

Welcome Everyone

And the trillions of microbes living within you

Tonight's Educational Forum will begin shortly

Maintaining a Healthy Gut After Spinal Cord Injury

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Thank you everyone for coming to tonight's virtual session on Maintaining Gut Health. This is a continuation of Oregon Spinal Cord Injury Connection's ongoing sessions of Educational Forums. Tonight's forum will be recorded for our community members that couldn't attend. Please do not share any personal information that you aren't comfortable with being recorded. We'd like everyone to know this is a safe space to share and ask questions, so please respect others opinions and experiences. Please stay muted during all the presentations and you can put questions in the chat or save them till the end. Thank you.

Maintaining a Healthy Gut



Image credit <https://www.wsj.com/articles/those-probiotics-may-actually-be-hurting-your-gut-health-11570721466>



Pro/Prebiotics and Fibers

In today's forum we will be discussing the health benefits of including prebiotics, probiotics, soluble fibers and insoluble fibers in your food choices. The benefits of gut wellness can help with many things including regular bowel movements, weight maintenance, pain management, alleviation of medication side effects and much more!

The Importance of Gut Health

We are what we eat. What we eat and how our body processes it contributes greatly to our overall well being. Research is showing that our gut microbiome can affect every organ in our body. Much of our serotonin is created in the gut and so the gut affects our emotions as well. Imbalance can weaken our immune systems and cause painful inflammation. At risk populations (like us!) who may have more need for antibiotics have to work extra hard to maintain our good bacteria. The loss of which can result in one more health issue after the next. A healthy gut is our best tool (full of stool) to feeling good and energized! And many of the roads to good gut health are very tasty too!

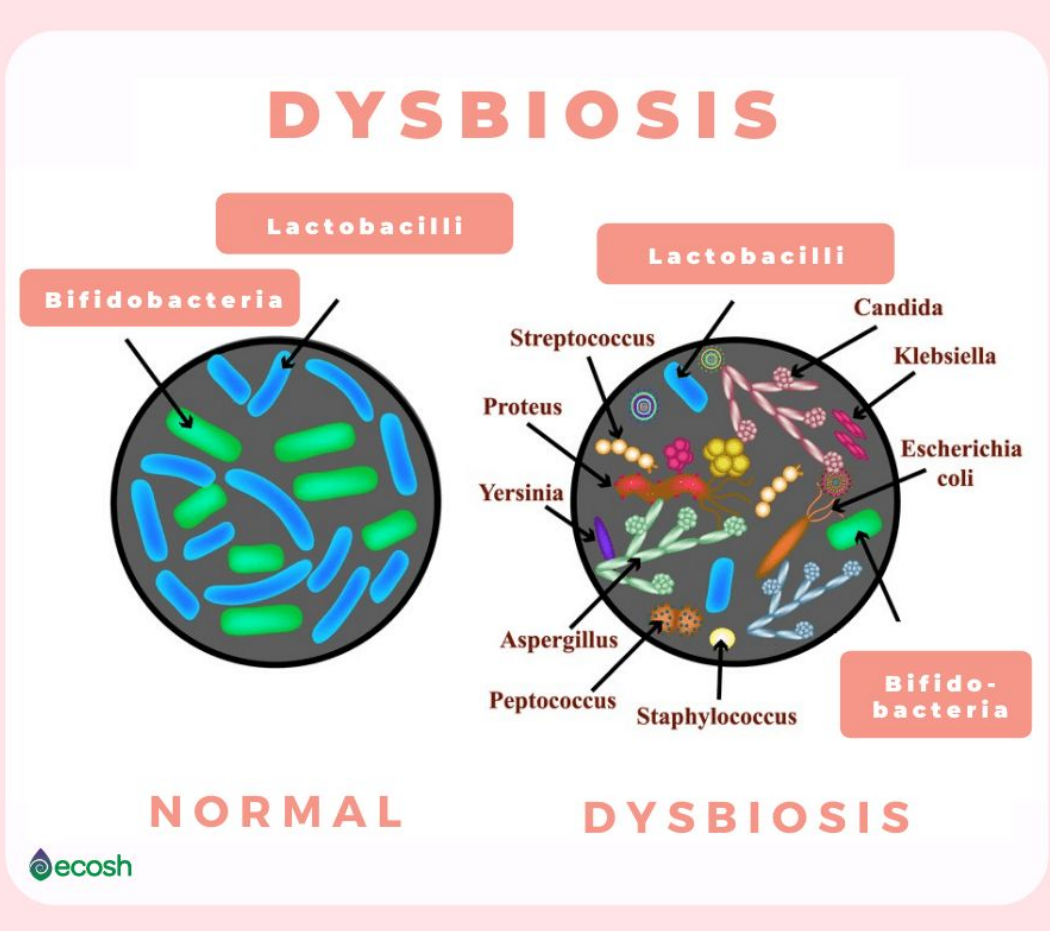


Image credit [the-human-microbiome-why-our-microbes-could-be-key-to-our-health](https://www.healthline.com/health/gut-health)

Dysbiosis....

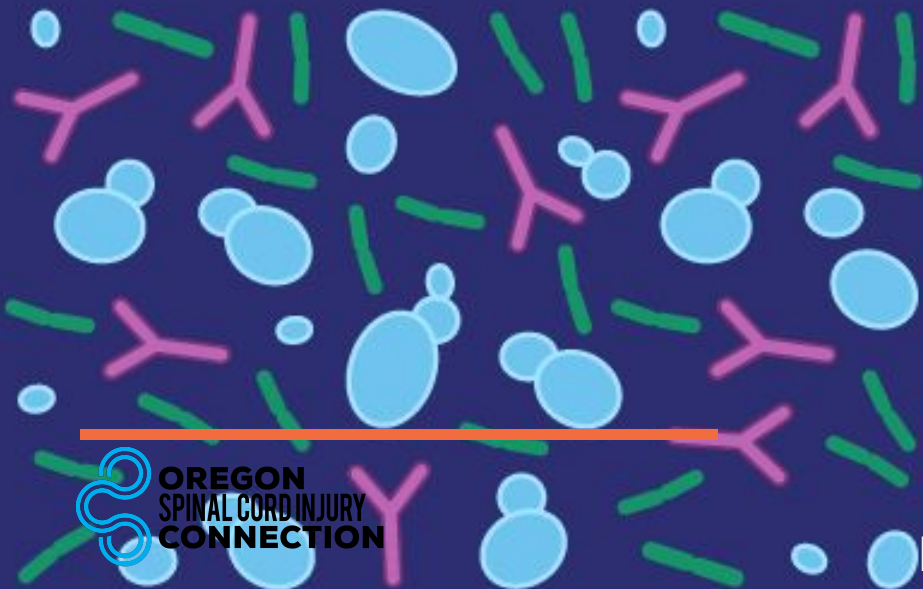
What could that be?

Dysbiosis is a word that will come up frequently today. It means that there is an imbalance of microorganisms in your intestines. After sustaining a SCI the gut-brain axis shifts in both human and rodent studies causing dysbiosis to set in. Using antibiotics also leads to gut dysbiosis, and unfortunately for a lot of people living with a SCI, UTI's are frequent and require antibiotics to treat. This causes many of us to live in a constant state of dysbiosis which then triggers an increase in neuropathic pain, bloating, gas, irregular bowel movements, fatigue, nausea, anxiety, depression and poorer quality of life.



probiotics

live microbes
that can provide health
benefits when taken in
sufficient amounts



prebiotics

food for the microbes
that provide
health benefits



Probiotics

Probiotics are foods or supplements that contain live microorganisms that help maintain or improve the good bacteria (normal microflora) in the body. Every human body is home to trillions of microorganisms that live within us and help support our bodily functions and health. Not all microbes are helpful, some types (like germs) can be harmful. The beneficial microbes, though, help to control the harmful ones. A healthy gut microbiome can boost overall immunity, help keep bowels regular, and reduce inflammation. Our gut microbiomes are affected by everyday things like stress and food choices. Probiotics are one way to restore it.



List of Probiotic Foods/ Drinks

- Sauerkraut / Kimchi
- Kombucha
- Fermented Pickles / Olives
- Apple Cider Vinegar
- Tempeh
- Cottage Cheese
- Yogurt / Kefir
- Raw Cheese
- Miso
- Sourdough Bread
- Apples / Green Peas
- And Many More!

Prebiotics

Prebiotics can be described as a non-digestible food product. Instead they ferment and become food for the human microflora. Prebiotics are foods that are high in fiber, primarily insoluble fiber. They help the healthy bacteria grow in your gut thus making the digestive system work better. Prebiotics also aid in our absorption of calcium. They improve metabolic health by changing the rate at which food causes spikes in blood sugar. They also help ferment foods faster as they go through the digestive tract, this helps you not get constipated. Prebiotics may reduce appetite and cravings for sugary foods and consumed along with probiotics may help reduce body fat.

List of Prebiotic Foods

- Garlic/ Leeks/ Onion
- Green Bananas
- Apples
- Cruciferous Veggies Like: Cabbage, Cauliflower, Broccoli, Brussel Sprouts, Kale, Arugula, Bok Choy, etc.
- Berries
- Beans
- Chickpeas
- Lentils
- Amaranth/ Quinoa
- Oats
- Almonds
- Chia seeds / Flax Seeds
- Psyllium Husks
- And Many More!



What Can Endanger Our Microbiome

Our gut microbiomes are affected by everyday things like stress and food choices. Example: A diet low in fiber and high in fats can degrade the microbe populations. Processed foods can also cause damage as they are often laden with emulsifiers and detergent like compounds. Other things that can affect a healthy balance are infectious illnesses and prolonged use of antibiotics or other bacteria-destroying medications.

When our microbiome balance is off, this called dysbiosis. Dysbiosis can lead to feeling bloated, abdominal cramping, diarrhea, constipation and mucus in the stool.



Fibers!

Soluble and Insoluble

Now let's talk about fiber. Did you know that there are two main types? Soluble and insoluble. A healthy diet should include both as they work in conjunction to promote digestion. Too much of only one type can have uncomfortable gastronomic affects.

Soluble Fiber

Soluble Fiber is called “soluble” because it dissolves and absorbs water forming a gel like substance that helps to slow down food digestion. This helps to slow down the process of food turning into glucose, which helps with appetite control and maintaining energy. The gel also protects the gastrointestinal muscles around the colon. Some soluble fibers also help maintain cholesterol by preventing dietary cholesterol from being broken down and digested. This in turn can lower the risk of heart disease and stroke.

List of Soluble Fiber Foods

- Chia Seeds / Flax Seeds
- Nuts
- Beans
- Lentils
- Barley
- Bran
- Oats
- Psyllium
- Whole Grains
- Fruits
- Sweet Potatoes
- Avocado
- Broccoli
- Carrots
- And So Much More!



Insoluble Fiber

Insoluble fiber does not dissolve in water and remains intact throughout the digestive process (sound familiar? It's prebiotic fiber), providing bulk and moving undigested waste through the digestive system. Many foods have both fibers, insoluble fiber comes from the indigestible parts like fruit skin and seeds. Like soluble fiber, insoluble fiber also helps us keep regular, reducing the risk of constipation and hemorrhoids.



List of Insoluble Fiber Foods

- Grains- Mixed Grain or Wholemeal Bread, Whole Wheat Pasta, Brown Rice, Corn
- Outer Skins - Vegetables & Fruits
- Legumes - Kidney Beans, Chickpeas
- Nuts and Seeds
- Psyllium
- Cauliflower
- Peas
- Dark Leafy Greens
- Avocados
- Any Many More!

Fiber Summary

It is important to include both types of fiber in a well rounded diet. Fiber is present in most plant based foods, especially when unprocessed. Both types of fiber aid in satiation and weight loss and promote a healthy gut microbiome.

Too much of one or the other can result in intestinal gas, abdominal bloating, abdominal cramping, diarrhea, and constipation. Some health conditions, (like IBS) may be exacerbated by too much fiber so always check with your doctor or nutritionist.

Food Choices vs. Supplements

All of these biotics and fibers are available in supplement form. Some people may need to supplement their diet to balance out their gut microbiome. Be cautious when choosing brands, many supplements are not regulated and may not pack the health punch they promise. Talk to your doctor to see if supplementing is right for you. A varied diet that includes whole foods (if possible) is the better way to establish good gut health. That's because vitamins and minerals are more potent when they come in food, they are accompanied by many other beneficial nutrients, including hundreds of carotenoids, flavonoids, minerals, and antioxidants that aren't in most supplements.



Smoking Effects on Gut Health

Cigarettes contain thousands of chemicals and several known carcinogens that negatively affect our health in many ways. Unsurprisingly, smoking also negatively affects our gut health. Here are some of the ways how..

- Smoking disrupts gut bacteria, impacting digestion and absorption.
- Reduced gut microbiome leads to dysbiosis, IBS and digestive issues.
- Smoking causes constipation, heartburn, and hinders nutrient absorption.
- Frequent abdominal pains, IBS, and inflammation linked to smoking.
- Smoking heightens risks of ulcers, Crohn's, and stomach cancer.

Easy Probiotic Recipes:

Sauerkraut

- Head of cabbage, mostly finely chopped with two big leaves set to the side
- 2-3 TBSP kosher salt

In large mixing bowl (with clean hands!) massage salt into chopped cabbage. The salt will pull a lot of liquid out of the cabbage creating the brine.

Once softened and the bulk is much decreased, taste the cabbage. It should be salty but not disgustingly so.

Pack cabbage and bring into a jar or crock, making sure the cabbage remains submerged by squishing everything down with the set aside big leaves. Do not seal. Taste after 3 days, and then everyday until desired taste! Seal and put in fridge

Kefir

- 1 cup milk
- 1 tsp active kefir grains

Combine kefir grains and milk in a GLASS jar. Cover with cheese cloth (so it can breath). Secure cheese cloth with rubber band. Let sit out in room temperature for 24-48 hrs. Give it a stir and strain into a non-metal storage container. Keep in fridge up to two days.

Put the strained out kefir grains into more milk to keep that kefir coming! The grains will multiply over time and can be given away to other lucky kefir makers!



High Fiber Cookie Recipe

- 1 ¼ cups quick-cooking oats
 - 1 cup white whole wheat flour
 - 1 ½ tsp baking powder
 - 1 ½ tsp cinnamon
 - ½ tsp kosher salt
 - ¼ cup unsweetened applesauce
 - 4 TBSP unsalted butter (melted and cooled)
 - 1 large egg
 - 1 tsp vanilla extract
 - ½ cup dark chocolate chips
 - ¼ cup raisins
 - ¼ chopped raw walnuts or pecans
- Preheat oven to 350
 - In large bowl whisk together oats, flour, baking powder, cinnamon and salt
 - In medium bowl, combine applesauce, butter, egg, vanilla, and honey. Whisk until blended
 - Pour liquid mixture into flour mixture and stir until just combined
 - Fold in chocolate chips and raisins and nuts
 - Let chill in refrigerator for 30 minutes
 - Spoon 1 ½ inch balls onto parchment lined baking sheet (leave 1 in. space between)
 - Gently flatten balls with hand to be ¾ in. thick
 - Bake until golden brown, about 9-10 minutes
 - Let cool on rack sheet for 2 min then move cookies to cooling rack
 - Enjoy!



Thank you very much, everyone, for participating in this educational forum. We hope it was useful to you and we are encouraged and grateful for your interest and time. We need to ask something of you... it would be extremely helpful to all of us who are involved in the ed forums to receive your candid and honest feedback on this particular event. Please do feel free to share openly, as any and all input will truly help us.

I am going to turn off the zoom recording now and then ask the feedback questions and note the responses. Thank you for staying online for a few minutes longer if you can.