

The History and Health Benefits of Fermented Foods

The Health Trend Of the Future

- Finds its root in the past
- Fermented foods are making a comeback
- Especially as research is focusing on gut health
- Once again, our ancestors knew best and science is now confirming what they knew to be true.

History

- Most sources indicates that fermentation existed as far back as 6000 BC
- Every civilization since has at least one fermented food as part its culinary culture
- Most historians assume its presumed purpose is as a preservation technique
- However, our ancestors understood the health benefits, too

History

- In some cases, a food was fermented in order to protect against toxins the food contains
- In West Africa, garri is a staple of the diet. It is made from cassava which was fermented to de-activate poisonous cyanides
- Other fermented foods protected against food-born illnesses such as German sauerkraut and Korean kimchi

History

- The earliest type of fermented foods were beer, wine, and other beverages
- Leavened bread (which we now call sourdough bread and is leavened primarily by yeasts) was also an early form of fermented food
- Cheese was another early fermented food, made from bacteria or mold as a means of preserving milk before refrigeration.

History

- Our ancestors did not know how fermented foods transformed the food
- They just understood that the foods had benefits they did not previously have before fermenting
- With the invention of the microscope in the 1500s, the study of microbiology was born
- In the 1700s, the mystery of wine was unravelled and further work to understand fermentation started in the 1830s by French and German scientists

What Is Fermentation?

- Fermentation is the result of the action of living microorganisms
- Microorganisms produce enzymes which cause the reactions to create the fermented product
- Good bacteria feed on sugar and starch and produce lactic acid
- This is known as lacto-fermentation

Lactofermentation

- Some foods like sauerkraut, kimchi, beet kvass and cultured vegetables use an anaerobic process. This is usually what is meant by lacto-fermentation
- Other foods use a combination of lactic acid bacteria and yeast such as kefir, sourdough bread and kombucha

The Good Bacteria

- Bacteria outnumber the cells that contain our unique DNA 10 to 1
- 85% of the bacteria in our bodies are good bacteria – found in the mouth, small and large intestines, the vagina and the urinary system and our skin
- Keeps bad bacteria, fungus and other pathogens at bay

Good Bacteria and Fermentation

- When we talk about good bacteria and fermentation, this can occur outside the body in the case of the fermenting food
- It can also occur inside the body as part of the digestion and elimination.
- Through the process of fermentation good bacteria has many roles

Role of the Good Bacteria

- When we talk about good bacteria and fermentation, this can occur outside the body in the case of the fermenting food
- It can also occur inside the body as part of the digestion and elimination.
- Through the process of fermentation good bacteria has many roles

Role of the Good Bacteria

- Good bacteria makes the phytonutrients more bioavailable and has a synergistic relationship them and with fiber
- A mother's good bacteria can prevent infections in the baby and give the baby its start in building its own good bacteria levels
- Good bacteria communicates with the brain and can help with mood disorders like depression

Role of the Good Bacteria

- Lack of good bacteria has been implicated in the following issues: heart disease, diabetes, allergies, cancer, inflammation, obesity and autoimmune diseases
- Aids digestions and elimination
- Helps detox out mercury and other heavy metals as well as other toxins
- They prevent leaky gut and much more...

Residential and Transient Bacteria

- Residential bacteria is the bacteria that is native to the body – good or bad.
- The only way to replenish the residential beneficial microflora is to feed them prebiotics
- Taking residential human microflora probiotics will help only while you take them
- Transient bacteria are found in fermented foods and probiotics and they help while they are in the body but just pass through – do not stay or reproduce.

How Do We Lose Good Bacteria?

- Antibiotics – directly kills them
- Aspirin, NSAIDs, Ibuprofen, birth control pills and corticosteroids - indirectly
- Three other ways: The first is surgery. The second is during a long distance marathon or triathlon (or any endurance-related exertion) and the third is during a plane flight.
- Stress also plays a role in depleting good bacteria
- Assuming we had sufficient in the first place

Prebiotics

- Non-digestible fiber such as resistant starch, fructooligosaccharides (FOS) (inulin is a type), xylooligosaccharides (XOS), polydextrose, and galactooligosaccharides (GOS).
- Also in pet food, mannoooligosaccharides are being used for prebiotic purposes
- Some smaller di-saccharides molecules also have prebiotic power
- It is impossible to not get prebiotics in a whole food diet

Prebiotics

- Jerusalem artichokes, chicory, garlic, onions, dandelion greens, whole wheat, corn, potatoes (with skin) brown rice, rye, barley, dairy products, asparagus, bananas, blueberries, almonds, broccoli, cabbage, kale cauliflower, radish
- This list will grow as more prebiotic substances are being discovered in other foods

Symbiotic Foods

- Jerusalem artichokes, chicory, garlic, onions, dandelion greens, whole wheat, corn, potatoes (with skin) brown rice, rye, barley, dairy products, asparagus, bananas, blueberries, almonds, broccoli, cabbage, kale cauliflower, radish
- This list will grow as more prebiotic substances are being discovered in other foods

Fermented Foods

- Fermenting food is a process where food are exposed to wild yeast and bacteria.
- The food is literally being pre-digested for the most part – how much depends on how long it is fermented
- Good bacteria and yeast feed on sugars and starch
- The key to fermenting is to inhibit bad bacteria and make the process more suitable to good bacteria and that is the key to lactofermentation

Fermented Foods

There are 3 elements to consider when discussing fermented foods:

1. The contribution of good bacteria and yeast to in the intestinal tract
2. They increased bioavailability of nutrients and phytonutrients for the body
3. The improved digestibility of the foods (and with the foods that are eaten with them)

How Many Should You Eat?

A study published in Journal of Dairy Research, looked at people who consumed at least 5 fermented dairy products such as yogurt and cheese and at least 3 other fermented products a week. The volunteers were asked to remove all fermented foods for two weeks. Blood and fecal samples were taken throughout the study. After two weeks without these foods, researchers found that gut bacteria levels had decreased and participants had a lower immune response – that is after just two weeks of no fermented foods.

Study Continued...

- After two week, participants were given a yogurt a day or a yogurt fortified with probiotics. Neither product could restore their immune response or good bacteria in the colon to the level that they had prior to removing the fermented foods
- Only when they re-introduced all the fermented foods they had been consuming previously, did their level return to where they had been
- So more than one type is key

Caring For Your Fermented Foods

- Each type has its own special instructions
- However, all involved living organisms as part of the fermentation process
- Just like we should talk to our plants, talk to your ferments
- Send them good intentions and loving thoughts



And So...

- Adding fermented foods and prebiotic foods to your diet is an important component to being healthy or aiding recovery
- The key is finding the ones you like and working them into your diet
- Learning to make them yourself saves money and gives you the opportunity to make them to your taste
- Learning to incorporate them into your meals makes it fun