



ARBOR FARMS MARKET

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

Our June 2023 Newsletter for Healthy Living

Hydrate for Health

One of the easiest steps you can take to improve your health is to provide your body with optimal hydration in the form of pure water. Researchers found that middle-aged people whose serum sodium is higher than normal, indicating dehydration, had an increased risk of being biologically older than their chronological age, of developing chronic diseases and of dying prematurely. This is logical since your body is made up of mostly water. An infant's body weight is 75% water, which drops to 55% in the elderly.

Optimal water balance is essential for survival, as water plays a significant role in your bodily functions, including keeping your skin healthy, eliminating toxins and facilitating digestion.



Dehydration occurs when you have lost more water than you replace. After losing just 1%

to 2% of your fluid, you'll feel thirsty, which is your body's way of telling you to start drinking.

The researchers began with the premise that some people obviously age faster than others. Using data from the Atherosclerosis Risk in Communities study (ARIC) and a 25-year follow-up, the researchers analyzed serum sodium as a means of estimating the hydration habits of individuals. The ARIC cohort included 15,792 black and white men and women from ages 45 to 66 years.

Since the study sought to analyze the effects of hydration that were measured through levels of serum sodium, they excluded individuals whose

sodium levels may have been affected by other health factors. After individuals were excluded, the researchers ended with 6,956 individuals in the cohort.

A normal serum sodium blood value is 135 milliequivalents per liter (mEq/L) to 145 mEq/L. However, while 145 mEq/L is at the high end of normal, the researchers found those with serum sodium levels greater than 142 mEq/L

tion, coagulation and the development of age-dependent degenerative diseases.

It's best to drink before you experience the signs of mild to moderate dehydration and get into a habit of staying well hydrated. Signs of mild to moderate dehydration include: dry sticky mouth, bad breath, chills, sleepiness, decreased alertness or fatigue, dizziness or lightheadedness, headache, confusion,

"...staying well hydrated may slow down the aging process and prevent or delay chronic disease."

had a 39% increased risk of developing chronic diseases and those with blood levels greater than 144 mEq/L had a 21% increased risk of premature mortality. Additionally, they found when an individual's serum sodium levels were outside the range from 137 mEq/L to 142 mEq/L, their risk of being biologically older than their chronological age was 10% to 15% higher than those whose levels were inside the range.

In a statement from the NIH, study scientist Natalia Dmitrieva, Ph.D., commented: *"On the global level, this can have a big impact. Decreased body water content is the most common factor that increases serum sodium, which is why the results suggest staying well hydrated may slow down the aging process and prevent or delay chronic disease."* The researchers also cited data showing close to half of people worldwide do not meet the recommended water intake. During the second part of the study, the researchers analyzed human data and found a strong association between serum sodium concentration in middle age and markers of inflamma-

constipation, muscle cramps, sugar craving, dry cool skin, a decline in athletic performance, few or no tears when crying, minimal amount of dark-colored urine. Since it's highly unlikely your serum sodium is consistently measured to determine whether or not you're fully hydrated, it is important to know how your body tells you that you have had too much or too little water.

You have probably heard the recommendation that you should drink eight 8-ounce glasses of water every day to stay healthy. This is often stated as scientific fact, but it's not quite that simple. Several factors affect how much water you need, including your health status, activity level, climate and your age. Ultimately, you do not need to get bogged down trying to figure out the exact amount of water your body needs or tracking how many glasses you've drunk that day. Your body will let you know when you need more water.

Reference: *The Lancet*, 2023; doi.org/10.1016/j.ebjom.2022.104404. *JCI Insight*, 2019; doi.org/10.1172/jci.insight.130949. *Great Lakes Gastroenterology*, August 3, 2020. *The Epoch Times*, January 9, 2023. NIH, January 3, 2023. Cleveland Clinic, *Dehydration, what are the signs of dehydration*.

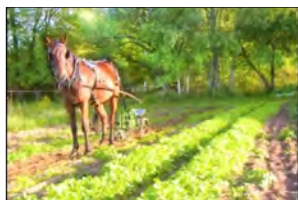
What's Inside This Issue

- 2023 Organic Produce Club Info
- Organic Produce Club Subscription
- Broccoli Down Below
- June Monthly Coupon

2023 Organic Produce Club

Michigan Organic Family Farms

Farming Practices



Healthy food starts with promoting life in the soil. Our growers are certified organic. Every year these farms are inspected by a third party and certified in compliance with National Organic Program Standards. This is to assure you that no harmful chemicals, pesticides or genetically-modified organism (GMO) seeds are used in the production of your food.

About Our Club

By joining our club, you become a patron of organically-grown produce. Our CSA/club has supported small Michigan family farms for over 10 years. In doing so, we have seen that the unpredictability of the seasons can significantly impact the variety, quality and value of the boxes. Simultaneously, weather variations and the availability of farm help (or not) can create problems for a single farm(er). To provide more value and variety in your weekly box, we will be working with several Michigan family farms in the 2023 season. These will include the growers from previous years, Pleasant Lane Farm and Homer Organic Family Farms. We will also welcome new growers from Green Valley Organics/Marlette, Schwartz Farm/Quincy, Better Way/South Haven and Cherry Capitol Growers/Traverse City. You will find a weekly update in your box with info about the harvest.

What are the benefits?

By subscribing to our club you are supporting Michigan Organic family farms. Not only are members getting the freshest food, but they are also using their dollars to assist and ensure that these farms remain “certified organic”. In appreciation of your patronage, you also receive: a 10% discount on any “in-store” produce purchases, any day, for the duration of the season (May 31—Sept. 30); your choice of three different pickup days, and a pickup location that is super-convenient. Grab and run or choose to shop a well-stocked grocery while you’re here.

What might I see in my weekly box?

Early Season: June - mid-July

Asparagus,
Leaf Lettuce,
Swiss Chard,
Kale varieties,
Collards,
Zucchini,
Peas: Snap and Shell,
Salad Greens,
Rhubarb
Strawberries

Summer Season: July/August

Lettuce, Broccoli, Cabbage,
Cauliflower, Radishes, Beans,
Zucchini, Cucumbers,
Hot Peppers, Garlic,
Carrots, Peas, Tomatoes,
Sweet Potatoes, Basil, Garlic,
Kale, Potatoes, Green Onions,
Sweet Corn, Onions, Beets,
Summer Squash, Watermelon,
Blueberries

Late Season: September

Any remaining
summer crops,
Red Peppers,
Hard Squash,
Spinach, Pie Pumpkin,
Late Greens, Turnips,
Eggplant, Parsnips,
Cabbage, Brussels
Sprouts, Watermelon,
Cantaloupe

Enroll now through May 29th

Be a Patron of Organic Produce

Broccoli Down Below

Food is a profoundly effective means of affecting your overall health and cruciferous vegetables have long been cherished for their health benefits. Among those are broccoli, cabbage, collards, Brussels sprouts and cauliflower. One of the most well-

“...cruciferous vegetables, such as broccoli, cabbage, and Brussels sprouts should be part of a normal healthy diet.”

known compounds in cruciferous vegetables is sulforaphane, which is an organic sulfur that supports normal cell function and division.

A 2023 study published in Laboratory Investigation by Penn State University scientists finds that broccoli's health benefits may also extend to protecting the integrity of the gut lining. This important discovery adds to research that demonstrates how to protect your gut health, since a considerable portion of your immune system resides in the gastrointestinal tract. As such, optimizing your gut microbiome and protecting your gut integrity is a worthwhile pursuit that has far-reaching effects on physical and mental health.

Mounting evidence also suggests that by keeping harmful microbes



in the gut in check, protecting health-promoting gut bacteria and protecting the lining of your intestines, you help to shore up your protection against

chronic disease. In the February 2023 study, researchers presented evidence that supported the role of the aryl hydrocarbon receptor in building intestinal resilience. Using an animal model, they found that broccoli contains molecules that attach to the receptor and safeguard the intestinal lining.

Researcher Gary Perdew said: *“We all know that broccoli is good for us, but why? What happens in the body when we eat broccoli? Our research is helping to uncover the mechanisms for how broccoli and other foods benefit health in mice and likely humans, as well. It provides strong evidence that cruciferous vegetables, such as broccoli, cabbage, and Brussels sprouts should be part of a normal healthy diet.”*

The researchers fed an experimental group of mice a diet that was equal to a human eating roughly 3.5 cups of broccoli each day. The control

group received a typical lab diet without broccoli. Examination of the intestinal tissue showed the mice who were fed a lab diet without broccoli had minimal AHR activity. This reduced food transit time in the small intestines and altered

the barrier function.

Perdew commented: *“The gut health of the mice that were not fed broccoli was compromised in a variety of ways that are known to be associated with disease. Our research suggests that broccoli and likely other foods can be used as natural sources of AHR ligands, and that diets rich in these ligands contribute to the resilience of the small intestine.”*

Mammals have a complicated and specialized gastrointestinal system that relies on an intact mucosal barrier. Evidence continues to mount demonstrating that your gut integrity may be an underlying trigger for most chronic diseases. The intestinal lining forms a barrier and when that permeability is compromised it allows bacteria and toxins to enter the bloodstream. Colloquially, this is known as leaky gut. When environmental factors and pathogens enter the bloodstream, it can trigger the development of autoimmune diseases and increase the level of inflammation in your body.

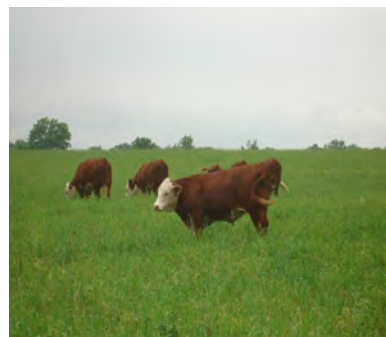
Research evidence also shows other factors that can promote tight cell junctions and therefore lower the risk of leaky gut. For example, probiotics can enhance the growth of beneficial bacteria, which in turn improves the production of tight junction proteins. On the other hand, pathogenic bacteria facilitate a leaky gut. In addition to the immense benefits of improving gut wall integrity, cruciferous vegetables have other health benefits.

Sulforaphane is one of several compounds that can spark genetic changes and activate genes that fight cancer, while switching off others that fuel tumors. One paper suggested that cruciferous vegetables were “perhaps a key to eliminating cancer as a life-threatening disease.” Cruciferous vegetables provide dozens of nutrients that support optimal health, including fiber, the anticancer compounds sulforaphane and glucoraphanin, anti-inflammatory and free radical quenching phenolic compounds and immune-boosting DIM.

Optimizing your gut microbi-

ome is another way to help protect your health and reduce your risk of chronic disease. One of the easiest ways is to include cruciferous vegetables in your daily diet. A 2023 study published in the Journal of Nutritional Biochemistry found a diet rich in cruciferous vegetables helped reduce inflammation, and the metabolites were found to improve both forms of inflammatory bowel disease — ulcerative colitis and Crohn's

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



Porterhouse & T-Bone Steaks
only \$16.99/lb

disease. A high intake of cruciferous vegetables was associated with a reduction in serum levels of proinflammatory cytokines.

The bioactive metabolites of glucosinolates, also found in cruciferous vegetables, were associated with anti-inflammatory and anticancer activities. As News Medical Life Sciences notes:

“Broccoli diets enhance the concentration of Bacteroides in human gut microbiota. In addition, enhancement in Clostridium spp., Proteobacteria, and butyrate-producing bacteria was observed.”

To get the most out of your broccoli, lightly steam it for three to four minutes until it's tough-tender. Do not steam longer than five minutes. This will allow you to get the most bioavailable sulforaphane out of it. If you opt for boiling, blanch the broccoli in boiling water for no more than 20 to 30 seconds, then immerse it in cold water to stop the cooking process.

Reference: Laboratory Investigation, 2023; doi: 10.1016/j.labinv.2022.100012. SciTechDaily April 9, 2023. Cancer Letters, 2008; 269(2). Current Pharmacology Reports, 2015; 1(1). Frontiers in Oncology, January 23, 2023. Medicines, 2015;2(3). Phys.org, June 22, 2016. Journal of Biomedical Research, 2014; 28(5). Journal of Nutritional Biochemistry, 2023; 1139109238. News Medical Life Science, November 29, 2022.