

For the Health Conscious Individual VOLUME 22 · No. 2 · FEBRUARY 2019

Alternatives

Health Problems Probiotics Can Resolve Right Now

t's been interesting, to say the least, devoting my adult life to investigating natural ways to preserve and restore health. The sheer number of health food fads and trends that have sprung up during my time has been astounding. Health fads aren't a new phenomenon; they've been around for ages. What is new, however, is just how quickly they



in William

can start and spread, thanks in large part to the internet and social media.

Just trying to recall all the fad diets over the decades can be enough

to make your head spin. Maybe you're old enough to remember the grapefruit, cookie, and Scarsdale diets from the 1970s or the cabbage soup, Beverly Hills, and liquid diets of the 1980s. The 1990s introduced the low-fat, Ornish, Zone, and blood type diets. These were followed by the Subway, Atkins, South Beach, lemonade, Master Cleanser, Special K, and baby food diets in the 2000s.

And the list goes on and on. Do you remember placenta pills, oxygen shots, diamond-containing face creams, the Shake Weight, the Ab Roller, and toning shoes?

Fads are often based on a tiny sliver of questionable research that has been interpolated into some miracle discovery. Once the fad starts, it draws in charlatans like a shark feeding frenzy. Unfortunately, the same type of charlatans like to capitalize on legitimate discoveries in the field of natural health, where the oversight is less stringent than it is in the prescription drug world. That's what's happening right now with probiotics.

Probiotic research is still in its infancy. The study of the microbes that inhabit the human intestinal tract (the microbiome) is definitely one of the most exciting, yet confusing, areas of research. The complex interactions of the various microbes-and which ones are responsible for the effects on our health—is still somewhat of a mystery. As I've explained before, the microbiome constantly interacts with the brain, immune system, and the rest of the body. We know that some diseases are directly associated with certain microbial compositions in the gut. But due to its great diversity, researchers haven't been able to fully analyze the composition and interactions between the

thousands of different species of bacteria within the microbiome.

Right now (and possibly for the next couple of decades), scientists are trying to figure out exactly what constitutes a healthy gut microbiome. Not only do microbiomes vary among ethnicities, there are differences from individual to individual. And the idea that one particular strain of bacteria can cure or prevent a disease has been shown *not* to be the case. The pharmaceutical companies would love for this to be true. Hundreds or thousands of bacterial strains could be patented and sold individually to treat specific conditions, just like drugs. However, the research has shown that the microbiome's influence can't be solely attributed to the presence or absence of individual species of bacteria, but instead to the interactions between the different forms of bacteria. Variety is truly the spice of life in this situation, and supplying the proper environment to allow the body to innately balance this garden of diverse microbes appears to be the key.

Inflammatory Bowel Disease

.

Despite all of these unanswered questions, we don't need to wait for the final chapter to be

Alternatives

written before taking advantage of what we've learned so far. A prime example of this involves inflammatory bowel disease (IBD).

IBD is an umbrella term that encompasses ulcerative colitis and Crohn's disease. According to the CDC, an estimated 1.3 percent of US adults (3 million people) reported being diagnosed with IBD in 2015. This was a large increase compared to 1999, with 0.9 percent of the population (2 million adults) reporting IBD.

Roughly 1 million of the people diagnosed with IBD are men. And importantly, **new research shows that men with IBD have four to five times higher risk of being diagnosed with prostate cancer.**

After skin cancer, prostate is the most common cancer in American men. It is the second leading cause of cancer death in men after lung cancer. One in nine men will be diagnosed in his lifetime.

Has your urologist or doctor, who has likely prescribed alpha blockers, finasteride (Proscar, Propecia), dutasteride (Avodart), or some other medication for benign prostatic hypertrophy (BPH), told you this? Has your doctor even questioned you to find out if you suffer from IBD, and if so, told you that a fecal transplant could cure it and dramatically reduce your risk of prostate cancer? I hope so, but I doubt it.

Most doctors relate an elevated prostate-specific antigen (PSA) to inflamation in the prostate or a urinary tract infection. The IBD connection is largely being overlooked.

Researchers followed for 18 years 1,033 men with IBD and a control group of 9,306 men who did not have the disease. They found that the men with IBD had higher than average PSA values, and also were four to five times more likely to develop prostate cancer. (*https://doi.org/10.1016/j. eururo.2018.11.039*)

We don't have to wait for decades of additional research to confirm that a healthy colon and a health-promoting microbiome can help prevent prostate cancer. If you're a male, this is just another reason you should be using probiotic supplements regularly, along with eating a variety of fiberrich and fermented foods.

Bipolar Disorder

About 3 million people in the US are diagnosed every year with bipolar disorder—a mental condition characterized by dramatic shifts in mood ranging from depression to mania (great excitement, delusions, and overactivity).

I've written before about the gut-brain axis. Probiotics in the gut influence brain activity through the vagus (or tenth cranial) nerve. In a 24-week study, researchers familiar with the gut-brain axis studied 66 patients with bipolar disorder who were admitted to the hospital with mania during that timeframe. About half were given a probiotic along with their prescribed psychiatric medication, and the other half a placebo with their medication.

More than half (51 percent) of those in the placebo group had at least one rehospitalization during the study period, compared to only about a quarter (24 percent) of the individuals receiving the probiotics. Additionally, those on the placebo were hospitalized for more days than those in the probiotic group (an average of 8.3 days compared to 2.8 days). Overall, the individuals in the placebo group were hospitalized for a total of 275 days compared to 93 for those in the probiotic group. (Bipolar Disord 2018 Nov;20(7):614–21)

In the above study, two specific probiotics were utilized— *Lactobacillus rhamnosus* strain GG and *Bifidobacterium animalis lactis* strain Bb12. *Lactobacillus*

Alternatives. Author: Dr. David Williams; Editor: Larissa Long

ISSN# 0893-5025. Published monthly for \$69.99/yr. by Mountain Home Publishing at 6710-A Rockledge Dr. Ste. 500, Bethesda, MD 20817. Editorial Office: 6710-A Rockledge Dr. Ste. 500, Bethesda, MD 20817. Periodicals postage paid at Bethesda, MD, and at additional mailing offices. Postmaster: Send address changes to *Alternatives*, PO Box 11, Montoursville, PA 17754. © Healthy Directions, LLC. All rights reserved. Photocopying or reproduction is strictly prohibited without permission from the publisher.

The approaches described in this newsletter are not offered as cures, prescriptions, diagnoses, or a means of diagnoses to different conditions. The author and publisher assume no responsibility in the correct or incorrect use of this information, and no attempt should be made to use any of this information as a form of treatment without the approval and guidance of your doctor.

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.

rhamnosus strain GG is readily available but the *Bifidobacterium animalis lactis* strain Bb12 is a little harder to find. You can buy it from Return2Health (return2health.net). Marketed under the Radiance brand, the product is called Probiotics Daily Balance.

The same researchers are now testing to see if the probiotics will be beneficial to individuals hospitalized for bipolar depression. I'll be surprised if the results aren't positive as well.

Bipolar disorder is a leading cause of disability in young people and leads to functional/cognitive impairment and increased death from suicide and cardiovascular disease. The positive changes the study patients experienced from simply adding a probiotic is nothing short of amazing. And the savings in hospital and medical costs must be enormous.

Depression & Anxiety

We already know that probiotics can help with depression, and there's no reason they shouldn't be routinely included as an adjunct to a patient's first line of treatment.

We tend to overlook the toll that depression and anxiety can have on our health, but research has shown that both are accurate predictors for problems like cardiovascular disease, stroke, high blood pressure, headaches, stomach issues, back pain, and arthritis even more so than known risk factors like smoking and obesity.

Researchers at UC San Francisco recently studied the health data of 15,418 retirees (average age 68). Of those, 15

percent (2,225) suffered from high levels of anxiety and depression, 31 percent (4,737) were obese, and 14 percent (2,125) were currently smoking. Those individuals with the highest levels of anxiety and depression were found to have 65 percent increased odds for a heart condition, 64 percent higher risk of stroke, 50 percent increased risk for high blood pressure, 87 percent higher risk of arthritis, and 161 percent increased risk for headaches, compared to those who were obese and/or smokers but didn't have anxiety or depression. (One positive note was that anxiety and depression were not strong predictors of cancer.)

This should be headline news and a subject every doctor should be asking about during physical exams and health surveys.

I have no doubt the psychiatric and pharmaceutical communities will use this data to promote the use of antidepressants and anxiety medications. But the last thing we need is more of the population needlessly taking mild-altering drugs. Fortunately, there are natural solutions—one being the use of probiotics to balance the body's microbiome.

In addition, very little attention seems to be given to the key role the vagus nerve plays in depression and anxiety. With a better understanding of how the vagus nerve works, it's easier to see how you can use various natural techniques to effectively deal with most cases of depression.

The vagus nerve is known as the "wandering nerve" because it has numerous branches starting in the cerebellum and brainstem that wander to the lowest parts of the intestinal tract while touching on the heart and almost every other organ along the way. In Latin, vagus actually means "wandering." From the same Latin root, we also get the words vagrant, vague, and vagabond.

The vagus nerve is a conduit that is constantly transferring information back and forth between the brain and other organs. However, 80–90 percent of the nerve fibers within the vagus nerve are dedicated to informing the brain about the condition of your viscera. It is through these nerves that go from your gut to your brain that you actually experience gut reactions and gut instincts. Research has proven these signals are linked to modulating not only mood, but also fear, depression, and anxiety.

Nerve transmission goes in the other direction as well-from the brain to the gut. "Downstream" messages that originate in your conscious mind then travel through the vagus nerve can signal the organs to either relax and remain calm, or prepare the body for threatening situations through the fight-or-flight mechanism. This has been demonstrated through meditation. In addition, simple techniques like taking a few deep breaths and positive self-talk engages the vagus nerve and can lead to relaxation and calm when faced with a threatening situation.

Weight Problems

Some of the latest research has also revealed that the microbes in your intestines use this same neurological feedback system to their advantage. Through

Alternatives

the release of specific chemical byproducts, microbes send messages to the brain that trigger cravings for particular foods that support their growth and survival.

For example, the group of bacteria known as *Firmicutes* feed on sugar and other simple carbohydrates, and a high population of these bacteria can elicit cravings for sugar, sweets, and carbohydrates. As you well know, consuming sugar and refined carbohydrates leads to dramatic swings in blood sugar, with the lows resulting in a depressive mood. Along with mood swings come insulin resistance, type 2 diabetes, and high triglyceride levels, which are converted to fat that leads to obesity.

As a result, an overabundance of *Firmicutes* is associated with inflammation and weight gain. *Firmicutes* are happiest when we eat a lot, particularly sugars. Studies have shown that starving mice for a single day will reduce the population of *Firmicutes*, while transplanting *Firmicutes* from obese mice into lean mice makes the thin mice fat.

On the flip side, when the group of bacteria known as *Bacteriodetes* proliferate in the gut, levels of *Firmicutes* decline. *Bacteriodetes* prefer a diet low in simple carbohydrates and high in complex carbohydrates like fiber, pulp, seeds, and resistant starches. Levels of *Bacteriodetes* start to increase when obese individuals go on a low-carb, high-protein, high-fiber diet.

In closing, millions of men in this country have prostate issues and grapple with the risk of eventually developing prostate cancer. If they have IBD, that risk increases significantly. Millions more suffer from anxiety and depression. It's truly a shame more people aren't informed about the role that probiotics can play in reducing risk of all these issues. Make it your goal to be one step ahead of the mainstream by including a highquality probiotic and a variety of fermented foods in your diet.

NEWS TO USE from around the world

One Workout Can Boost Metabolism for Days

DALLAS, TEXAS—For years, we've been told exercise has a residual effect and your body continues to burn calories for several hours afterward. But researchers at UT Southwestern Medical Center have discovered the effects are more profound.

It appears that certain neurons in the brain that influence metabolism are active for up to two days following a single workout. In the words of one of the researchers, "It doesn't take much exercise... Based on our results, we would predict that getting out and exercising even once in a semi-intensive manner can reap benefits that can last for days, in particular with respect to metabolism."

The neurons activated are associated with reducing appetite, lowering blood glucose levels, and higher energy burning. A single workout consisting of three 20-minute treadmill runs caused a decrease in appetite that lasted six hours.

The pearl to gather from this study is that sitting around over the weekend or for a couple of days shouldn't make you feel guilty or wreck your long-term exercise regimen, if it's preceded by a decent amount of exercise a day or two prior.

This study also provides further evidence of how even minimal amounts of exercise can help boost metabolism and improve glucose metabolism. It's great news for people with diabetes or prediabetes, which can typically lead to diabetes within five years. (*Mol Metab 2018;18:107–19*)

Clay & Weight Loss

ADELAIDE, AUSTRALIA— Researchers from down under are working on a simple way to impede fat digestion and develop a product to aid in weight loss.

They had been testing different clay materials in hopes of finding a better way to improve the delivery of antipsychotic drugs. In testing the effects of a natural clay material called montmorillonite, they discovered its ability to efficiently soak up fat droplets in the gut.

Currently, the leading weight loss drug is orlistat (marketed in

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

this country as the prescription drug Xenical and over the counter as Alli).

Orlistat is an enzyme inhibitor that reportedly blocks about 30 percent of dietary fat digestion and absorption. It is somewhat successful but has a long list of side effects including stomachache, bloating, flatulence, and diarrhea. For these reasons, many people have difficulty taking it.

When the researchers tested montmorillonite clay against orlistat in a two-week trial, the clay outperformed the drug.

Rather than market the montmorillonite as a fat blocker, they are instead working to combine the clay with the drug, hoping to see a more profound combined effect and a reduction in side effects. (*Pharm Res 2018 Dec 5;36(1):21*)

Montmorillonite clay has been readily available in this country for decades. I'm always surprised it isn't used more. Several companies sell the clay, but I've always used Pascalite, which comes from a family-owned mine in Wyoming (pascalite.com or 307-347-3872). I knew the owner and one of the original operators of the mine, Ray Pendergraft, over 30 years ago and kept in touch until he passed away in 1998 at the age of 92. The mine and production is now run by Ray's granddaughter, Jeanne, and her husband.

Montmorillonite clay has primarily been used externally as a paste or poultice for cuts, burns, bug bites, rashes, eczema, or acne. One area I feel it has been severely underutilized is in the treatment of antibiotic-resistant forms of *Staphylococcus aureus*

and *Escherichia coli*. While antibiotics haven't been able to cure these bacterial infections, clay has.

It can also be used internally as a detoxifying agent, so it really comes as no surprise that the pharmaceutical industry is actively researching this area. In addition, clay has been used for thousands of years as a cure for diarrhea. It doesn't matter if the diarrhea is a result of food poisoning, food allergies, viral infections, spastic colitis, or mucous colitis—but it has been particularly effective in viralinduced diarrhea. Daily oral dosages typically used to treat diarrhea are:

- * Infants: 1/4 to 1/2 teaspoon
- * Children and small adults: 1 teaspoon
- * Adults of medium build: 1 heaping teaspoon
- * Adults of large build: 1 tablespoon
- * Adults of extra-large build: 1 heaping tablespoon

The study was performed on mice and the exact dosages weren't given, so I'm not sure what the recommended dose would be for weight loss in humans. If/when that information does become available, I'll be sure to pass it along. However, any substance that works as a fat blocker is cause for concern.

In the study, the clay was used to absorb dietary fat droplets. While this could decrease the amount of fat calories absorbed, it would also be interfering with the absorption of beneficial oils and fat-soluble vitamins (such as A, D, E, and K). Many people are already deficient in various fatty acids and vitamins. Short-term use for issues like diarrhea or detox I don't see as a big issue, but I certainly would be taking the clay on an empty stomach and not with meals so that it doesn't interfere with vitamin absorption.

Butyrate & Brain

URBANA, ILLINOIS—As mammals age, specific immune cells in the brain known as microglia become chronically inflamed. When inflamed, they produce chemical byproducts that have been shown to impair cognitive and motor function. This is one of the primary reasons our memory begins to fade and our other brain functions begin to decline.

Researchers have been working for decades trying to find a drug that could prevent this age-related decline in brain function. Past researchers have discovered that the drug form of butyrate showed some promise in this area. However, it had side effects, is difficult to absorb, and is often hard to take because of the horrendous odor.

Researchers at the College of Agriculture, Consumer and Environmental Sciences ran tests to see if the same positive results in the brain could be obtained naturally simply by increasing dietary fiber. (As you may recall, through fermentation, microbes in the gut convert fiber into shortchain fatty acids, one of which is butyrate.)

After testing high- and low-fiber diets in mice, they discovered that a high-fiber diet elevated butyrate and other short-chain fatty acids in the blood of both young and old mice. However,

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

only the older mice experienced increased inflammation on the low-fiber diet. Young animals didn't have the inflammatory response on the same diet. As one of the researchers pointed out, this "clearly highlights the vulnerability of being old."

But on a high-fiber diet, the inflammation was reduced dramatically in the old animals. (*Front Immunol 2018 Aug* 14;9:1832)

There's an important lesson here for those of us who are older. If we want to retain our cognitive and motor brain functions, we need to increase our butyrate levels. That can be accomplished by eating a highfiber diet. However, on average, older adults eat 40 percent less fiber than is recommended.

It is now widely accepted that microglial-mediated inflammation contributes to the progression of Alzheimer's disease. The lack of dietary fiber (reduced butyrate levels) in our older population could be one of the primary reasons for the explosion we've been seeing in Alzheimer's disease over the last few decades.

Keep in mind there are few ways you can increase butyrate levels:

• Consume butyrate-containing foods. Butyrate or butyric acid is a component naturally found in milk fat. As such, it is in both cheese and butter, with butter being one of the best food sources at 3–4 percent butyric acid. Butyrate is found in milk from most mammals that eat grass (except sows). These are referred to as ruminate animals: those that eat grass, have hoofs, chew cuds, and have specialized stomachs and bacteria very efficient at making butyrate. Although we don't have hoofs, there is some butyrate in human milk. The percentage of butyrate in human breast milk is 0.4 percent and has been shown to protect against food allergies. Percentages of butyrate in the milk of other mammals are 3.48 percent for cows, 1.27 percent for goats, 4.06 percent for sheep, and 3.9 percent for buffalo. No other common food fat, besides milk, naturally contains butyrate in any significant amount.

- Eat butyrate-producing foods. These are the various high-fiber foods and resistant starches that I've talked about many times in the past. There are many different kinds of fiber and resistant starches. Those that are fermentable, however, produce the most butyrate. The "fermentability" of fiber and starches can vary considerably. For example, wheat bran has 50 percent fermentability, whereas resistant starch and pectins have 100 percent fermentability. For this reason, it is best to consume a wide variety of highfiber and starch-resistant foods. That way you'll get the best of both worlds.
- Take butyrate supplements. Personally, I take enough supplements already and if there's a way to avoid adding another one, that's what I try to do. In cases of serious bowel problems, I think a butyrate supplement can be very helpful for the short term. It can quickly help sooth intestinal inflammation and get things started on the right path. However, the permanent solution entails changing the

microbial environment so that the gut can produce adequate amounts of butyrate on its own. There are several butyrate supplements on the market, but one of my favorites is called ButyrAid by Nutricology. It's an enteric-coated tablet and can be found both online and in many health food stores.

• Take a probiotic. Make sure the product you use contains bacteria known to produce butyrate. In addition, consume fermented foods like sauerkraut and other fermented vegetables and live yogurt regularly.

Determine Your Heart Capacity

MILAN, ITALY—In a recent study, 12,615 participants with known or suspected coronary artery disease underwent treadmill exercise echocardiography. While walking or running on a treadmill with varying intensity, their health was evaluated by echocardiography. (The researchers could see images of the heart at work on a computer screen.)

The health of the participants was then monitored for an average of 4.7 years. During that time, there were 1,253 cardiovascular deaths, 670 cancer deaths, and 650 deaths from other causes.

The death rate from cardiovascular disease was three times higher in participants with poor functional heart capacity compared to those with good functional heart capacity. Noncardiovascular and non-cancer deaths were also nearly threefold higher in those with poor compared to good functional

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

capacity. (As you might suspect, the cardiac imaging helped predict cardiovascular deaths, but not the deaths caused by cancer.)

What I found most interesting about this study wasn't that exercise was shown to increase longevity. It's common knowledge that physical activity reduces body weight, blood pressure, blood lipids, and inflammation and improves the body's immune response to tumors. What was interesting was the researchers crunched the data and determined that what was classified as "good functional heart capacity" in this study was equivalent to climbing three flights of stairs *very fast*, or four flights *fast*, without stopping.

If you have access to three or four flights of stairs, you have a

quick way to roughly determine your functional heart capacity.

You don't need to spend the time and money on the treadmill test. If you can't complete the task, it means you don't have good functional heart capacity and you need more exercise. Achieving that capacity is a simple way to help lower your risk of dying prematurely and increase your longevity.

News on the Vitamin D Front

For the last 10 years or so, vitamin D has been in the spotlight or "under the gun," depending on who you talk to. There's one group that says that practically the entire population is vitamin D deficient and in dire need of supplementation. The opposing view claims that there's no need to supplement as it's not only a waste of money, but also possibly dangerous.

As a result of the ongoing controversy, the number of blood tests for vitamin D have skyrocketed. Tests among Medicare beneficiaries increased 83-fold between 2000 and 2010. And among those with commercial insurance, testing rates climbed 2.5 fold from 2009 to 2014. (*Arch Pathol Lab Med 2014 Feb*;138(2):189–203)

There's even debate about what normal blood levels should be. The standard acceptable lower limit has been 20 nanograms/milliliter, but many labs now say that a result below 30 nanograms indicates a deficiency. Personally, I do believe we have an epidemic of vitamin D deficiencies. But supplementing with 2,000–5,000 IU of vitamin D daily is adequate to meet the needs of almost everyone.

Sunlight acting on a cholesterol derivative in the skin naturally produces vitamin D. For thousands of years, deficiency wasn't a problem because we used to live in rural settings and work outdoors. But our country has changed over the decades. We are living much more urban lifestyles these days. As a result, fewer people are exposed to outdoor work and sunlight.

And then there's the evergrowing fear of the sun, which has brought about the universal use of sunscreen. Sunscreen blocks the UVB rays that are responsible for the conversion of vitamin D.

Research has shown that adequate levels of vitamin D can help prevent osteoporosis, high blood pressure, type 1 diabetes in children, depression, and cancers of the breast, prostate, colon, bone, skin (it's a form of treatment for psoriasis), and others.

Those who oppose supplementation say that the possibility of excess vitamin D can cause an elevation of serum calcium. At the levels I've recommended, though, that shouldn't be an issue.

Also, there's no way to overdose if you get your vitamin D from sun exposure. If you stay too long in the sun, you'll burn, which will keep you inside for a while, or you'll tan, and as you darken, less sunlight will reach the deeper layer of the skin where vitamin D is produced. (For the record, you know you've gotten the correct amount of sun when your skin turns slightly pink without sunscreen. Once it does, don't sunbathe again until the pink subsides.)

I'm mentioning this for two reasons.

One, this is the time of year when it becomes more difficult to get adequate amounts of sun exposure. If that's the case for you,

Alternatives

or if you live in northern states (north of 35 degrees latitude) where the UVB rays are practically nonexistent in the winter months, then at least make sure you're supplementing during that period.

Two, there's new research indicating that magnesium appears to be the key to optimizing vitamin D status in the body. Sufficient amounts of magnesium can raise vitamin D in those who are deficient, and lower it in individuals with high levels. This study found that a magnesium deficiency actually shuts down the vitamin D synthesis and metabolism pathway. (*Am J Clin Nutr 2018 Dec;108(6):1249–58*)

The magnesium connection also helps explain why different vitamin D studies produce such varying results. Magnesium deficiency is, and has been, an unrecognized problem for a long time. It's estimated that 80 percent of Americans don't consume enough magnesium daily to even meet the minimum daily recommended amount (400–420 mg for men and 310–320 mg for women).

In part, this is due to the fact that most people abstain from some of the richest food sources of magnesium, such as dark leafy greens, beans, fatty fish like salmon, avocados, and nuts. For some reason, people tend to shy away from nuts. They are afraid the high fat content in nuts will make them fat. All the research, though, shows that's not the case. Enjoy them. They are a tasty way of increasing magnesium levels.

The magnesium/vitamin D situation is just another good reason to take a daily multivitamin/ mineral complex. It's not going to make up for a total lack of sunshine or a poor diet, but it forms a good foundation and certainly can help cover the bases.

One other point needs to made about vitamin D, this time in relation to pregnant women. A developing fetus is completely reliant on the mother's vitamin D stores. Much like a mother's deficiency in folic acid can result in spina bifida, a vitamin D deficiency has been linked to an increased risk of the baby developing schizophrenia later in life. A joint study from Australia and Denmark just found that newborns with a vitamin D deficiency have a 44 percent increased risk of being diagnosed with schizophrenia as adults compared to those with normal vitamin D levels.

The study was triggered by the fact that prior research identified a higher risk of schizophrenia existed in children born in the winter or spring and living in higher latitude countries like Denmark. It was interesting that even though Australia has far more sunlight than Denmark, vitamin D deficiencies among pregnant women existed there as well—likely a result of their "sun safe" campaign that emphasizes the use of sunscreen and minimal sun exposure.

Eventually, we need to realize that, like many things in life and health, moderation is the key to getting a healthy dose of sun.

Until next month,

Dr. David William

This Month Online

Visit my website at **drwilliams. com**, where



you'll find information and recommendations for many of your top health conditions, including:

- Strengthening Immunity
- Hiatal Hernia, GERD, and other Digestive Concerns
- Cognition and Brain Health
- Joint Health

Stay in touch between newsletter issues by signing up for my weekly Health E-News. Simply visit **drwilliams.com** and submit your email address.

You can also read more at my website, which covers a variety of topics. Here are just a few recent additions:

- Benign Prostatic Hyperplasia Prevention and Treatment Tips
- Natural Sinus Remedies
- Remedies for Chronically Cracked & Chapped Lips

Contact Us Here

- To submit a Mailbox question, suggest an article topic, or make a comment about this month's issue, email feedback@ drdavidwilliams.com.
- For customer service matters such as address changes, subscription renewals, or to order back issues or reports, call 800-527-3044 (Monday through Friday, 9:00 am– 5:00 pm EST) or email custsvc@drdavidwilliams.com.