and medicine that has been used for centuries. It is made but using various strains of monascus purpureus, which is a strain of yeast, to culture rice. Red yeast rice can be found in Chinese cuisine such as peking duck, but it is also sold as a dietary supplement.

WHAT ARE THE BENEFITS?

In the past, red yeast rice has been used to lower cholesterol. A substance called monacolin K can be found in some forms of red yeast rice. This substance is identical to an ingredient in lovastatin, which lowers cholesterol by reducing the production of cholesterol in the liver.

Recently, red yeast rice has grown in popularity. In both 2008 and 2009, more than $20 million worth of red yeast rice supplements were sold. More people turned to red yeast rice as a form of alternative medication, especially for patients with high blood pressure that either don't believe in statins or cannot complete statin therapy.

PROCEED WITH CAUTION

Even though it is believed the red yeast rice can help lower cholesterol, patients should use it with caution. There are different types of red yeast rice depending on yeast strains used and the culture conditions used to manufacture the product. While some red yeast rice does contain monacolin, other strains only contain a small amount of it or none at all. Reporting the amount of monacolin in the supplement is also not required, and it is generally not published on labels.

On August 9, 2007, the FDA released a statement warning consumers not to buy or eat three red yeast rice products as the products may have contained an unauthorized drug that could be harmful to patients' health. The three products specifically mentioned had a drug that could cause severe muscle problems leading to kidney impairment. [1] Other rare side effects of red yeast rice include headache, gas, heartburn, dizziness, stomachache or muscle aches, and weakness. See a doctor if you experience any of these side effects.

Because it is a fat-soluble nutrient, red yeast rice can be limited in its usefulness by poor absorption by the body. Studies

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show that the patented VESIsorb delivery platform, which is a naturally self-assembling colloidal droplet system, dramatically improves absorption and bioavailability of fat soluble nutrients by up to six times.

RESEARCH RESULTS

There have been a number of studies done on the effectiveness of red yeast rice but there have also been studies on the ingredients and regulation of the product. While many of the studies have shown positive results when it comes to using red yeast rice to lower cholesterol, the lack of regulation by the FDA raises safety concern.

A 2009 study by University of Pennsylvania School of Medicine researchers, tested the effectiveness of red yeast rice on statin-intolerant patients. In a randomized, controlled trial of 62 patients, the researchers found that red yeast rice decreased cholesterol levels without increasing pain levels. They concluded that red yeast rice was a good treatment option for dyslipidemic patients.[2]

In 2010, the American Journal of Cardiology studied the tolerability of red yeast rice verses pravastatin in patients with statin intolerance. After testing 43 adults with dyslipidemia, the researchers found that the cholesterol levels of the red yeast group decreased by 30 percent while the pravastatin group only decreased by 27 percent, showing that red yeast rice was affective in this case. [3]

Also in 2010, a study by JAMA Internal Medicine compared 12 commercial red yeast rice formulas and tested each to see the amount of monacolin present. The researchers found that all red yeast rice products had different monacolin content. [4]

In April 2016, the Journal of Clinical Pharmacy and Therapeutics completed a systematic review of red yeast rice. The researchers compiled results of 10 randomized controlled trials and found that red yeast rice did not show a statistically

In a randomized, controlled trial of 62 patients, the researchers found that red yeast rice decreased cholesterol levels without increasing pain levels.

significance difference in outcomes of people with high blood pressure. They also said that even though a number of small trials showed that red yeast rice was effective, larger trials with increased methodological rigor are necessary to see the full extent on the effectiveness of red yeast rice. [5]

Overall, people have mixed feelings about the benefits of red yeast rice. While it may be helpful in lowering cholesterol, researchers and the FDA warn caution when taking the supplement. People should consult with their doctor before they start using the product. ■

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IF YOU AREN'T TAKING OMEGA-3 SUPPLEMENTS, YOU SHOULD BE

Packed with protein and an abundance of omega-3 fatty acids, fish is an important element to a complete diet. The benefits of eating fish help both those who are healthy and those who have cardiovascular disease.

The American Heart Association (AHA) recommends two servings of fatty fish per week, such as salmon, mackerel, and herring, to name a few.[1] However, while everyone needs the dietary value fish provides, not everyone likes the taste. Although the AHA doesn't consider supplementation commensurate to fish consumption, it may be worth talking to a physician about taking omega-3 nutritional supplements if eating fish isn't realistic for you.[2]

Whether you're enjoying grilled salmon a few nights a week or taking a supplement every morning, consider the benefits of having a healthy amount of omega-3 fatty acids in your diet.

HEALTHY HEART

Heart health may be one of the most well-known benefits of maintaining a diet high in omega-3s. According to the AHA, these fatty acids have been found to help hearts by decreasing the risk of arrhythmias (abnormal heartbeats), decreasing triglyceride levels, slowing the growth rate of atherosclerotic plaque, and lowering blood pressure.[1]

Omega-3s work particularly well for heart health because they may be able to reduce inflammation throughout the body, which, in turn, can reduce the inflammation that can damage blood vessels and lead to heart disease. The Mayo Clinic suggests "eating at least one to two servings a week of fish, particularly fish that's rich in omega-3 fatty acids," as research shows it may reduce the risk of heart disease, particularly sudden cardiac death.[3]

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Because it is a fat-soluble nutrient, omega 3s can be limited in its usefulness by poor absorption by the body. Studies show that the patented VESIsorb delivery platform, which is a naturally self-assembling colloidal droplet system, dramatically improves absorption and bioavailability of fat soluble nutrients by up to six times.

LOWERS BLOOD PRESSURE

Several studies have found that those with hypertension who have high levels of omega-3s in their diets have lower blood pressure. The University of Maryland Medical Center (UMMC) noted one analysis that looked at 17 different clinical studies and "found that taking 3 or more grams of fish oil daily may reduce blood pressure in people with untreated hypertension." The writers noted, however, that these doses were high and required direction from a physician.[4]

HELPS ARTHRITIS

Rheumatoid arthritis (RA) is an autoimmune disease that causes inflammation in the joints. Several groups have studied the effects of fish oil on RA symptoms, specifically morning stiffness and joint pain.[4]

According to UMMC, "An analysis of 17 randomized, controlled clinical trials looked at the pain relieving effects of omega-3 fatty acid supplements in people with RA or joint pain caused by inflammatory bowel disease (IBS) and painful menstruation (dysmenorrhea). The results suggest that omega-3 fatty acids, along with conventional therapies such as NSAIDs, may help relieve joint pain associated with these conditions."[4]

ONGOING RESULTS

Research is ongoing and clinical studies continue to pop up to further investigate the health benefits of omega-3 fatty acids and a diet rich in fish. In addition to the conditions above, UMMC noted several areas in which the effects of omega-3s are currently being studied including high cholesterol, diabetes, depression, ADHD, asthma, cancer, skin disorders, MS and more. [4]

The University of Maryland Medical Center (UMMC) noted one analysis that looked at 17 different clinical studies and "found that taking 3 or more grams of f ish oil daily may reduce blood pressure in people with untreated hypertension."

In many of these cases, studies have found mixed results, and in all of these cases, more research is needed. However, it is clear that adding omega-3s to your routine can be very beneficial to your overall health. Be sure to consult a physician before adding any supplements to your diet. ■

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CURCUMIN IS THE MASTER HEALING INGREDIENT

By Ajay Goel

If you had to recommend just one botanical supplement, you couldn't do better than curcumin from turmeric (Curcuma longa).

Curcumin may be the only natural compound that eases pain, reduces inflammation, stops free radical damage, alleviates depression, and protects cellular processes throughout the body.[1,2]

Although most curcumin extracts can be difficult for the body to absorb, there is a clinically studied extract blended with turmeric oils that over- comes this issue. In fact, it has up to eight times the absorption of standard 95 percent curcumin extracts and longer blood retention time at meaningful levels.[3,4] This makes a huge difference in effectiveness.

Another option is to look for a supplement with VESIsorb to increase the absorption of curcumin. Studies show that the patented VESIsorb delivery platform, which is a naturally self-assembling colloidal droplet system, dramatically improves absorption and bioavailability of fat soluble nutrients by up to six times.

CURCUMIN HEALTH BENEFITS

One study followed 45 individuals with rheumatoid arthritis, randomized to three groups. Group one received 50 mg of diclofenac sodium twice daily, group two received 500 mg high- absorption curcumin twice daily, and group three received both diclofenac sodium and curcumin. Curcumin was more effective than diclofenac sodium at reducing joint pain and swelling.

Combining it with the drug was no more effective than using the botanical alone, and taking the drug alone was less effective.[5]

Curcumin also stops the damage of inflammation in the brain. In fact, a clinical study in Australia is using high-absorption curcumin to examine its potential for patients with mild to moderate

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dementia. Past research has shown that in experimental models of Alzheimer's disease, curcumin reduced beta-amyloid levels and shrank the size of accumulated plaques by over 30 percent.[6,7]

Also, curcumin promotes neuro- genesis and can fight depression[8-10] A clinical study published in the journal Phytotherapy Research focused on individuals with major depressive disorder (MDD). This randomized, controlled clinical trial compared the efficacy and safety of high-absorption curcumin blended with turmeric essential oils versus the prescription antidepressant fluoxetine (alone or in combination with curcumin) to deter- mine whether this extract could be a viable therapeutic treatment for patients with MDD.[11]

The highest level of response, as measured by the Hamilton Rating Scale for Depression (HAM-D), was in the group using the combination of fluoxetine and high-absorption curcumin at nearly 80 percent. Interestingly, the single-therapy groups scored almost exactly the same, with fluoxetine at about 65 percent and curcumin at 62.5 percent—so close as to be statistically insignificant.

Two important conclusions from this study are that curcumin worked as well as the prescription drug fluoxetine in terms of measurable changes in the HAM-D score from baseline to six weeks of treatment; and curcumin may be used as an effective and safe treatment for patients with MDD, with no psychological side effects.[11]

Curcumin worked as well as the prescription drug fluoxetine in terms of measurable changes in the HAM-D score from baseline to six weeks of treatment; and curcumin may be used as an effective and safe treatment for patients with MDD, with no psychological side effects.



CANCER FIGHTER

For fighting cancer, there are few alternatives that work along as many pathways as curcumin. For instance, curcumin influences epigenetic activity—that is, the way genes are influenced by diet and environment. So while a person might have certain genetic tendencies toward specific health outcomes, these are not necessarily forgone conclusions. What a person does in life affects genetic expression more than was previously supposed.

With that in mind, researchers studied the effects of curcumin on "turning off" colon cancer cells. One study, published in the journal PLoS One, examined the ways that colon cancer cells can be influenced—and turned off—by curcumin. When those cells flourish, it is partly due to a process called "methylation." Essentially, methylation silences certain genes that are designed to suppress tumors, and circumvents the body's own defense mechanisms.

But curcumin changes that. It is able to

continued>>

"reawaken" the sleeping genes that power the body's own tumor suppression activity that keeps cancerous tumors from growing and spreading.[12,13]

Although colon cancer cells were used for this study, because of the multiple pathways that curcumin influences, it is likely that the compound can suppress other cancers as well.

Curcumin has also been shown to increase the activity of cancer drugs and to decrease drug resistance in cancer cells (i.e., it helps cancer drugs kill tumors more efficiently). Additionally, it protects normal cells from the toxic effects of chemotherapy drugs and radiation treatments.[14]

Taking curcumin in combination with chemotherapy drugs may mean less of the drugs are required, but the results will be better with reduced side effects. In fact, a recent clinical trial showed that curcumin decreased the severity of adverse effects of radiation therapy on the urinary tract in men with prostate cancer.[15]

Clearly, more research needs to be done but these examples show the astounding potential of curcumin. DCs know that well-being is holistic— inflammation, oxidative damage, and chronic mental stress are interrelated in ways that are just beginning to be quantified.

Curcumin is well tolerated and supports (and sometimes outperforms) conventional medications. As such, it deserves an honored place in in natural medicine to promote vibrant health. ■

Taking curcumin in combination with chemotherapy drugs may mean less of the drugs are required, but the results will be better with reduced side effects.

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HOW COQ10 CAN HELP DEPRESSION

By Tina Beychok

While depression is common in both Western and non-Western societies, anxiety is reported more in the Western world.[1]

Statistics for anxiety disorders in the United States show that not only is anxiety the most common mental illness, affecting an estimated 18 percent of the population, but less than half get treatment.[2,3]

A 1999 article in the *Journal of Clinical Psychiatry* estimated the annual cost of anxiety disorders in the United States at more than $1,500 per person.[4] The greatest expenditure was in nonpsychiatric medical treatment, at 54 percent of total cost. In one example, patients with an anxiety disorder and established cardiac disease were twice as likely to have a heart attack when compared to cardiac patients who did not have an anxiety disorder.[5]

DCs can help patients by offering nutritional supplements to help keep the body healthy and reduce symptoms of anxiety. Coenzyme Q10 (CoQ10) is an excellent example of such a supplement.

WHAT IS COQ10?

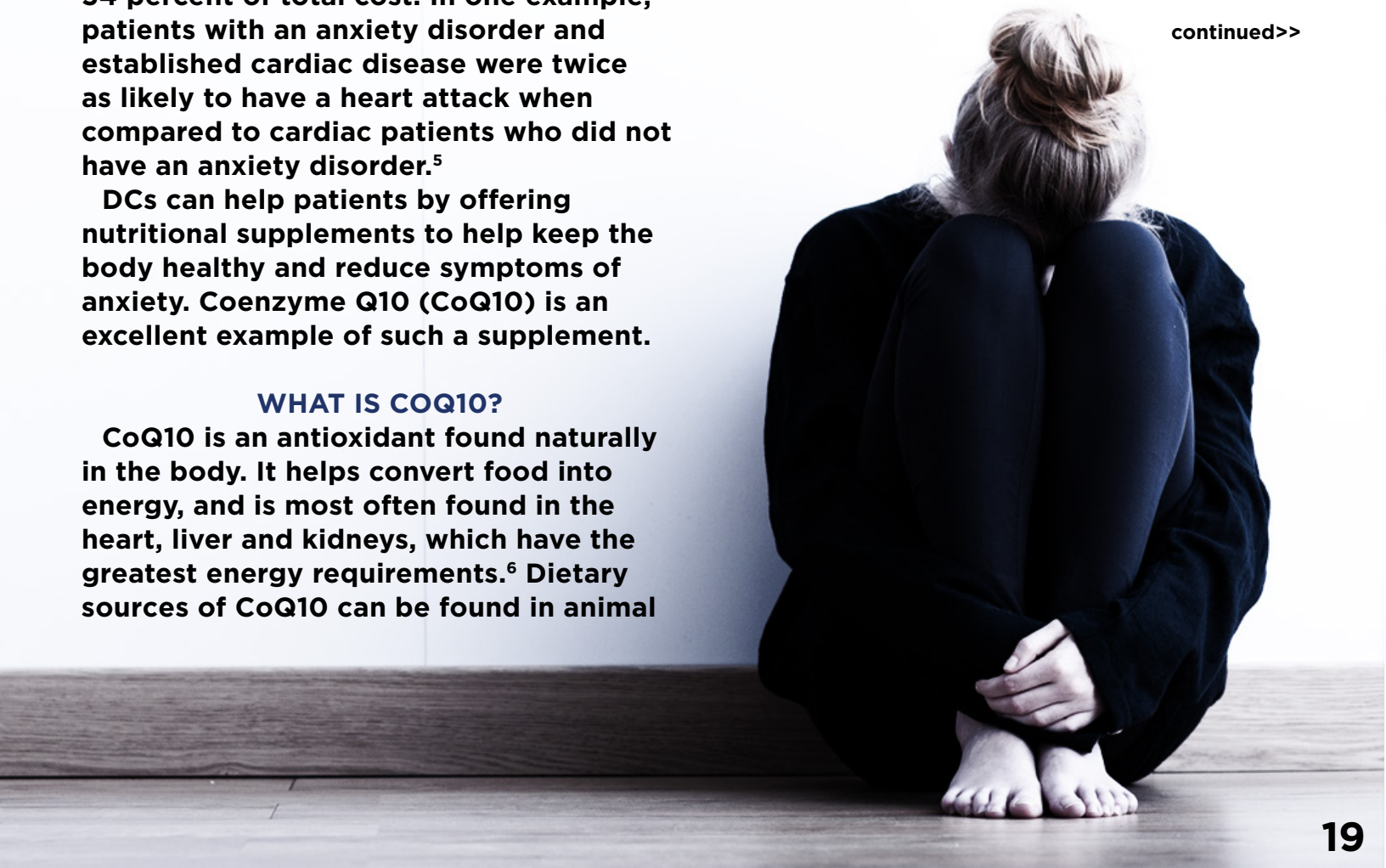
CoQ10 is an antioxidant found naturally in the body. It helps convert food into energy, and is most often found in the heart, liver and kidneys, which have the greatest energy requirements.[6] Dietary sources of CoQ10 can be found in animal heart and liver organs, fish, parsley, avocado, and soybean oil.[6]

However, the average daily intake of CoQ10 is only 3–6 milligrams per day, most of which comes from meat that has been cooked, thereby reducing its bioavailability by about 15 to 30 percent.[6-8]

Because it is a fat-soluble nutrient, CoQ10 can be limited in its usefulness by poor absorption by the body. Studies show that the patented VESIsorb delivery platform, which is a naturally self-assembling colloidal droplet system, dramatically improves absorption and bioavailability of fat soluble nutrients by up to six times.

Hydroxyl-methylglutamyl coenzyme

continued>>



A reductase (HMG CoA reductase) is a rate-limiting enzyme involved in the production of cholesterol. Statin medications function in part by inhibiting the activity of this enzyme and in turn help to lower cholesterol. HMG CoA reductase is also involved in the pathway for the production of CoQ10. As a result, statin medications can also lower the level of CoQ10 in the body. It is for this reason that CoQ10 is often recommended for those individuals taking statin medications.

WHAT DOES THE RESEARCH SAY?

A 2013 meta-analysis published in the *American Journal of Clinical Nutrition* pooled the results from 13 randomized, controlled trials examining the effects of CoQ10 upon heart failure. Pooling results allows researchers to see commonalities across much smaller studies. In this case, CoQ10 appeared to improve the percentage of blood the heart pumps out with each heartbeat.[9]

A 2012 study examined the effect of CoQ10 upon oxidative stress on a group of over 40 patients with coronary artery disease.[10] Patients received either placebo, 60 mg/day, or 150 mg/day of CoQ10 for 12 weeks. At the end of the study, patients taking CoQ10 showed significantly less oxidative stress compared to placebo.

There is some promising preliminary research, particularly in the area of Alzheimer's disease, which may include symptoms of anxiety. Two studies using mice specifically bred to develop Alzheimer's disease found that CoQ10 administration reduced some of the behavioral traits associated with the disease, including fearfulness about exploring new environments. These mice also had an increased survival rate.[11,12] While these studies are far from definitive, they also show promise for reducing anxiety by treating symptoms of Alzheimer's disease.

The evidence shows that CoQ10 has the potential to reduce the effects of heart disease and symptoms of Alzheimer's disease, thereby reducing anxiety in both cases. Savvy DCs who understand this secondary connection can help patients reduce their risks for heart disease, symptoms of Alzheimer's, and anxiety. ■

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