





What's Inside

Why Gut Health is Important

Imbalanced Gut Microbiome

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Re-inoculate: Probiotics



Why is Gut Health Important?

Our gut contains an estimated 100 trillion microbes, which make up the microbiome. These microbes are mostly bacteria, but there are also some viruses and yeast.

Ideally, the microbiome should have a very diverse population of microbes and most of the microbes should be beneficial, with pathogenic (bad) microbes kept to a minimum.

The microbes are incredibly important, as they participate in or control all of our bodily functions, including:



Metabolism



Detoxification pathways



Signaling of hunger cues and cravings



Digestion and absorption of nutrients



Protection of the interior lining of the digestive tract



Immunity



Inflammation



Kids should eat until they are satisfied



Production of neurotransmitters (brain chemicals)



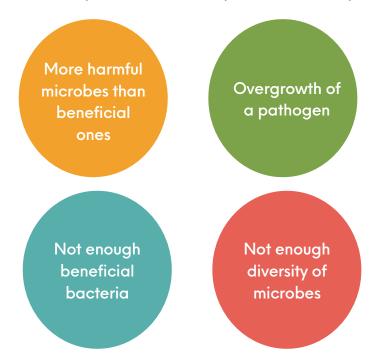
Effect on weight, mood, energy levels, cognition, and behavior

Gut microbes may be the root cause and solution for many health troubles.

There are three problems that can occur in the gut that may lead to health troubles. Let's explore...

Imbalanced Gut Microbiome (Gut Dysbiosis)

There are several ways in which dysbiosis may occur, including:



Symptoms of dysbiosis may include the following:



Imbalanced Gut Microbiome (Gut Dysbiosis)

There are multiple things that may cause dysbiosis, such as:

C-sections

Babies born vaginally acquire beneficial bacteria from their mothers in the birth canal

Formula Feeding

Breastfeeding may be better for the microbiome of the baby, but this depends on the health of the mother and the quality of the formula

Antibiotic Use

Antibiotics kill beneficial bacteria in addition to harmful bacteria

GI Infections

Food poisoning, traveler's diarrhea, and stomach bugs disrupt the balance of the microbiome

Poor Diet

A diet too high in refined sugar and starches, inflammatory fats (such as fried food), or alcohol or too low in fiber or vegetables can cause dysbiosis

Chronic Stress

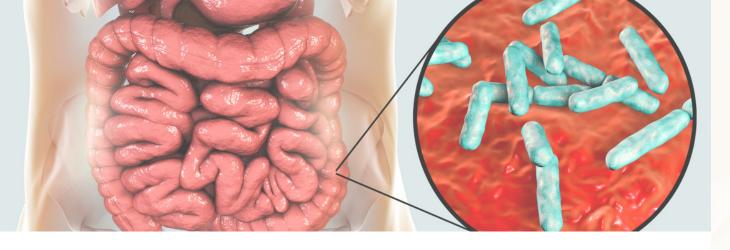
Stress can cause pathogenic microbes to thrive and overgrow

Toxins

Toxins found in the environment and food can cause dysbiosis

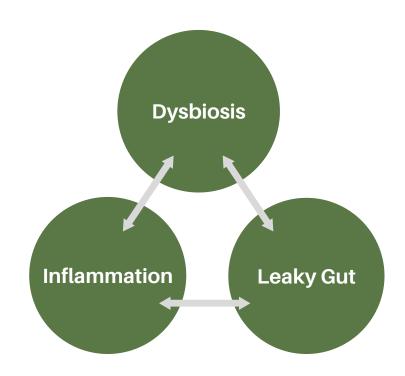
Low Stomach Acid

Stomach acid kills pathogenic microbes that are ingested along with food, but it may be reduced with aging or by taking antacids



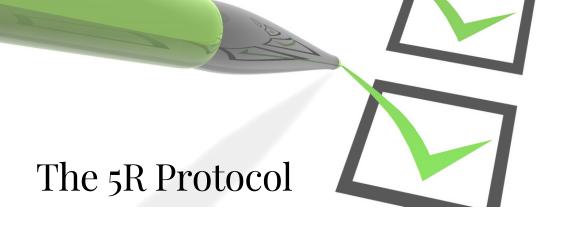
The Trifecta

There is a relationship between the quality of the microbiome, the integrity of the intestinal lining, and the degree of inflammation.



Dysbiosis causes leaky gut and inflammation, leaky gut causes inflammation and dysbiosis, and inflammation causes leaky gut and dysbiosis. Because they are all a cause and effect of each other, when one condition is present, all three result.

All three of these conditions can come together as a root cause of countless digestive and non-digestive ailments and diseases.



Functional nutrition focuses on treating the root cause of a problem, not just muffing the symptoms.

The protocol for healing the gut involves the 5Rs:



Remove the foods and microbes that compromise the gut, causing dysbiosis and inflammation

Repair

Repair the lining of the intestine to heal leaky gut

Replace

Stomach acid and enzymes need to be replaced in order to digest food properly and heal. Cleansing waves must be restored, and nutrients must be replaced as well

ir Re-inoculate

Introduce beneficial microbes into the microbiome

Relax

Learn how to manage stress in your life, in your body, and in your gut

It is important to note that the 5Rs should be done with the help and guidance of your healthcare practitioner

Inflammation

Inflammation is the response of the immune system to any threat, infection, or injury. Healthy inflammation is a short-lived, targeted response. Chronic inflammation, which is more widespread through out the body and continues for a long time, is unhealthy inflammation.

Chronic inflammation may be caused by different factors, such as:

Food sensitivity

The immune system perceives that food as a threat and will be in a state of inflammatory response whenever that food is consumed Pathogenic microbe overgrowth in the gut

The continued presence of those microbes in the gut will cause continued inflammation

Inflammation can be reduced, but not completely removed because a healthy amount of inflammation is required to fight off germs and heal acute injuries. Inflammation can be reduced by removing inflammatory foods from the diet. This includes generally unhealthy foods and foods to which the person is sensitive. Inflammation will also be reduced by killing off harmful microbes

arti-inflammatory food sources and supplements



Omega 3 Fatty Acids (Fish Oil)



Turmeric/ Curcumin



Green Tea Extract (EGCG)



Capsaicin (Chili Pepper)

Remove Harmful Microbes

Removing harmful microbes will be necessary for some individuals, but not others. It is best to discuss your options with your healthcare practitioner. Your treatment may be guided by testing for harmful pathogens.

Antimicrobials kill all microbes and are the best option for removing harmful microbes. Some antimicrobial ingredients include:



Antimicrobial ingredients may be found in individual ingredient supplements or supplements that contain a combination. It is important to use a high-quality product and work with your healthcare practitioner when choosing antimicrobial supplements. A biofilm enzyme may also be needed, especially in cases of candida overgrowth and SIBO.



After removing harmful bacteria, beneficial ones should be introduced to achieve the desired balance in the microbiome. This can be done in several ways.

Probiotics are live bacteria that have health benefits. Probiotics can be taken as supplements or can be found in fermented foods

The strains of probiotics that are supported by the most research include L. Plantarum, L. Salivarius, L. Rhamnosis, B. Infantis, B. Longum, B. Lactis, L. Acidophilus, S. Thermophilus, and S. Boulardii.

When buying a probiotic supplement, it is important to consult with your dietitian and choose a high-quality product because the production, encapsulation, and delivery of live bacteria are difficult procedures

food sources







kombucha



yogurt



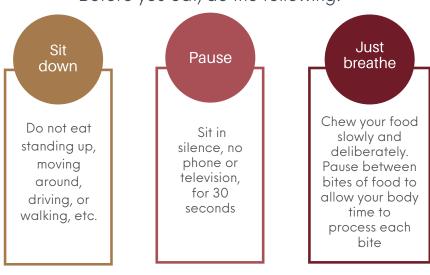
kimchi

Fermented foods are prepared in a way that healthful microbes are able to grow and ferment. Fermented foods can be made at home or bought in the store

Relax

Stress management can help minimize the harmful effects of stress. Stress feeds the bad bacteria, contributes to leaky gut, and increases inflammation

Before you eat, do the following:



Everyday Relaxation Tips

Exercise

Exercise has many beneficial effects and a recent study showed that exercise actually improves the microbiome. However, excessive and strenuous exercise can be damaging to the gut and body

Sleep

Insufficient sleep can impair your health and sabotage your progress. Practice good sleep habits, such as maintaining a sleep schedule, limiting or avoiding artificial light before bed, and avoiding caffeine in the second half of the day

Supplements

Supplements that are known to have a calming effect include magnesium, passionflower and skullcap flower, 4-amino-3-phenylbutyric acid, lavender oil, L-theanine, and CBD oil

Meditation

Meditation has been found to boost the immune system, improve concentration, increase self-acceptance and reduce stress. Just a few minutes a day can have a positive effect

Therapy

Cognitive-Behavioral Therapy helps people take control of their own experience. Research suggests this is the best treatment for reducing anxiety



The Whole Foods Diet is a plan that is safe for most people and can help most health conditions. It is better for the microbiome and promotes good health

Whole foods are foods that have not been altered since being harvested from the ground or animal

Examples of whole foods include:

- Organic chicken, grass-fed beef, fish, eggs
- Nuts, seeds
- Fresh fruits
- Fresh vegetables
- Organic dairy (if tolerated)
- Starchy vegetables: red bliss potatoes, sweet potatoes, winter squash, peas, corn, legumes/beans
- Whole Grains: wild or brown rice, buckwheat, oats, quinoa
- Healthy fats: avocado, extra virgin olive oil, coconut oil
- Sweeteners: 100% maple syrup, honey
- Bake with: almond our, coconut our, chickpea flour











Simple Quinoa Tabbouleh

Prep Time: 20 minutes Total Time: 40 minutes Yield: 4 servings

Salad

Ingredients

- 1 cup quinoa, uncooked
- 1 pint cherry tomatoes, halved
- 1 bell pepper, yellow, chopped
- 1 cucumber, seedless, diced
- 2 cup parsley, fresh, chopped
- 1/4 onion, red, chopped
- 1/4 cup pepitas, raw

Instructions

Prep

1. To cook quinoa: Place quinoa and water in a small saucepot in a ratio of 2:1, quinoa: water. For 1 cup quinoa, add 2 cups of water. Bring to a boil, reduce heat to simmer for about 8 minutes. You may need to crack the lid a bit to prevent overflow. Once the water has been absorbed. remove from heat, fluff with a fork, and return the lid. Set aside.

2. Prepare cherry tomatoes, pepper, cucumber, parsley, and onion according to directions.

Make

- 1. Add cooked quinoa and vegetables to a large bowl and toss to combine.
- 2. Drizzle with enough dressing to coat and toss again. Season with salt and pepper.
- 3. Top with pepitas and serve.

Dressing

Ingredients

- 5 Tbs olive oil
- 2 lemons

Directions

Prep

1. Juice lemons [each lemon yields ~ 3 Tbsp. of juice.]

- 1. Whisk together ingredients and add to salad.
- 2. Season with salt and pepper to taste.



Salmon with Lemon-Dill Dressing

Prep Time: 8 minutes Total Time: 15 minutes Yield: 4 servings

Ingredients

- 2 lb salmon, cut into serving sizes
- 4 Tbs lemon-dill dressing, prepared (meal plan recipe)
- salt, to taste
- pepper, to taste

Instructions

Prep

- 1. Cut salmon into serving sizes ~ 6 ounces each.
- 2. Prepare lemon-dill dressing.
- 3. Preheat oven to 350° F.

Make

- 1. Line a baking pan with parchment paper.
- 2. Coat salmon with 3 tablespoons of dressing, reserving 1 tablespoon to top salmon after cooking. Let marinate for 30 minutes. Be sure not to dip the brush you use for raw salmon back into the reserved dressing.
- 3. Bake salmon for about 10-15 minutes until cooked through [timing will vary depending on the thickness of the filets.]
- 4. Remove salmon from oven and top with additional dressing.
- 5. Season with salt and pepper to taste.

Lemon-Dill Dressing

Total Time: 30 minutes Prep Time: 15 minutes Yield: 4 servings

Ingredients

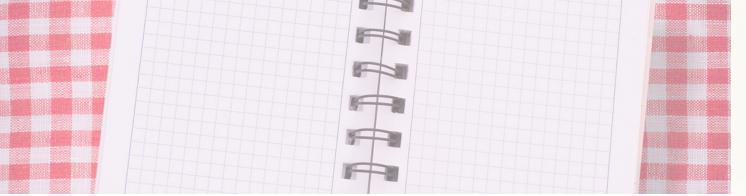
- 4 Tbs olive oil
- 1 clove garlic, pressed
- 11/2 Tbs red wine vinegar
- 1 lemon, zested and iuiced
- 1/2 cup dill, fresh, chopped
- salt, to taste
- pepper, to taste

Instructions

Prep

1. Zest and juice lemon.

- 1. Add oil, garlic, vinegar, lemon juice, 1/2 teaspoon zest, and dill to a small mason jar. Shake to combine.
- 2. Season with salt and pepper to taste.
- 3. Use as a dressing for salads and vegetables or as a marinade.



Shaved Brussels Sprout Salad

Prep Time: 15 minutes Total Time: 20 minutes Yield: 6 servings

Salad

Ingredients

- 2 lb Brussels sprouts, shaved
- 2 pears, 1/4" slices
- 1 cup pomegranate arils (1 small pomegranate)
- 1/3 cup pecans, raw, roughly chopped

Directions

Prep

- 1. Using a food processor, shave the brussel sprouts.
- 2. Seed the pomegranate (if necessary).
- 3. Roughly chop the pecans.
- 4. Slice the pears.

Creamy Tahini Dressing

Ingredients

- 1/4 cup olive oil
- 1/4 cup tahini
- 1 lemon, juiced (for 1/2 Tbs juice)
- 2 tsp Dijon mustard
- 2 tsp maple syrup
- 2 Tbs cold water
- salt, to taste
- pepper, to taste

Directions

- 1. Combine the shaved brussel sprouts, pears, pomegranates and pecans in a bowl.
- 2. To make the dressing, combine all ingredients in a mason jar and shake to emulsify. If necessary add more water to thin the dressing. Season to taste with salt.
- 3. When ready to serve the salad, drizzle the dressing over the salad ingredients and toss to combine.



Kale Salad with Tahini Miso Dressing

Prep Time: 15 minutes Total Time: 30 minutes Yield: 4 servings

Salad

Ingredients

- 2 Bunches kale, destemmed and shredded
- 1/2 small red onion, diced
- 1 cucumber, diced
- 1 bell pepper, red, diced (or other color)

Directions

Prep

- 1. To shred kale, bunch together a few leaves and slice
- 2. Dice onion, cucumber, and pepper.

Make

- 1. Add kale to a large bowl. Massage kale for about 2-3 minutes or until soft and bright green.
- 2. Add onion, cucumber, and pepper to kale toss well.
- 3. Drizzle salad with dressing and toss well before serving.
- 4. Optional: Top with a sprinkle of nutritional yeast and roasted chickpeas for added crunch! Search "Roasted Chickpeas" on your meal planner.

Tahini Miso Dressing

Ingredients

- 2 lemons, juiced (2 lemons = 1/2 c. juice)
- 1/4 cup olive oil
- 2 Tbs tahini paste
- 1 Tbs chickpea miso
- salt, to taste
- pepper, to taste

Directions

Prep

1. Juice lemons. About 2-3 lemons will yield 1/2 cup of juice.

Make

1. Add all ingredients to your blender and process until creamy. Add water as needed to thin.



Raspberry Chia Seed Jam

Prep Time: 15 minutes **Total Time: 20 Minutes** Yield: 6 servings

Ingredients

- 2 cup raspberries
- 1 lemon, juiced (2 tablespoon)
- 2 Tbs maple syrup
- 2 Tbs chia seeds

Instructions

Prep

1. Wash, prepare, and chop fruit as needed [remove seeds, stems, etc.]

- 1. Add fruit to sauce pan and simmer over medium heat until fruit breaks down. Mash with a fork to break apart and create a smoother jam.
- 2. Remove from heat and stir in maple syrup and lemon juice.
- 3. Stir in chia seeds and let stand for 10 minutes to thicken. If you want a thicker consistency, stir in more seeds a teaspoon at a time.
- 4. Transfer to a jar to cool.
- 5. Store in refrigerator for up to two weeks.



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