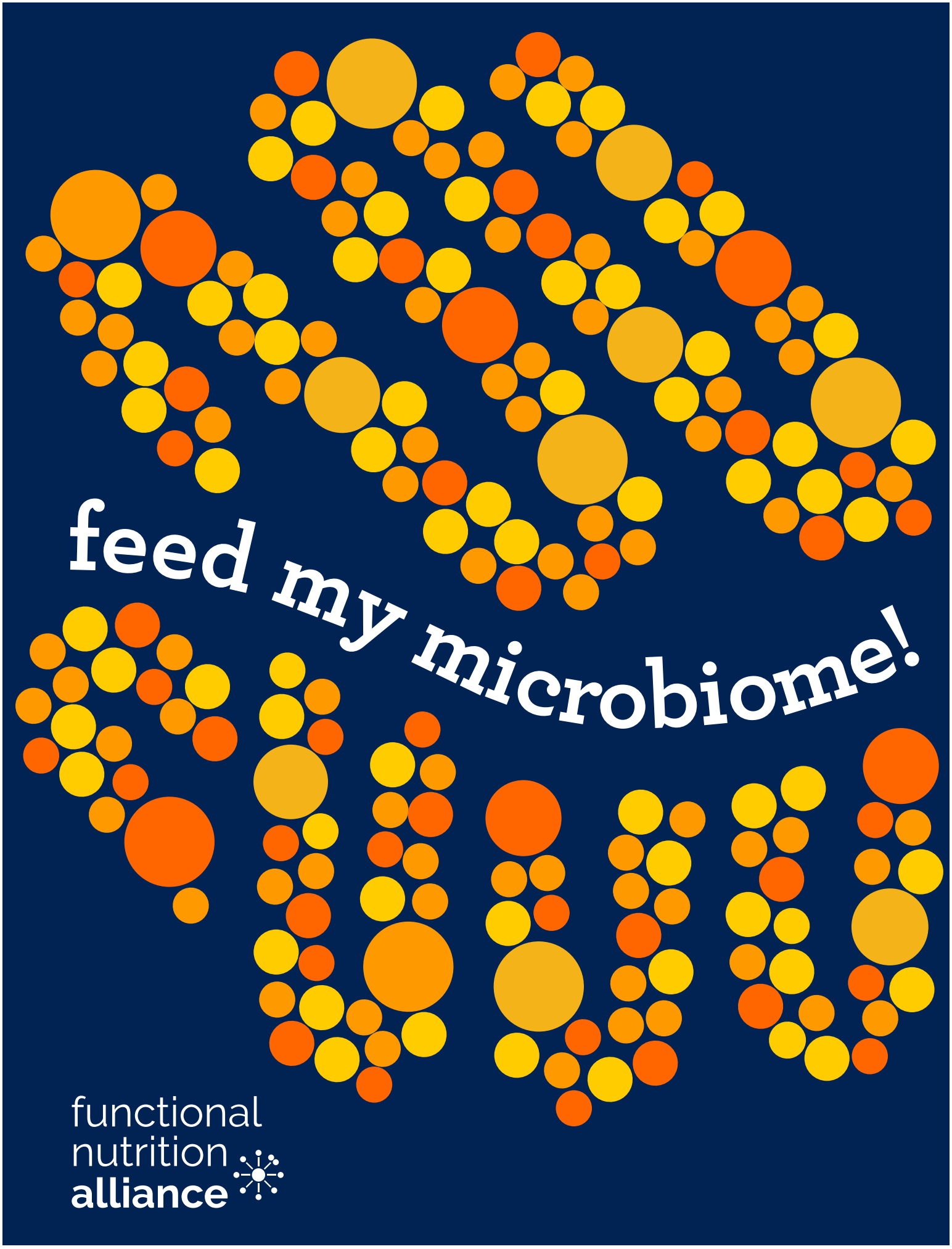

feed my microbiome!
functional
nutrition
alliance

feeding your microbiome

"Leaky" gut?

Brain challenges like ADD/ADHD, cognitive, memory and behavioral disruptions?

Autoimmune conditions like Crohn's, Ulcerative Colitis, Multiple Sclerosis and Hashimoto's?

Obesity?

Chronic inflammation?

Why are these conditions on the rise?

The current health epidemic and the rise of chronic health diseases can be tied back to the combined result of the rapid changes in our modern diet & cultural practices, hyper-sanitization, increasing rates of C-section births, immunizations and antibiotic excesses, decreases in plant food intake, carbohydrate heavy diets, and the increase in GMO foods. All these factors have created a recipe for microbiota disruption, dysbiosis and the loss of ecological diversity.

Let's stop the madness and *feed* your microbiome. Let's create a recipe for your ecological success and health victories.

In *Feeding Your Microbiome* we're going right to the core. Your core. I like to say that you're not what you eat, but what your body can do with what you eat. That comes down to the health of your digestive system and how you can break down and absorb the nutrients you take in, but also the deep interaction between the foods you eat and the bacteria you harbor.

Let's get feeding those good guys!

feeding your microbiome with

ferments

From birth onwards, the human gut microbiota swiftly increases in diversity. It reaches an adult-like stage at about three years of age. After this age, the composition may fluctuate in response to external factors such as the environment, antibiotics, and the foods we consume.

Eating fermented or probiotic-rich foods is an age-old secret to protecting health as well as preserving foods. The traditional process of fermentation allows airborne bacteria to grow on food to prevent it from spoiling. Once consumed, that bacteria, which is known as lactic acid bacteria, supports the growth of the healthy population of bacteria in your intestines.

The benefits of eating fermented foods was first discovered at the turn of the last century by Dr. Elie Metchnikoff. He received a Nobel Prize for his work on probiotics. His research lead to the understanding that ferments can:

- prevent chronic and degenerative diseases
- improve digestion
- possess anti-cancer and immune boosting properties
- control inflammation

When it comes to feeding your microbiome with ferments, remember that a little goes a long way. Think of kraut more as a condiment not a side dish. Have one to three forkfuls with each meal to boost digestion and give yourself a steady, daily dose of the good guys your gut needs. (Start slow and see how you feel!)

blueberry lemon digestive mocktail

INGREDIENTS

1 (12-oz.) bottle plain coconut KeVita (fermented coconut water)

2 Tbsp. fresh blueberries

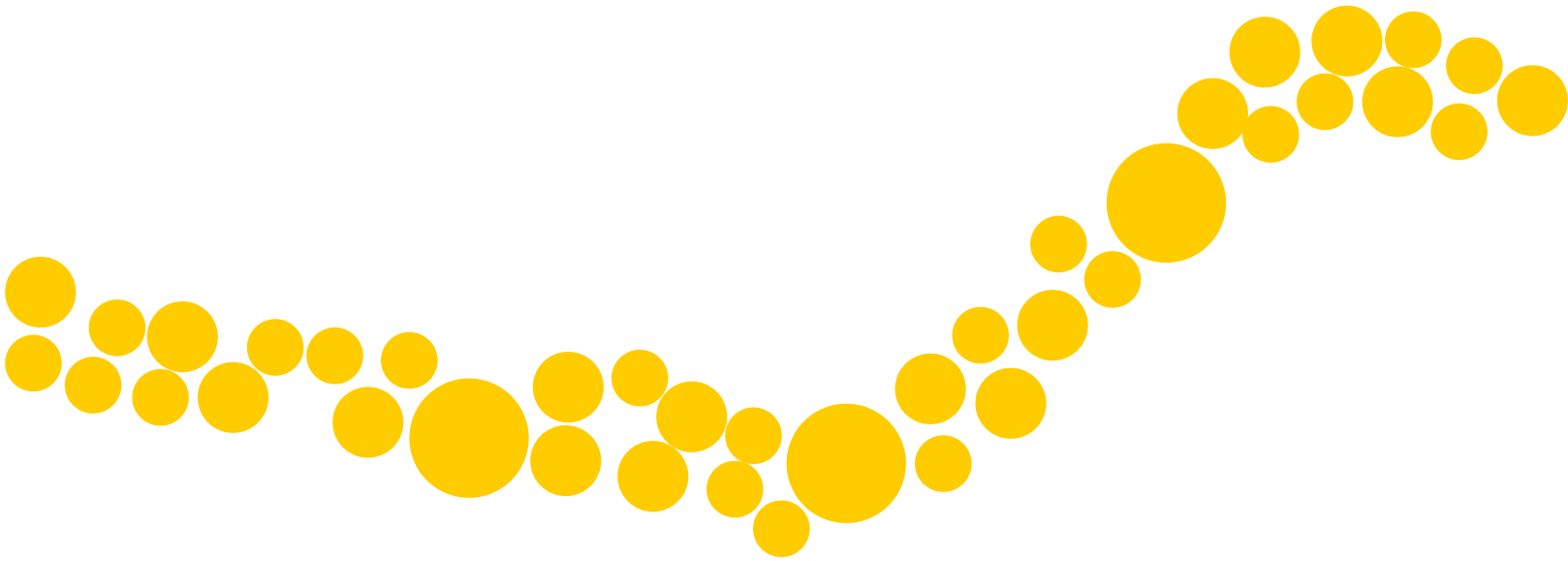
3 slices cucumber

2–3 slices lemon

PREPARATION

Add the blueberries, cucumber, and lemon to the bottom of a large glass or small pitcher. Muddle with the back of a wooden spoon until fruit is pressed and juices are released. Add 5–6 ice cubes and the full bottle of KeVita. It's best if you let stand for 5–10 minutes to allow the flavors to infuse, but you can certainly drink it right away. Put it in a fancy glass, serve it with a straw, and enjoy!

1–2 servings



simple sauerkraut

INGREDIENTS:

2 lbs. green or red cabbage
(about 1 large head or 2 small)

4 tsp. sea salt

PREPARATION:

Rinse cabbage and remove the outer leaves. Slice thinly, with either a knife or the shredding attachment of a food processor. You may slice it thin or thick, but the key is making it uniform in size.

Place shredded cabbage in a large metal or glass bowl. Sprinkle with salt. Massage salt into the cabbage; it will start to release water. Continue massaging until you have quite a bit of water and cabbage starts to soften. This might take a few minutes, and it does require some arm and hand muscles!

Using a large glass jar or kraut crock, press cabbage into the container. Do this slowly, with just a cup or two at a time so you can really press down. You want to compact the cabbage as much as possible to eliminate air bubbles and release more water.

Once all of the cabbage is in the jar or crock, place something heavy on top (like another jar filled with water) to weigh it down. Press down hard on the jar until water covers the cabbage. Ideally, you want at least 1 inch of water on top. Cover jar with a cloth and secure it with a rubber band. Tip: Label jar with the date so you know when it started to ferment. Place your kraut on the counter or in a cabinet.

Every few days, check your kraut. Smell it and maybe even take a little taste with a clean fork. Mainly, you want to make sure it's not smelling funky (like garbage or old socks) and that water still covers the cabbage. If the cabbage creeps up above the water, press down on your small jar to compact it more.

After a few days, it should get bubbly. That's a good thing! After a few more days, it should start to smell and taste sour. You can eat your kraut pretty much anytime, but letting it ferment for 2–6 weeks is usually ideal.

When you are ready to taste it, don't be afraid. As long as it smells like kraut, meaning a little bit sour, you should be good. If it smells like old socks or garbage, or if you see obvious signs of mold (green or black), something likely went wrong and you'll want to start over.

If there is a white layer on top, that is normal. You can simply scoop it out. If there's a pink layer on top, that is a type of mold but you can scoop that out, too. You can eat everything underneath.

When you are ready to taste it, smell it first. If it smells good, take a small bite and swish it around in your mouth but spit it out (don't swallow it). If it passes both of these tests, dig in and enjoy your kraut. Transfer your kraut to clean mason jars and store it in the fridge (it will safetley keep for many months)..

Serving size varies depending on the size of your cabbage but should get 1 to 2 large mason jars of sauerkraut.

homemade "cheater" coconut yogurt

INGREDIENTS:

1 (13.5-oz.) can full-fat coconut milk (My favorite BPA-free brands are Arroy-D, Native Forest, or Natural Value.)

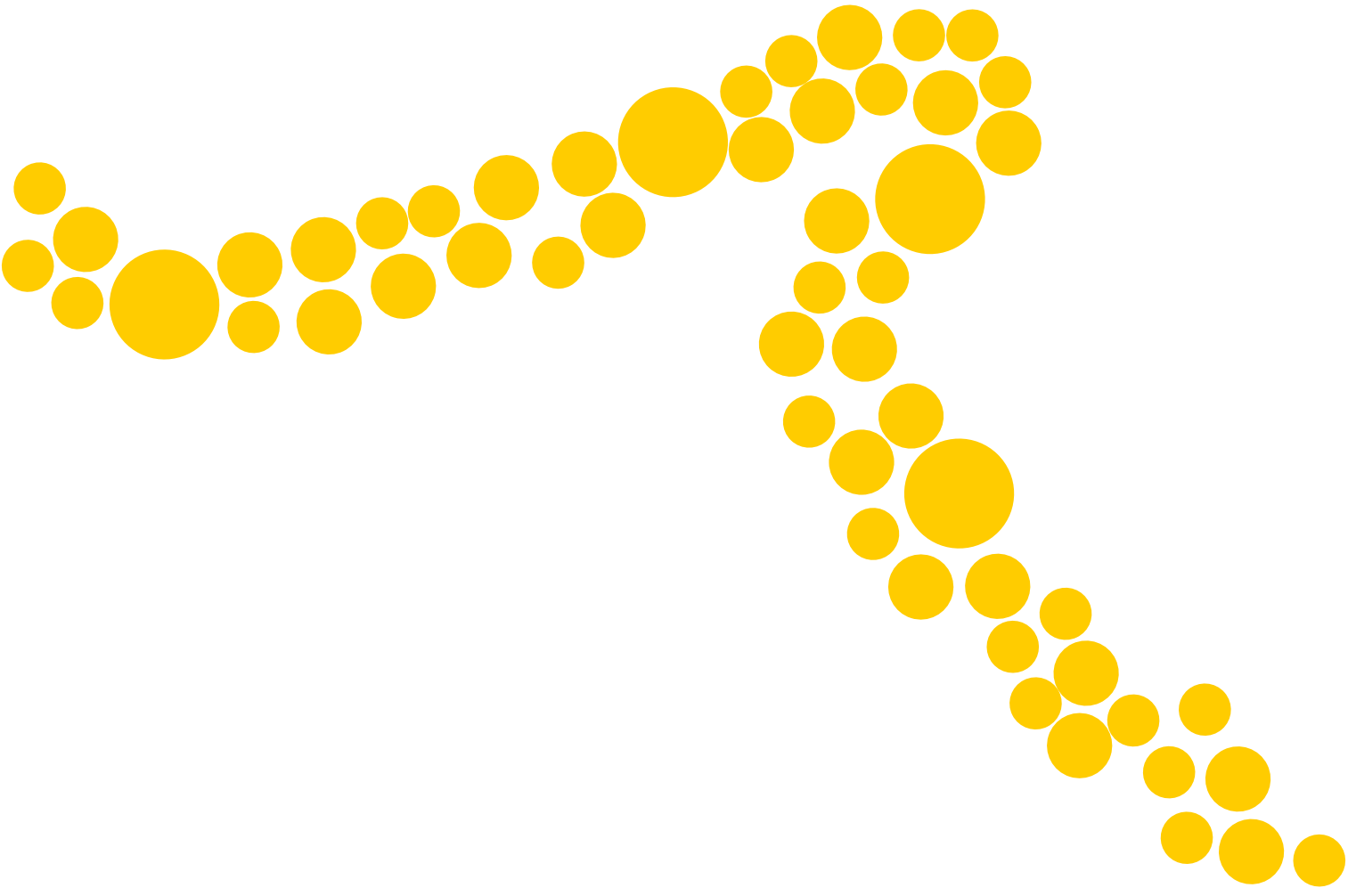
5 opened capsules OR 1 "pinch" GutPro probiotic powder

Note: If you don't have GutPro probiotic, another powder probiotic may work but I can't guarantee it. (Start with 50 billion CFU to try it out).

PREPARATION:

Pour coconut milk into a large mason jar, add probiotic powder, and screw on lid. Give it a good shake to mix it all together. Put it in a cool dark place on your countertop for 3–4 days, shaking the jar about 2 times per day. You'll know it's ready when the mixture smells a bit sour and starts to feel thicker when you shake it. When this happens, put it in the fridge to cool and thicken even more. Enjoy it as you would any other type of yogurt.

4–6 servings



feeding your microbiome with

resistant starch

Resistant starch is like nutrition for the probiotic bacteria in your colon. This type of starch resists digestion. What this means is that it travels through the gastrointestinal tract – the mouth, the esophagus, the stomach and the small intestine – without breaking down and becoming fuel for the cells throughout your system, like other foods do. Once resistant starch reaches the colon it is ready to do it's job.

In the colon or large intestine, much resistant starch is converted to short-chain fatty acids, one of which is called butyrate. Butyrate not only helps the colon to rebuild, repair and replenish, but it helps to lower cancer risk and increase the population of good colon bacteria to ward off disease. Butyrate is like a superfood for your colon and resistant starch is how you deliver that superfood!

The benefits of consuming resistant starch include:

- the reduction of inflammation in the colon by helping to lower the colon pH
- supporting the repair of digestive dysfunctions including symptoms related to both IBS (irritable bowel syndrome) and IBD (irritable bowel diseases such as Crohn's and Ulcerative Colitis)
- the potential increase in the absorption of minerals
- improved insulin sensitivity for blood sugar management and control

Foods that contain resistant starch include:

- cooked and cooled potatoes (potato flour and/or starch)
- green bananas
- green plantains (and their flour)
- legumes such as lentils and chickpeas
- cashews
- raw oats

If you have gas or bloating, watch how you feel adding these foods that contain resistant starch. You may have to go slow and build your way up.

purple potato salad

INGREDIENTS

5–6 medium-size purple potatoes, peeled or skin-on

Dressing:

½ cup raw cashews

1 Tbsp. chickpea miso

1 Tbsp. wakame (seaweed)

1 Tbsp. dried nettles

½ cup extra virgin olive oil

¼ cup water, or more depending on desired thickness

Juice of 1 full lemon

½ tsp. sea salt

Garnish:

3–4 Tbsp. fresh chives or other fresh herbs

PREPARATION

Scrub potatoes and chop into bite-size pieces. Fill a medium pot with water and bring to a boil. Add potatoes to the boiling water, reduce heat, and simmer until potatoes are fork tender (about 15–20 minutes). Drain potatoes and run under cold water to cool. Place in a large bowl.

For the dressing, add remaining ingredients to a high-speed blender (such as Vitamix, NutriBullet, or BlendTec) and blend on high until completely pureed.

Begin by adding about half of the dressing to the cooled potatoes. Mix until potatoes are coated with dressing, adding more if desired. Garnish with chives or other fresh herbs. Serve cold to get the full benefit of the resistant starch! You can use any leftover dressing to dress greens or other veggies.

4-6 servings

macho bread

INGREDIENTS

2 green plantains (also known as macho bananas)

Coconut cream from the top of a (13.5-oz) can of chilled coconut milk (My favorite BPA-free brands are Arroy-D, Native Forest, or Natural Value. The clear liquid can be saved for smoothies.)

2 Tbsp. coconut flour

1 Tbsp. pysllium husks (ground)

½ tsp. aluminum-free baking soda

¼ tsp. ground cinnamon

⅛ tsp. sea salt

Optional:

coconut sugar and cinnamon for topping

PREPARATION

Preheat oven to 350° F. Line a baking sheet with parchment paper.

Peel plantains, chop into smaller pieces, and place in food processor fitted with the S-blade. Pulse to break them down slightly. Add remaining ingredients and process until a smooth batter forms.

Scoop batter from processor onto parchment paper-lined baking sheet and spread to about ¼-inch thickness. It's easy to form as psyllium will make dough quite springy. If using cinnamon sugar, sprinkle onto dough as desired.

Bake for 20 minutes. Remove from oven and cool before slicing.

This also makes a good grain-free pizza crust!

Makes 12 –16 squares

feeding your microbiome with

polyphenol-rich foods

Polyphenol may be a crazy sounding word, but polyphenol-rich foods are easy to include in your diet, and your belly (and your immune system) will love them.

Polyphenol-rich foods include:

- blueberries
- flaxseed meal (I like it freshly ground and always refrigerate my seeds and meal)
- raw cacao
- plums
- cherries
- hazelnuts
- red wine (if you can tolerate it)
- resveratrol
- pomegranate
- curcumin
- and my favorite, green tea!

Chemical constituents in this class of food also travel through your small intestine largely undigested. The portion of the polyphenol-rich foods that make it to the colon are broken down by your gut bacteria into metabolites that increase the good guys and decrease the bad guys, helping you with your healthy inner ecology.

Several of these foods, including green tea, also have anti-microbial and anti-biofilm activity, supporting the inhibition of yeast overgrowth like Candida albicans and the formation of bacteria like e.coli, from disrupting the balanced microbiota population.

The polyphenols essentially act as prebiotics for your gut bacteria. Prebiotics are like food for your good bacteria – they are PRE biotics. The relationship between the polyphenol-rich foods and your gut bacteria is symbiotic. The bacteria work to break down the chemical bonds in the polyphenols to their biologically active components and the polyphenols feed and shape shift the make-up of the bacterial population. A win-win! Green tea anyone?

lemon low-glycemic blueberry smoothie

INGREDIENTS

2 cups water

2 cups wild blueberries

1 large handful parsley

Zest of 1 lemon

Juice of ½ a lemon

1 Tbsp. flax meal

1 knob fresh ginger, about the size of a small adult thumbnail

1 tsp. cinnamon

1 tsp. vanilla

20 drops vanilla liquid stevia

¼ cup Brazil nuts

Optional:

1 Tbsp. maca root powder

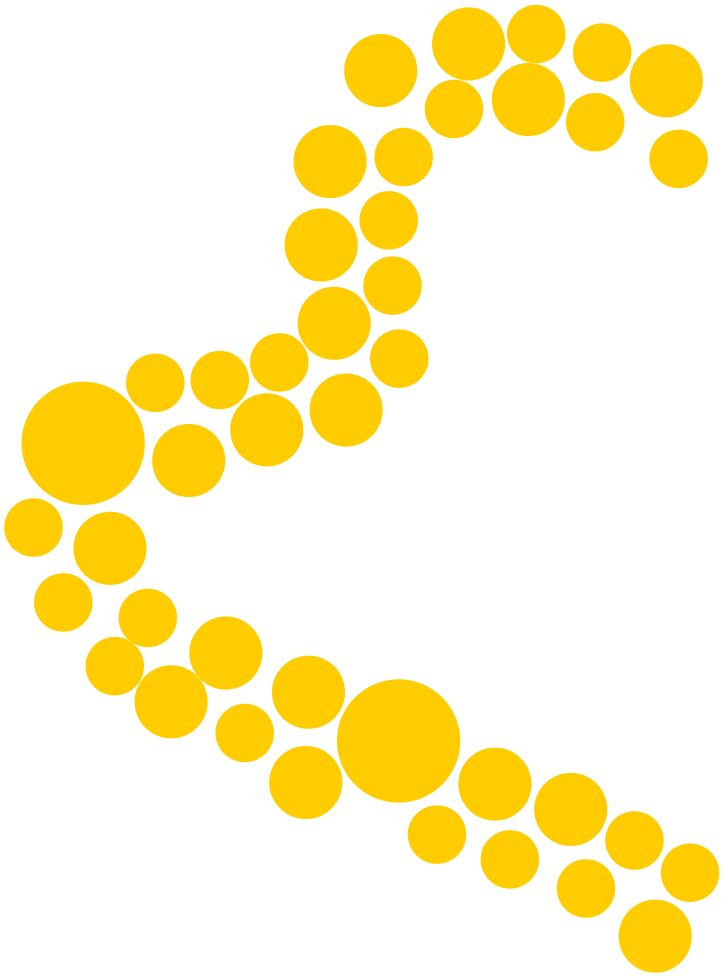
ice

PREPARATION

Place all ingredients in a high-speed blender (such as Vitamix, NutriBullet, or BlendTec) and blend on high until creamy and smooth. This smoothie is on the more liquid side, so be sure to add ice if you'd like it a bit more slushy-like.

With a less powerful blender, be sure to chop the parsley. Also, add ingredients and blend, one at a time, until all ingredients are liquefied.

1-2 servings



lemon-infused green tea gummies

INGREDIENTS

2 cups water

4 bags green tea

3 Tbsp. grass-fed gelatin

1 tsp. lemon zest

2 Tbsp. lemon juice

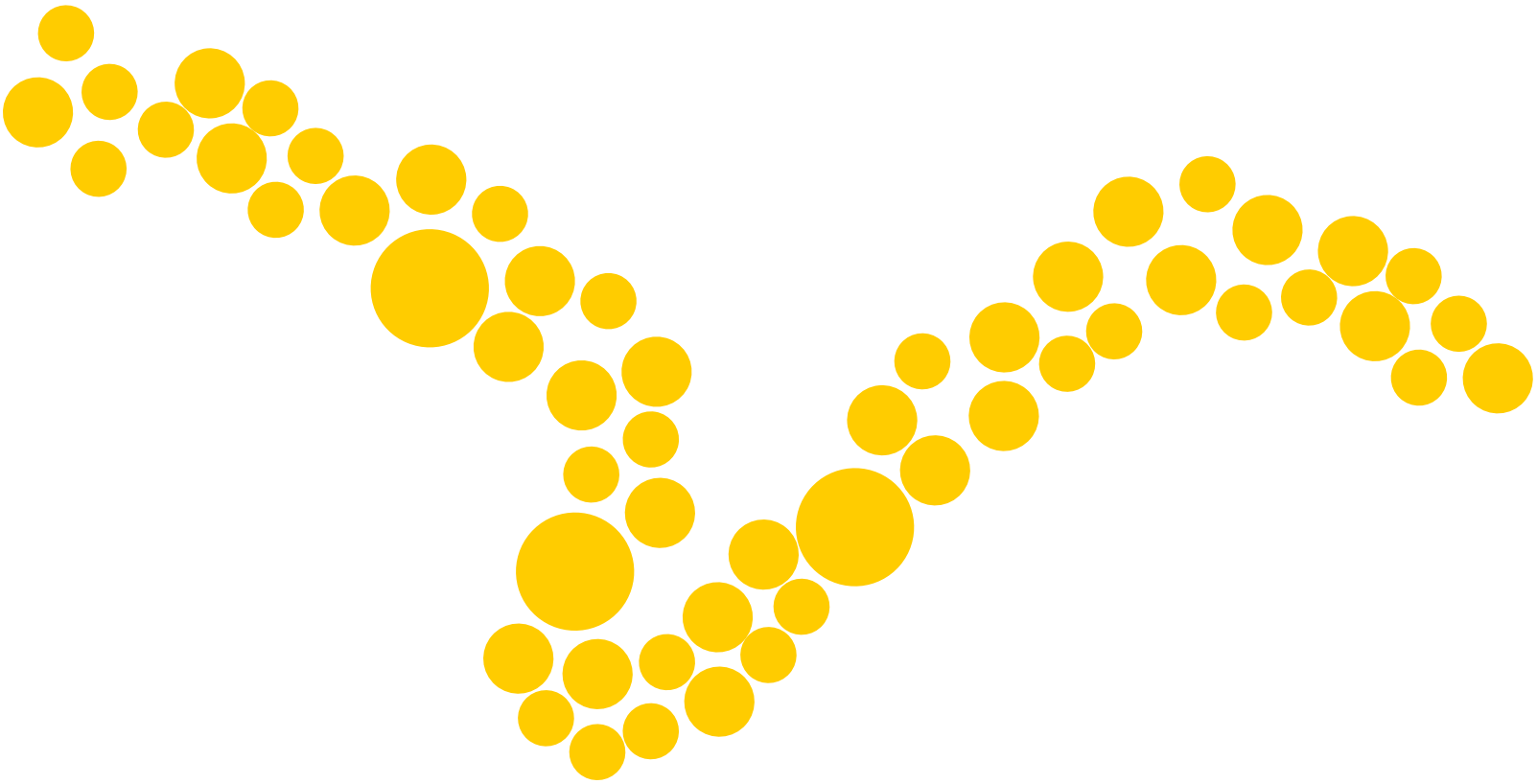
2 Tbsp. raw honey

⅛ to ¼ tsp. minced fresh ginger
(depending on how much you like ginger!)

PREPARATION

In a small saucepan, heat water until boiling. Add green tea bags and steep tea for at least 5 minutes. Once the tea is ready, slowly sprinkle gelatin over the tea and allow it to "bloom" or dissolve. (The key is to add it slowly so it doesn't get clumpy. Stir out any clumps with a whisk or fork or whirl the mixture for a few seconds in the blender. It will get frothy but it will work). Add remaining ingredients to gelatin mixture in pan and stir until well combined. Pour mixture into a glass dish or individual ramekins. Chill for at least 45 minutes or until gelatin is set.

8-10 servings



glossary of key words

GUT MICROBIOTA

The community of microbes that lives in the human gastrointestinal tract. This item includes bacteria, archaea, eukarya, and their viruses.

GUT MICROBIOME

The combined population of genomes and genes present in the gut microbiota.

DYSBIOSIS

This is a concept that was coined by the biologist and "father of natural immunity", Elie Metchnikoff, to describe a state of microbial imbalance in the human gut. Dysbiosis implies a change in the structural or functional composition of the microbiota that result in a disruption in health and homeostasis.

PREBIOTIC

These are foods for your probiotics or beneficial bacteria. Prebiotics typically consist of a non-digestible food ingredient that beneficially affects the host by selectively stimulating the growth or activity of one or a limited number of bacteria in the colon.

Categories of prebiotic foods include:

- fructooligosaccharides (FOS)
- lactulose
- galactooligosaccharides (GOS)

EXAMPLES OF PREBIOTIC FOODS INCLUDE:

- onions
- Jerusalem artichoke
- dandelion leaves
- asparagus
- leek
- garlic
- globe artichoke
- banana
- chicory
- burdock
- yacon

PROBIOTIC

A live microorganism that supplies benefit to the host when ingested, either directly through interactions with host cells or indirectly through effects on members of the intestinal bacterial population.

EXAMPLES OF PROBIOTIC FOODS INCLUDE:

- yogurt
- kefir
- kimchi
- sauerkraut
- other fermented vegetables
- tempeh
- miso
- sourdough (go gluten-free!)