



ARBOR FARMS MARKET

2103 West Stadium - Boulevard Plaza
Ann Arbor - 734-996-8111 - arborfarms.com

Our June 2018 Newsletter for Healthy Living

So Much to Love About Chocolate

Throughout its history, which dates back at least 4,000 years, chocolate has been a symbol of luxury, wealth and power. During the 14th century, the Aztecs and Maya even used cacao beans as currency. Modern research has also revealed chocolate has significant health benefits — provided you're willing to give up the now-familiar sweetness of modern day milk chocolate. Its cacao content — which is bitter, not sweet — the amount of sugar added, and the processing chocolate undergoes, makes a huge difference in terms of whether it has any health benefits. Raw cacao gets its bitter taste from the polyphenols present, and these plant compounds are also responsible for most of the health benefits associated with dark chocolate. Milk chocolate, on the other hand, has few, if any, redeeming qualities, as it is loaded with sugar, containing very low amounts of flavonol-rich cacao

The cacao bean contains hundreds of naturally occurring compounds with known health benefits, including epicatechin (a flavonoid) and resveratrol, the former of which has both antioxidant and anti-inflammatory properties, and is thought to help shield your nerve cells from damage. Resveratrol, a potent sirtuin activator, is known for its neuroprotective effects and has been linked in many recent studies to work synergistically with NAD to increase longevity. It



has the ability to cross your blood-brain barrier, which allows it to moderate inflammation in your central nervous system (CNS). This is significant because CNS inflammation plays an important role in the development of neurodegenerative diseases. Research also shows resveratrol is an exercise mimetic, producing similar mitochondrial benefits as exercise by stimulating neurotransmit-

major source of flavonoids, this is the first time the effect has been studied in human subjects to determine how it can support cognitive, endocrine and cardiovascular health ... These studies show us that the higher the concentration of cacao, the more positive the impact on cognition, memory, mood, immunity and other beneficial effects."

In the first study, 70 percent

“Cocoa has more phenolics and higher antioxidant capacity than green tea, black tea, or red wine.”

ters, which increase mitochondrial biogenesis. Another compound found in cacao is phenylethylamine, which has been shown to boost mood in a way similar to that of tryptophan, which your body converts to serotonin. Theobromine, meanwhile, has effects similar to that of caffeine, but without the jitteriness. Cacao is also rich in important minerals such as magnesium, which promotes muscle relaxation and is needed for bone health, iron for red blood cell production, and zinc, needed for cell renewal.

Most recently, human trial data from Loma Linda University, presented at the Experimental Biology 2018 annual meeting in San Diego, reveal chocolate helps improve stress levels, inflammation, mood, memory and immune function. The caveat? It has to contain at least 70 percent cacao and be sweetened with organic cane sugar. According to Loma Linda University:

“While it is well-known that cacao is a

cacao chocolate consumption was associated with upregulation of several intracellular signaling pathways that are involved in the activation of T-cells, the cellular immune response, and genes involved in the signaling between brain cells and sensory perception. In other words, not only was it found to improve immune function, but dark chocolate may also boost brain plasticity, improving your ability to learn, process and remember new information.

In the second study, which used 70 percent organic cacao chocolate, they assessed the brain's response to eating 48 grams of dark chocolate using electroencephalography (EEG); first 30 minutes after, and then two hours after. As in the first trial, the dark chocolate was found to enhance neuroplasticity. A number of other studies have confirmed cacao can benefit your heart, blood vessels, brain and nervous system, and helps combat diabetes and other conditions rooted in inflammation.

continued on page 2

What's Inside This Issue

- About Chocolate, *continued*
- June Specials
- Tend Your Inner Garden
- June Monthly Coupon

So Much to Love About Chocolate (continued from page 1)

As noted in a paper published in the journal *Oxidative Medicine and Cellular Longevity*: "Cocoa contains about 380 known chemicals, 10 of which are psychoactive compounds ... Cocoa has more phenolics and higher antioxidant capacity than green tea, black tea, or red wine ... The phenolics from cocoa may ... protect against dis-

events, although residual confounding cannot be excluded. There does not appear to be any evidence to say that chocolate should be avoided in those who are concerned about cardiovascular risk."

Polyphenol-rich cacao can also be beneficial for diabetics. In one study, patients consuming 100 grams of

boost mood. One study, published in 2013, found the polyphenols in cocoa (a dark chocolate drink mix) helped reduce anxiety and induce a sense of calm when consumed daily for one month. Participants received a cocoa drink standardized to contain either 500 milligrams or 250 milligrams of polyphenols, or a placebo drink with no polyphenol content. After 30 days, those receiving the highest dose reported significantly increased calmness and centeredness, compared to the placebo group. Those receiving the lower dose (250 milligrams) did not experience any significant effects.

While there's plenty of science vouching for the health benefits of dark chocolate, it's important to realize that none of these benefits are transferable to milk chocolate, which is what most people crave. As a general rule, the darker the chocolate, meaning the more cacao it contains, the more flavonols it

contains, and this is the primary source of its health benefits. Milk chocolate, which is low in cacao and high in milk and sugar, has little redeeming value and will only promote insulin resistance and related ailments. Additionally, the standard manufacturing process of milk chocolate destroys about one-quarter to one-half of the available antioxidants, thereby diminishing its benefits even further.

So, while you'd be better off getting your antioxidants from fruits, berries and vegetables, should you decide to indulge in chocolate, the better choice is restricting your intake to dark, organic chocolate, which contains the most flavonols, and avoid milk chocolate. Your best option would be raw cacao nibs, which are relatively bitter since they contain no added sugar. Additionally, consume chocolate in moderation, even the dark kind, and avoid even dark chocolate if you're struggling with serious disease such as cancer, which feeds on sugars.

"...dietary flavonols might have an important impact in the prevention of cardiovascular complications..."

eases in which oxidative stress is implicated as a causal or contributing factor, such as cancer. They also have antiproliferative, antimutagenic, and chemoprotective effects, in addition to their anti-cariogenic effects."

One 2012 meta-analysis found that eating chocolate could slash your risk of cardiovascular disease by 37 percent and stroke risk by 29 percent. Another meta-analysis published that same year found that cocoa/chocolate lowered insulin resistance, reduced blood pressure, increased blood vessel elasticity, and slightly reduced low-density lipoprotein (LDL) cholesterol.



A 2015 study published in the journal *Heart* — which also included a systematic review of nine other studies — also found a correlation between chocolate consumption and a lower risk for cardiac events and stroke. The initial analysis included data from nearly 21,000 men and women and had a median follow-up of nearly 12 years.

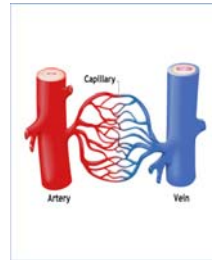
According to the authors: "The percentage of participants with coronary heart disease (CHD) in the highest and lowest quintile of chocolate consumption was 9.7 percent and 13.8 percent, and the respective rates for stroke were 3.1 percent and 5.4 percent ... A total of nine studies with 157 809 participants were included in the meta-analysis. Higher compared to lower chocolate consumption was associated with significantly lower CHD risk ... stroke ... composite cardiovascular adverse outcome ... and cardiovascular mortality. Cumulative evidence suggests that higher chocolate intake is associated with a lower risk of future cardiovascular

dark chocolate for 15 days showed decreased insulin resistance. In another, high-flavonol instant cocoa powder was found to lower the risk of cardiovascular disease in diabetics when consumed three times a day. After one month, their blood vessel function was brought from severely impaired to normal. In fact, the improvement "was as large as has been observed with exercise and many common diabetic medications," according to the authors, who believe the vascular improvement is largely caused by increased production of nitric oxide, which relaxes your blood vessels. It's worth noting that the cocoa beverage used here contained much higher amounts of flavonols (321 milligrams per serving) than what you'll find in your local grocery store.

As noted by lead author Malte Kelm, professor and chairman of cardiology, pulmonology and vascular medicine at the University Hospital Aachen in Germany, "The take-home message of the study is not that people with diabetes should guzzle cocoa but, rather, that dietary flavanols hold promise as a way to prevent heart disease."

"Patients with Type 2 diabetes can certainly find ways to fit chocolate into a healthy lifestyle, but this study is not about chocolate, and it's not about urging those with diabetes to eat more chocolate. This research focuses on what's at the true heart of the discussion on 'healthy chocolate' — it's about cocoa flavonols, the naturally occurring compounds in cocoa. While more research is needed, our results demonstrate that dietary flavonols might have an important impact as part of a healthy diet in the prevention of cardiovascular complications in diabetic patients."

As mentioned, cocoa also contains chemical compounds shown to



Tend Your Inner Garden

Your intestinal bacteria are part of your immune system and researchers have discovered that microbes of all kinds play instrumental roles in countless areas of your health. Beneficial bacteria also control the

search shows your gut microbiome has a truly profound influence on your health and well-being. Aside from improving liver function and lowering blood pressure, beneficial bacteria have been shown to: modulate your immune re-

“...people who consume probiotics on a regular basis tended to have lower blood pressure.”

growth of disease-causing bacteria by competing for nutrition and attachment sites in your colon. This is of immense importance, as pathogenic bacteria and other less beneficial microbes can wreak havoc with your health if they gain the upper hand. It can also affect your weight.

Moreover, your gut microbiome — which contains 100 times as many genes as your body’s total genome — is involved in important chemical reactions that your gut enzymes cannot perform, including fermentation and sulfate reduction. Importantly, your gut microbiome helps generate new compounds (bacterial metabolites) that can

have either a beneficial or detrimental impact on your health. Among the most recent research published are studies showing beneficial gut bacteria, also known as probiotics, benefit your liver function and help lower blood pressure. Other recent findings suggest regularly consuming probiotics can help relieve hypertension (high blood pressure).

One previous analysis of nine studies that scrutinized associations between probiotics and blood pressure found that people who consume probiotics on a regular basis (in the form of yogurt, kefir or supplements, for example) tended to have lower blood pressure than those who did not consume probiotics. On average, their systolic blood pressure (the top number in a reading) was 3.6 millimeters of mercury (mm Hg) lower and their diastolic blood pressure (the bottom number) was 2.4 mm Hg lower. The most significant benefit appeared to be among those whose blood pressure was higher than 130/85, and probiotics that contained a variety of bacteria lowered blood pressure to a greater degree than those containing just one type of bacteria.

In recent years, mounting re-

sponse and boost immune function; help your body produce vitamins and absorb minerals; aid detoxification of pesticides; control asthma and reduce risk of allergies; and, influence the activity of hundreds of genes, helping them to express in a positive, disease-fighting manner. For all of these reasons, and more, it’s critical to consume a diet rich in whole, unprocessed foods along with cultured or fermented foods. A high-quality probiotic supplement can also be a helpful ally to restore healthful balance to your microbiota — especially when taking antibiotics

Aside from eating fermented or cultured foods and taking a high-quality probiotic supplement if needed, a number of other factors will also have a bearing on the composition of your gut microbiome. Below are suggestions for how you might support and nourish the beneficial microbes in your gut: **Only consume organic foods.** Genetically engineered foods are loaded with glyphosate that can cause leaky gut and disrupt cellular communication. Your best strategy to avoid glyphosate and other toxic agrichemicals is to grow your own, or buy certified organic only.

Avoid antibiotics. The average child in the developed world will likely receive 10 to 20 courses of antibiotics before his or her 18th birthday. This, coupled with the low therapeutic doses added to animal feed, and therefore many of our foods, may be shifting our gut microbes into an unhealthy state and possibly contributing to obesity and related metabolic diseases. It’s also well documented that following a course of broad-spectrum antibiotics, it could take weeks, months or even years for your gut microbial community to bounce back — if at all. During this period of imbalance, opportunistic pathogens can take over. While antibiotics are clearly needed in some scenarios, ask your doctor if they’re truly necessary. **Avoid an-**

tibacterial soaps and products. Like antibiotics, antibacterial soaps indiscriminately kill both good and bad bacteria, and contribute to growing antibiotic resistance. **Open your windows.** Though keeping the outside out has its advantages, it has actually changed the microbiome of your home. Studies show that opening a window and increasing natural airflow can improve the diversity and health of the microbes

Michigan Grass-fed Beef:
*Humanely-raised at
Lamb Farm in Manchester, MI*



Porterhouse & T-Bone Steaks
only \$13.99/lb

in your home, which in turn benefit the inhabitants. **Eat more plants.** This may be one of the single most important dietary strategies for improving the diversity and health of your gut microbiome. In short, your gut microbes thrive on a diversity of fermentable substrates (dietary fiber). But not all fiber is the same (physically or chemically), so consuming a diversity of whole plants will assure a steady flow of substrates for your resident microbes. Also consider eating more of the whole plant, not just the soft and tasty parts. By doing so, you will guarantee that the harder-to-digest portions of the plant will extend the metabolic activity of your microbiome deep into your bowels. **Get your hands dirty.** Start a garden. Getting your hands (and body) dirty not only will help you connect with the natural world, but will also reacquaint your immune system with the wide variety of microorganisms living on plants and in the soil. Reconnecting with ecosystems, through gardening or some other outdoor activity, will improve your internal ecosystem as well.

Reference: *Eurekalert* April 22, 2018. *Nature* November 2017; 551: 585-89. *Science Daily* November 23, 2016. *Nature* Aug 30, 2012; 488 (7413):621-6.



ARBOR FARMS MARKET

PRSRT STD
US POSTAGE
PAID
ANN ARBOR MI
PERMIT NO 150

2103 West Stadium - Boulevard Plaza
Ann Arbor - 734-996-8111 - arborfarms.com

\$2 OFF

your next purchase
of **\$15 or more** at
Arbor Farms Market.

Limit one coupon per visit. No cash value.
Valid through June 30, 2018.

June Specials

Effective through June 24, 2018



Enjoy
Michigan's Harvest



Arriving in June:

Local Products from Local Growers

Hilhof Farm Dairy - Hersey Homer Organic Farms
Graham's Organics Rosebush Schwartz Farm - Quincy
Black Pearl - Ann Arbor Artesian Farms - Detroit



Serving Ann Arbor
since 1979



Shop
Local

Keep your \$\$\$
in Michigan

- Michigan Asparagus..... \$2.99/lb
- Organic Strawberries, 1-lb pkg..... \$3.99
- Michigan Grass-fed T-Bone Steaks & Porterhs \$13.99/lb
- G. T.'s Kombucha, select 16-16.8 oz..... 2/\$5
- Cadia Organic Coconut Oil, 14 oz Virgin..... \$7.99
- Santa Cruz Organic Lemonade, select 32 oz..... 2/\$4
- Back to Nature Crackers, select 4-8.5 oz..... 2/\$6
- Cadia Organic Gelato, assorted 30 oz..... \$4.99
- Garden of Eatin' Organic Corn Chips, 16 oz... \$3.99
- Maple Hill Organic Yogurt, Grass-fed 6 oz..... 3/\$4
- Green Forest Bath Tissue, 12-ct., Double Roll..... \$9.99
- Founder's All-Day IPA, & select 6/12 oz..... \$8.99
- Provenence Rose', 750 ml..... \$8.99
- Desert Essence Hair Care, assorted 8 oz..... \$5.99
- Life Extension Supplements, entire line..... 20% OFF
- Garden of Life Men's Health, entire line... 25% OFF
- Barlean's Flax Oils, entire line..... 20% OFF
- Jarrow Dietary Supplements, entire line... 20% OFF

Dr. Hauschka Skin Care..... 20% OFF entire line!