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A Guide to Building BETTER GUT HEALTH

with Deep Nutrition

Discover the nutritious fruits and vegetables that can help

keep your gut balanced. Plant-based foods are full of fiber and other nutrients that help feed your microbiome and support better digestion and gut function.

If you're familiar with the phrase, "go with your gut," what that really refers to is your "second brain," also known as your enteric nervous system. This system is made up of more than 100 million nerve cells lining your gastrointestinal tract that communicate with the brain located in your skull to help control digestion, release enzymes, and absorb nutrients from the foods you consume. So much of our health is dependent on what happens in our gut—what, how, and when we consume it, and how it's processed in our bodies.



GET TO KNOW YOUR DIGESTIVE SYSTEM

Your digestive system is made up of the gastrointestinal tract, also called the GI or digestive tract, along with the liver, pancreas, and gallbladder. The GI tract is a series of tube-like organs that twist through your body, running all the way from your mouth to your anus. The hollow organs in the GI tract include the mouth, esophagus, stomach, small intestine, large intestine, and anus. The solid organs are the liver, pancreas, and gallbladder.

WHY DIGESTION MATTERS



Your body needs nutrients from food and drinks to maintain your whole body and stay healthy. Think of protein, fats, carbohydrates, vitamins, minerals, and water as the building blocks and nutrients you need. The digestive system breaks down these nutrients into smaller components so that your body can convert them into energy.









Gut Health 101

Your gut is home to trillions of microbes



including bacteria, viruses, and fungi. Yes, they help digest your food, but they also help fight pathogens, maintain your immune system, and even play a role in healthy aging. These gut microbes love to eat, and their favorite foods are fruits, vegetables, beans, and whole grains.

HOW CAN YOU IMPROVE YOUR DIGESTION?

Digestion begins in your mouth so it's important to consider how you eat. Chewing your food at least 20 times helps begin the digestive process, releasing enzymes that help break down the food and move it through the digestive system. Take time to fully taste and enjoy your food.

Other lifestyle factors can impact your digestive health. Stress can have a negative effect on your digestive system and has been associated with stomach ulcers, diarrhea, constipation, and IBS. Exploring ways to reduce your stress from mindfulness techniques, breathwork, or even hobbies like coloring or puzzling can help.

Movement is another way to help improve digestion. Exercise can help food move through your system, which is why taking a walk after a meal is so beneficial. Studies also suggest that movement can reduce symptoms of inflammatory bowel diseases thanks to the anti-inflammatory effects.



BROCCOLI CAULIFLOWER LEAFY GREENS (Kale, spinach, chard) FENNEL GINGER LEEKS PAPAYA TURMERIC



Juicing for Gut Health & Healing

Juice is a great option for anyone dealing with constipation, diarrhea, IBS, GI pain, or difficulty with absorbing nutrients. It's easy on the gut, a great vehicle for concentrated vitamins and minerals, and can help reduce inflammation.

JUICING FOR SPECIFIC CONDITIONS

Constipation: Drink a daily juice and consume half your body weight in ounces of water. Start daily with lemon water with ginger or take a shot of lemon-ginger juice. Dark leafy greens are rich in magnesium, helping to relax your muscles and support regularity. Beets may also be beneficial, helping to increase vasodilation and blood flow. Irritated or painful gut:

Papaya is very soothing and great to add to an irritated GI system. Carrots are rich in beta-carotene and vitamin A, which can help reduce irritation.

Gas: Omit or reduce raw cruciferous veggies like kale, broccoli, or cabbage.

Stomach ulcers: Avoid too much lemon, lime, citrus fruits, or tomatoes.



Inflammation

Chronic inflammation is a state of persistent activation of the immune system and an important part of many diseases. Diet can contribute to this chronic state.

One way to help soothe inflammation is to avoid ultra-processed foods and drinks, like sodas, packaged baked goods, sugary cereals, processed meats, etc. Research published in a 2019 study in Nature Medicine found that sugars, grains, and extra salt in ultraprocessed foods can change the bacteria in your gut, damage the gut's lining, and switch on inflammatory genes in cells. Other studies have linked ultra-processed foods to shorter life spans, cancer, heart disease, heart attacks, strokes, and diabetes.

Adopting an anti-inflammatory lifestyle means consuming more whole, unprocessed

foods without added sugars. Try fruits,

vegetables, whole grains, legumes, nuts,

seeds, and olive oil. Additionally, herbs and

spices like cinnamon, ginger, and turmeric

can help.

Key Nutrients

WATER + ELECTROLYTES

You may not think about water when it comes to healthy digestion, but staying hydrated is what helps you swallow, digest, and break down your food. Think about it—you could consume the healthiest food in the world, but if you are not sufficiently hydrated or digesting your food well, you may not be able to extract the nutrients your body needs.

Every cell, tissue, and organ in your body needs water to function. The amount you need will depend on a variety of factors including how much you exercise, your environment, and overall health.

DAILY HYDRATION

WOMEN: 11.5 cups (2.7 liters) of fluids a day

MEN: 15.5 cups (3.7 liters) of fluids a day

Aim for about 20 percent of daily fluid intake from food and the rest from beverages.



ELECTROLYTE-RICH PRODUCE:

> BEETS CARROTS CELERY PINEAPPLE SPINACH WATERMELON

Staying Hydrated

is about more than just drinking water. You want to make sure you are getting enough electrolytes such as sodium, potassium, and magnesium.

Electrolytes are minerals

that help support:

- The balance of fluids in the body for digestion (especially for people dealing with IBS and constipation)
- Muscle contraction
- Your whole system running properly

Fiber

Fiber is the part of plant foods that your body cannot digest, and it plays an essential role in everything from regulating blood sugar to adding bulk to stool. It also helps you feel fuller longer after you consume a meal or snack.

THE TWO TYPES OF FIBER ARE:

Soluble Fiber dissolves in water to form a gel, and helps lower cholesterol levels and reduce the risk of heart disease.

Insoluble Fiber is what cleans out the digestive system and helps regulate bowel movements, prevent constipation, and remove waste from the body.







You will want to start slowly when adding more fiber to your daily routine. Too much all at once can cause digestive upset in the form of bloating, gas, and more. Drinking more water as you increase your fiber intake can help your body adapt.

EASY WAYS TO ADD MORE FIBER:

- Start your day with a high-fiber fruit like raspberries, pears, or passion fruit.
- Add nuts, seeds, and fruit to plain yogurt or smoothie bowls.
- Snack on vegetables like cauliflower, broccoli, carrots, or edamame.
- Eat more whole, unprocessed foods and less junk foods from boxes and bags.
- Include beans, nuts, and seeds in your salads and veggie bowls.
- Eat more avocados as a snack or dip,

a half offers 5 grams of fiber.

Phytonutrients

Phytonutrients are plant compounds that are good for you. One in particular that can help strengthen your digestive system is called sulforaphane. It's a sulfur-rich compound found in cruciferous vegetables such as cabbage, bok choy, and kale, and just one of the many reasons these veggies are so good for you.



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Sulforaphane acts as a powerful antioxidant, helping repair cell damage in the body and fight against inflammation. This compound is activated when another plant compound called glucoraphanin comes into contact with enzymes that are activated when the plant is impacted, such as when you chop, cut, or chew it. It's just one example of how nature and plants are perfectly designed to help us.

Once you chew and swallow these vegetables, your gut bacteria help convert glucoraphanin to sulforaphane.

SULFORAPHANE

While raw veggies have the highest levels of sulforaphane, some people tolerate these foods better when steamed or lightly cooked, which still retains many nutrients. Broccoli sprouts contain some of the highest levels of sulforaphane, so consider adding them to salads and bowls.



PRIMING YOUR GUT



Before you eat, you can stimulate digestive secretions in your upper GI, which can help prepare the body to digest food. A great way to do this is with elixirs or tonics, which are simply beverages with a health-supportive purpose. Certain ingredients

can help stimulate your digestive juices, also called hydrochloric acid. You can drink them first thing in the morning or before a meal. **Ingredients to include are tart cranberries, ginger, lemon, or grapefruit, and more bitter foods such as greens like endive and arugula.** These foods will help get your gut ready for a meal. Enjoy trying the elixir and tonic recipes listed in this guide.



Elixirs & Tonics

You can use any of the elixir concentrates to make a nutrientdense tonic by adding 4-6 ounces of sparkling water. If the intense flavor or bitterness of any of the elixirs feels too overpowering for your taste buds, try turning it into a tonic. You will still get the digestive supporting benefits, but the addition of sparkling water will help to reduce the intensity of the flavors.

Bitter Arugula Grapefruit Elixir

This bright, peppery elixir aids in stimulating the production of our digestive chemicals to make for healthier digestion, as well as calm inflammation and disruptive digestive symptoms like gas post-meals.

> MAKES: 8-12 OZ SERVING SIZE: 2-4 OZ

INGREDIENTS 2 cups arugula 1 grapefruit ½ bunch cilantro 2-inch piece ginger

DIRECTIONS

Wash all produce. Peel the grapefruit. Add all ingredients to the juicer and enjoy 2-4 ounces before a meal.

> TO MAKE A TONIC, mix with 4-6 ounces sparkling water.

Herbal Carminative Elixir

This herbal elixir is the key to priming healthy digestion before a meal. Its use of bitter carminative vegetables and herbs soothe gas, cramping, bloating, and discomfort in the GI system.

> TO MAKE A TONIC, mix with 4-6 ounces sparkling water.

MAKES: 8-12 OZ SERVING SIZE: 2-4 OZ

INGREDIENTS

2 fennel bulbs

1 endive bulb

1/2 bunch parsley

1 lemon, with 1/2 rind

DIRECTIONS

- 1. Wash all produce.
- 2. Peel half of the lemon, leaving the other half of the rind on.
- **3.** Add all ingredients to the juicer and enjoy 2-4 ounces before a meal.

Bitter Beet Elixir

This blend of bitters helps to prime the digestive system. It can stimulate digestion before a meal or be used after or between meals to soothe any indigestion and support an overall healthy digestive system.

MAKES: 8-12 OZ SERVING SIZE: 2-4 OZ

INGREDIENTS

2 beets

1 lemon, with 1/2 rind

1-inch piece ginger

DIRECTIONS

- 1. Wash all produce.
- 2. Peel half of the lemon, leaving the other half of the rind on.
- **3.** Add all ingredients to the juicer and enjoy 2-4 ounces before a meal.



TO MAKE A TONIC, mix with 4-6 ounces sparkling water.

These are heavy on the ginger and are great for activating digestion before a meal, soothing GI inflammation and easing any post-meal digestion symptoms.

Citrus Ginger Prime Shots

MAKES: 8-12 OZ SERVING SIZE: 2-4 OZ

INGREDIENTS

1 navel orange

2 lemons, with 1/2 rind

3-inch piece ginger

4-inch piece turmeric

Pinch of black pepper

DIRECTIONS

1. Wash all produce.

2. Peel half of the lemon, leaving the other half of the rind on. Peel orange.

3. Add all ingredients to the juicer and enjoy 2-4 ounces before a meal.

TO MAKE A TONIC, mix with 4-6 ounces sparkling water.

FEEDING YOUR GUT



in your lower GI. Think about consuming

polyphenols, prebiotics, probiotics, and fiber. Root veggies like beets, carrots, sweet potatoes, and squash are a great way to begin. You can also add brightly colored foods like pomegranate, berries, and herbs and spices. Here are a few juice and smoothie recipes that help feed your gut microbiome.

Fennel Apple

Crunchy fennel is a great base for this juice, offering a mild licorice flavor along with vitamin C, potassium, and calcium. Plus, it's great for digestive health. MAKES: 16 OZ INGREDIENTS 1 fennel 1 apple 1/2 cucumber 1-inch piece ginger 1 lemon

DIRECTIONS

- **1.** Wash all produce well.
- Core and quarter the fennel.
 Quarter the apple and cucumber. Peel the lemon.
- **3.** Add all ingredients to the juicer and enjoy!



Tropical Citrus

All that's missing in this sunny, tropical juice is a little umbrella in your drink. The sweet flavors of orange and pineapple pair well with the zip of lemon and the earthiness of celery.

MAKES: 16 OZ **INGREDIENTS** 1 orange 1 lemon 1/2 pineapple

2 celery stalks

DIRECTIONS

- Quarter the pineapple and celery.





Juices & Smoothies FEED THE GUT

Carrot Beet

This tasty red juice is high in beneficial plant compounds. The carrots offer beta-carotene, while the apples offer quercetin. The ginger adds not just a fragrant zest but also gingerol, a plant compound that helps move food through your digestive tract with ease.



MAKES: 16 OZ

INGREDIENTS

2 medium carrots

2 apples

1 beet

1-2 inch piece ginger

DIRECTIONS

- 1. Wash all produce well.
- 2. Halve the carrots and quarter the apples.
- 3. Add all ingredients to the juicer and enjoy!

Papaya Lime

Papaya is known for helping digestion thanks to its papain enzyme that helps break down protein. Enjoy this tropical flavor combo of papaya, lime, and cucumber.

MAKES: 16 OZ

INGREDIENTS

DIRECTIONS

1/2 papaya

4 limes

- 1. Wash all produce well.
- 2. Peel the papaya and limes.
- 1/2 cucumber
- **3.** Add all ingredients to the juicer and enjoy!



Green Ginger

When you really want a green drink without added sweetness, this juice has you covered. Celery and watercress are mineral-rich greens that will provide you with a big boost of energy.



MAKES: 16 OZ

INGREDIENTS

4 celery stalks

1 cucumber

1 bunch of watercress

1/3 cup parsley

2-inch piece ginger

1 lemon, with 1/2 rind

DIRECTIONS

- **1.** Wash all produce well.
- 2. Peel half of the lemon, leaving the other half of the rind on.
- 3. Add all ingredients to the juicer and enjoy!



Carrot Mango Smoothie

Carrots are not just for juicing. Try them in this creamy smoothie with vitamin-C rich mango, protein-rich hemp hearts, and some sweet coconut milk that offers a healthy source of fat.

MAKES: 16 OZ INGREDIENTS 1 medium carrot 3/4 cup frozen mango chunks 1/2 cucumber 3 tablespoons hemp hearts 1 cup light coconut milk

DIRECTIONS

- 1. Wash all produce well.
- 2. Add all ingredients to a blender and blend. You can add a splash of water or more coconut milk, to reach your desired consistency.
- 3. Serve and enjoy!



Butternut Squash Smoothie

This smoothie is sure to keep you full thanks to the fiber found in the squash, cauliflower rice, almond butter, and flaxseeds. Butternut squash is a great base, bringing creaminess and essential vitamins and minerals.

MAKES: 16 OZ

INGREDIENTS

1 cup cooked or frozen butternut squash

1/2 frozen banana

1/2 cup cauliflower rice

1 tablespoon almond butter

- 1 tablespoon ground flaxseed
- 1/2 teaspoon Ceylon cinnamon
- 3/4 cup unsweetened plant-based milk

DIRECTIONS

- **1.** Add all ingredients to the blender in the order listed.
- **2.** Blend and enjoy!



PREBIOTICS

provide food to thousands of different beneficial bacteria in your digestive system. Many whole, plant-based foods are naturally high in prebiotics, such as bananas, leeks, garlic, Jerusalem artichokes, lentils, chickpeas, and oats. We can't talk about gut health without covering the ways you can maintain the balance of bacteria in your gut.

PROBIOTICS

are live microorganisms like bacteria and yeast, found in both supplements and fermented foods, that help build and maintain a healthy community of



microorganisms in your gut.

POSTBIOTICS

are non-living organisms that are byproducts of the fermentation process created in the body. They contain nutrients like amino acids, vitamins B and K, and can help slow the growth of unwanted or bad bacteria. Postbiotics can be found in dietary supplements or fortified foods. Consuming certain foods can also help increase your body's ability to make postbiotics such as high-fiber foods like oats and flax, along with pickles, kombucha, and miso. Research shows they have anti-inflammatory and antioxidant properties, as well as help to lower cholesterol.

Other Gut Healing Foods

BITTERS

For centuries, humans evolved eating bitter greens, roots, and barks. In Traditional Chinese Medicine, each food flavor has an impact on health. Bitter foods, like dark leafy greens, vinegar, coffee, dandelion, and chocolate, are believed to promote health. Herbalists have used bitter tinctures for years as a natural remedy to stimulate the digestive system and to help ease an upset stomach. These tinctures, also called bitters, are made from a blend of herbs and roots mixed in alcohol to preserve them, usually combining bitters with something more appealing like fennel or orange peel.

> "I think a lot of people don't always eat bitter foods as they are less common in the food supply because we've all been trained to like sweet and salty foods," explains Meg Gerber, a functional medicine dietitian. "If you're someone who

struggles with constipation, gastroparesis, or the feeling like food is sitting too long, or you deal with lots of bloating, bitter foods or taking bitters are just wonderful at supporting your system."

FERMENTED FOODS

People throughout the world have fermented foods to help store it for longer periods of time. The process can vary and fermented foods can be made with grains, beans, dairy, vegetables, and even tea. While these foods are delicious on their own, when you pair fermented foods with meals it helps increase the nutrient bioavailability and enzyme content of the whole meal.

Fermented Food Options: Kimchi, Yogurt, Kefir, Kombucha, Miso, Sauerkraut, Sourdough bread



General Gut Health Tips

WITH **MEG GERBER**, RD, LD, IFNCP, CGN AT GROUNDED NOURISHMENT



Meg is a functional medicine dietitian, best-selling author, and the founder of Grounded Nourishment. She is also the co-founder of JÜJ Digestive Bitters. She specializes in working with individuals who struggle with chronic digestive issues. Learn more about Meg @groundednourish and @jujbitters.

Q: What are signs to look for when it comes to a healthy gut?

Meg: A big thing to notice and look for is: are you having daily bowel movements? That's a good sign of some level of a healthy gut. I tell people that their stool should look like a banana in the toilet, not something super skinny, not something mashed up and separated. We want a formed banana texture stool that you're pooping at least once a day.

Q: What are some essential ways to begin to heal or soothe the digestive system?

Meg: My go-to category of foods is gelatinous or collagenous foods. Gelatin is the hydrolyzed or broken-down form of collagen. It's a little easier to digest gelatin than collagen.

Whole food gelatin is rich in an amino acid known as glycine, which is anti-inflammatory. It helps promote collagen synthesis and aids in tissue repair. It's mending at the lining level. Glycine is also considered a nervous system calming amino acid. I am a big fan of gelatin gummies. You can simply use fresh squeezed or cold-pressed juice to make them. I love a gelatin gummy before bed because it has a calming aspect to it. You can also stir collagen peptides into your coffee or into a smoothie.

Another category is demulcent herbs or foods such as aloe, marshmallow root, slippery elm, and licorice. These herbs contain a mucilaginous substance that is soothing to inflamed tissues and often has a prebiotic effect. I call them the gentle massage for your gut. They are great for those dealing with celiac disease, Crohn's, colitis, or anyone coming off a round of antibiotics and their gut feels irritated.

Q: Any other foods to help improve digestive capacity?

Meg: I am a really big fan of incorporating high-quality salt at every meal, especially if you're someone who cooks often. It is very old school to think about reducing sodium for "heart health." Yes, we want to reduce processed forms of sodium, but we want receptor lining the GI tract to trigger a domino effect of enhanced digestion. They are the food category that lights up the digestive tract and the GI receptors the most to support motility, meaning moving food along and enhancing the cleaning wave of the gut.



to think about optimizing our salt intake in whole food sodium form. Salting your food to taste, and doing it often, is actually a great way to optimize stomach acid. You need sodium in ample amounts to make stomach acid. Stomach acid is the starter of the symphony of digestive secretions within the gut.

My favorite category of food is bitter foods. Foods like radicchio, endive, broccoli, rabe, arugula, radish, and cranberry help stimulate the bitter I founded a digestive bitters company called JUJ because I'm so passionate about the benefits of bitters and how they can support digestive processes. Bitters are an herbal tincture made from an infusion of plants and herbs. I'm the most jazzed about them because they really improve digestion. Research shows that digestive bitters can enhance output of digestive secretions like stomach acid and digestive enzymes to help you better break down your food.

Q: What are your favorite lifestyle recommendations for gut healing?

Meg: I'm a breathwork and meditation teacher for a reason as a gut health dietician because I came to find in my 10 years or so of working with clients that everyone has this elephant in their room known as stress. We can't just make that elephant disappear, but we can manage the elephant. We can find ways to modulate the impacts of stress on our body and mainly on digestion.

Chronic stress turns the dial down on our digestive secretions and on gastric motility, meaning things don't move along as well. Research says that typically people (not everyone) who deal with higher chronic stress loads tend to have more constipation because it makes things so much more sluggish.

Taking some deep breaths can be a wonderful starting ground. I call this process my "Rule of Threes." I say take three deep breaths, three times per meal because it helps draw us back to the present moment. You want to aim for nine breaths total for the meal: three when you start the meal, have three mid-meal breaths and then toward the end of the meal, take three more deep breaths. It can really make a measurable difference.

Studies support that we get an upregulation of digestive juice secretion by 20 percent when we become present and engage our brain in this way of eating.

Q: Can you talk about the benefits of digestive bitters?

Meg: Digestive bitters help to reduce bloat and gas because bitters enhance and support that cleaning wave of the gut and motility, helping moving things along.

We've seen great results in terms of how they can lower blood sugar and help with reduced sugar cravings. like recommending bitters before meals for people who have blood sugar balance concerns. It also supports

healthy bile flow. Bile helps us break down and serves as a kind of detergent for fat and fat-soluble vitamins. This is a biggie for immune system support because a lot of us tend to struggle with absorption of these vitamins like vitamin A and vitamin D.





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