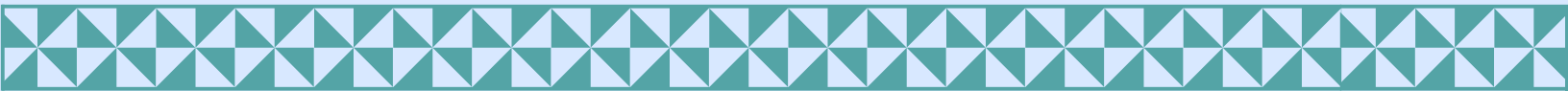


PROBIOTICS

THE MICROBIOME WITHIN THE BODY

Larissa Wheeler, BHS, Naturopathic Student





Beneficial Bugs

What is Inside?

Beneficial Bugs

What are probiotics?

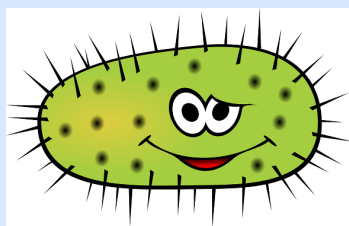
What are prebiotics?

How do I get probiotics?

Fermented Foods

- Food Sources

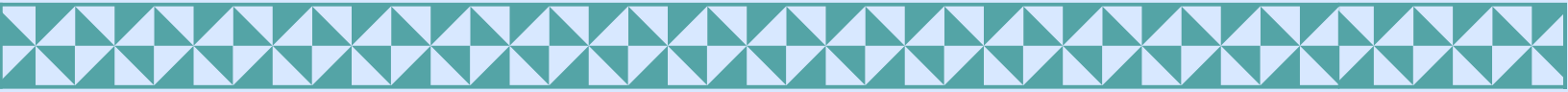
Sauer Kraught Recipe



You have no doubt heard the benefits of a healthy gut flora. Gut flora, in simple terms, means a good balance of good and bad bacteria. This can also be called intestinal flora. Recent studies suggest that a gut flora is essential for so much more than digestion. In fact, a good balance of bacteria in the gut protects us from getting sick from imbalance, overreaction, autoimmunity, and gastrointestinal compromise. Further, a healthy gut microbiome has been shown to decrease the risks of : Irritable bowl syndrome (IBS), Crohns disease, Autism, Alziehmers, Type 1 Diabetes!

The gut is a source of not only healthy digestion and the absorption of nutrients, but a healthy gut is actually important for producing certain hormones. For example, ten percent of the serotonin that our bodies produce is made in the brain, and the other ninety percent is produced in the gut! Talk about beneficial bugs! Obviously, our gut has a larger capacity than simply digesting your lunch!

We should not be afraid of bacteria living on and in our skin. In fact, there are more e-coli cells in your gut than there are people on earth! We need them to be healthy and maintain that gut-balance. However with increased antibiotic use, the microbiome that is our gut is thrown off kilter. Antibiotics cannot tell the difference between the healthy and unhealthy bacteria, so it kills them all. This can cause our bodies to react in adverse ways. For example after several rounds of antibiotics, have you ever noticed that you are more susceptible to getting a cold – more often than someone else? Perhaps you experience other symptoms such as: diarrhea, lethargy, or fatigue among others. This could be a result of immunocompromised due to the lack of beneficial bacteria in your gut! It is always a good idea to follow up a round of antibiotics with a probiotic supplement in order to repair that intestinal flora balance



What are Probiotics?

Probiotics are tiny organisms which are present in our gut which have a symbiotic relationship in our bodies. Symbiotic relationships are those in which both parties receive benefit from one another. From us, the gut-bugs have somewhere to live and in return, they provide us with benefits for immunity and digestion. Simply, probiotics are beneficial organisms which work hard to keep their homes (us) squeaky clean and running optimally.

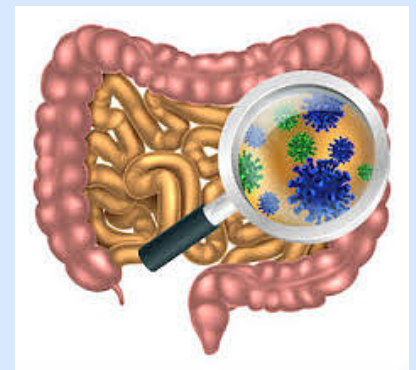
What are Prebiotics?

Prebiotics are the food for the gut bacteria. They differ from probiotics because prebiotics are nourishment which helps the organisms to grow, while probiotics are newly introduced bacteria in the gut. Just like us, the gut-bugs need food in order to do their jobs. Some natural sources of prebiotics include raw Jerusalem artichokes, raw dandelion greens, , raw garlic, and cooked or raw onions.

How do we get Probiotics?

When we are born, we get our probiotics from our mothers. If babies are born vaginally, they get beneficial bacteria via the vagina and the rectum. Babies who are born via cesarean section do get some beneficial bacteria as well from the skin and the environment.

After birth, babies get their probiotics from the breastmilk. Breastmilk is a nutritional powerhouse which not only provides energy and the perfect balance of proteins, carbohydrates and fats for baby to grow, but relays probiotics (read: natural immunity boosters) to baby. It has been shown that the properties of breastmilk, including their probiotics have a substantial benefit for baby when he/she is young, and later in life.



These benefits include:

- A three times decreased risk of respiratory infection
- A three to four times decreased risk of diarrheal disease
- A decrease in the incidence of SIDS (Sudden Infant Death Syndrome)
- A decrease in the incidence of atopic conditions (eczema, asthma and allergies)
- A decrease incidence of food allergy/sensitivity
- A decrease incidence of ear infections
- A decrease incidence of obesity
- A decrease risk of developing autoimmune disease
- An eight times decreased risk of developing cancer prior to the age of 15.


In childhood and adulthood, we can get our probiotics from a variety of sources. First, through food sources. There are many foods which provide healthy probiotics, naturally. We will discuss these foods a little later. Second, you can get probiotics through supplementation. Supplements allow us to get a more concentrated amount of probiotics into the body. This can be beneficial especially when we are trying to build up the good bacteria to restore the intestinal flora balance. There are many great options on the market today, please speak to your Naturopath to ensure you are getting a quality product and the correct dosage.



Fermented Foods

Now that you understand the benefits of probiotics, I want to warn you before you run out and buy a yogurt that has a belly dancer in the commercial. You may find it beneficial to consider some different options to increase your probiotic intake. Yogurt can be a good option, especially if dairy is tolerated; however, most commercial yogurts actually include so much added sugar and artificial ingredients that the benefits can be negated or lost with processing.

Fermented foods are an excellent and yummy source of probiotics. These foods can be eaten alongside or without probiotics supplements.

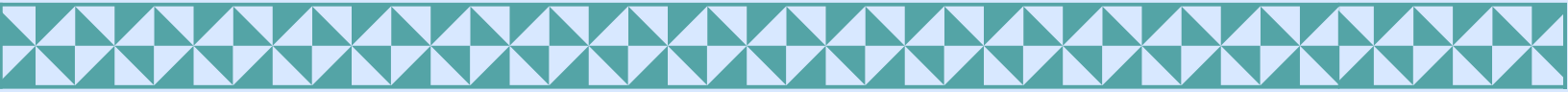


Along with improving digestive health including reducing constipation, bloating and gas, these are great for strengthening immunity, the absorption of vitamins and minerals, as well as have been shown to reduce inflammation. Talk about a powerhouse of gut benefits!

List of Seven Healthy Fermented Foods

1. **Sauer Kraut** : This fermented product is made from cabbage and salt. Make sure when you pick it up it doesn't contain any additional additives, and that it is kept refrigerated. Better yet, make it yourself with this easy recipe taken from Joyous Health's Kathrin Brunner at the end of this factsheet.
2. **Kimchi** : Similar to Sauerkraut, but the cabbage is fermented with spices like cayenne and ginger. Yum!
3. **Kombucha** : This product is made from fermented tea. This is a great boost for before or after a meal.
4. **Kefir** : Typically made from cow or goats milk and even can be found from coconut milk, kefir has three times the amount of probiotics. Easily added as a sub for yogurt in smoothies or for breakfast. Buy the unsweetened and unflavoured variety and add your own fruit, honey, nuts and seeds for flavour.
5. **Tempeh** : This is made from fermented soybeans and is a great protein source. Don't be afraid of this soy product, as it is minimally processed and more easily digested than tofu.
6. **Miso** : This is a very salty paste made from fermented soybeans. Delicious in moderation in a stir fry or in miso soup.

Please enjoy a delicious sauer kraught recipe on the following page. I hope that this factsheet has given you some helpful information on one of the body's most underrated processes. I hope that you feel inspired to integrate mindfulness of gut health into your daily life. ♥





Crunch-tastic Kraught

Recipe adapted from Kathrin Brunner at Joyous Health.

Ingredients

1. 1 large head organic purple cabbage (please choose organic, we need the good bacteria on the cabbage to help us ferment)
2. 4 organic carrots
3. 1 organic tart apple
4. 1-2 Tbsp high-quality sea salt (such as Himalayan or Celtic)

Instructions

1. Set aside a few cabbage leaves. Shred or chop the rest of the cabbage (you can use the attachments on a food processor to speed things up), and place in a large bowl. Sprinkle on 1-2 Tbsp of sea salt (use more salt for a crunchier kraut).
2. Roll up your sleeves and massage kraut with your hands for a few minutes until cabbage begins to soften and release water.
3. Coarsely grate or julienne the carrots and apple and add to cabbage. Mix together, then begin to stuff mixture into clean, glass jars. Push down with your hands or the back of a wooden spoon or mallet, getting rid of any air bubbles and helping to push more water out of the cabbage. Keep pushing and packing until the released water is covering the kraut (you may need to let it sit for a little while to let the cabbage release enough water). Pack jars as tightly as possible within 2-inches of the rim. Once enough water has released to cover the veggies, use your reserved cabbage leaf to push the veggies down into the water. (This is important, keeping the veggies submerged lets good bacteria ferment and keeps bad bacteria out.) Top with a lid, but don't tighten completely as you need to let air from the fermentation process escape.
4. Set in warm place, out of direct light for 2-7 days depending on how warm your house is (the warmer your home, the less time it will take). Begin tasting after 2 days, once it's tangy to your liking, discard cabbage leaf, close lid tightly and transfer to the fridge.
5. Enjoy a small portion daily for best results.

Notes

1. Tips: In the first few days, you will see air bubbles rising, this is a good sign! If this causes extra liquid to spill over, set jars in a shallow plate.
 2. If you don't have enough water pulled out of the cabbage to submerge everything, then you will need to add some brine (salted water). Use 1/2 Tbsp of salt per cup of water.
 3. If you see foam forming on top as it ferments, this is normal, just spoon it off.
 4. Keeps for several months in the fridge.
- 