

Body Balance: Protect Your Body from Pollution with a Healthy Lifestyle

Fundamentals of Fermented Foods

Fermented foods are foods that have been aged in a way that allows good bacteria to develop in them. Consuming these good bacteria can benefit health. Common fermented foods are yogurt, soy sauce, sauerkraut, and some types of pickles. Although these foods may seem like an odd assortment, they are all fermented and contain good bacteria.

How Can Bacteria Be Good?

Different types of bacteria are either good or bad for the body. It is common to hear that bacteria are bad and can cause illness. That is true for some types of bacteria, but there are others that do the opposite. Good bacteria work with the body to help the body stay healthy. These good bacteria are called probiotics.

Probiotics are live bacteria and yeasts that help support the digestive system. After people consume probiotics, they



travel to the gastrointestinal tract (also known as the gut, or stomach and intestines). There, they help prevent the development of diseases. One way they do this is by helping keep the gut acidic. This prevents harmful bacteria from growing, and may help prevent against the development of cancers of the gastrointestinal tract. This is also one of the reasons probiotics are said to help support the immune system.

Where Have You Heard About Probiotics Before?

It is very common to hear probiotics mentioned in yogurt advertisements. Common probiotics includes *Lactobacillus* and *Bifidobacterium*. Eating yogurt and other fermented foods is an easy way to include more probiotics in your diet. In fact, yogurt with live cultures may be one of the best sources

of probiotics because it helps keep the good bacteria alive and active until it is consumed.

What Are Prebiotics?

If probiotics are good bacteria that exist in the gastrointestinal tract and can be increased by consuming foods or supplements that contain probiotics, then what are prebiotics? Prebiotics support good bacteria that already exists in the gastrointestinal tract and are found in many foods as a part of fiber. They stimulate the growth of good bacteria and help the good bacteria get stronger. Prebiotics are in many common foods. In fact, you are probably eating prebiotics already and don't even know it!

Common foods that contain prebiotics

- Onions
- Garlic
- Asparagus
- Sweet potatoes
- Whole grains
- Bananas

Eating a diet high in fiber will help ensure you consume plenty of prebiotics.

Is Your Gut In Good Health?

Many things can have a negative impact on gut health.

- Lack of physical activity
- Chronic stress
- High-fat diet

All of these things can weaken the health of the gastrointestinal tract. Consuming fermented foods will help build back up the good bacteria in the gut, support the immune system, and improve digestive health.

Fermented Foods and Pollution

Pollution is something we are exposed to and cannot always avoid, often from our local environment including air, water, soil and food. Exposure to certain pollutants lowers our immune system's ability to protect the body, making the body more susceptible to acute and chronic diseases. Eating fermented foods supports our immune system by providing probiotics, which may help protect the body from some of the negative effects of pollution. The University of Kentucky is a participant in the Superfund Research Center (SRC), which conducts ongoing research on the effects of pollutants and hazardous chemicals on the environment and the body. For more information, see Inter-Program (IP) publications 76 and 77. Good nutrition is one of our best defenses for staying healthy, even in the presence of environmental pollutants.



Fermented Foods and How to Incorporate Them into Meals		
	What is it?	Try it!
Yogurt	A dairy product which usually contains several types of probiotics. Check the ingredient list to determine if they contain Lactobacillus and other cultures.	Use yogurt, fruit, ice, and juice to make a fresh and healthy smoothie. Mix together 1 cup of plain yogurt with two tablespoons of honey to make a yogurt dip or dressing for fruit salad.
Greek Yogurt	Regular yogurt that has been strained, it also usually contains probiotics. It is thicker than regular yogurt and higher in protein.	Try using plain, unflavored Greek yogurt as a direct substitute for sour cream and mayonnaise. Using fat-free Greek yogurt is also a way to reduce fat intake.
Soy Sauce	Made from aged, fermented soy beans, traditionally used in Asian cuisine. Low-sodium soy sauces are also available.	Savory Chicken: Brush any cut of chicken with soy sauce and sprinkle ginger and garlic over it, then bake or sauté.
Miso	Miso is a Japanese food. It is fermented soybean paste. It is a very versatile condiment.	Use miso to make a traditional Japanese breakfast - miso soup. Whisk 1 tablespoon of miso per cup of hot water to make the soup. Add thin mushroom and onion slices.
Sauerkraut	Sauerkraut is chopped cabbage that has been fermented in a salty brine. It is one of the easiest fermented foods to make at home.	Sauerkraut pork chops: Try topping pork chops with sauerkraut and baking them in the oven for a savory dinner. Sauerkraut also makes a great sandwich topping. It goes well with any meat, Swiss cheese, and a dark rye bread.
Kefir	Kefir is a dairy-based drink full of probiotics, similar to yogurt drinks. It comes in plain and flavored varieties.	Try kefir by itself or as an addition to any smoothie. Kefir Popsicles: Pour fruit flavored kefir into popsicle molds for a healthy, kid-friendly treat.
Kimchee	Kimchee is spicy pickled vegetables, like cabbage, radish, cucumber, and green onion with spices like garlic, ginger, and chili powder. It is the national food of Korea.	Kimchee is a condiment and side dish, similar to American coleslaw. It can be added to a burger, deviled eggs, or mixed in fried rice. You can buy kimchee at health food stores or it can be made at home.
Cultured Buttermilk	Most buttermilk in stores today is cultured buttermilk - probiotics are added to low-fat milk and fermented to make buttermilk. It is similar to kefir and yogurt.	Use buttermilk to make coleslaw, a creamy salad dressing, or traditional buttermilk biscuits.

Summary

Many types of fermented foods contain probiotics or good bacteria. Choosing to eat fermented foods which contain probiotics and high fiber foods that contain prebiotics support gastrointestinal tract health. These foods are an important part of the diet because good

nutrition is one of the body's best defenses for staying healthy, even in the presence of environmental pollutants.

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