## What's this about Fermentation? October 2015

Fermentation is an ancient tradition of transforming foods for flavor and preservation. Examples include, cheese, beer, wine, sauerkraut, yogurt, Kombucha, miso, tempeh, black and oolong teas, and chocolate. Fermentation is also valuable for transforming inedible foods into edible, nutritious foods such as cassava, a staple starch in many African countries; the fermentation process eliminates cyanide. Grain fermentation simply by soaking the grain in water neutralizes phytic acid, a natural component of some plant foods that is known to bind minerals in the digestive tract and reduce absorption.

Historically, food preservation was the greatest benefit of fermentation. Through the process of fermentation, lactic acid bacteria, alcohol, and acetic acid production prevent foods from spoiling. Next in history, flavors developed through the fermentation process were highly sought after. Foods created, such as blue cheese, had strong and pronounced flavors. These flavors were the result of adding specific bacteria and yeast to a food. With preservation and flavor aside, present day the art of fermentation has revealed a much greater benefit, health!

Fermented foods have been found to contain bacteria that are essential to life, otherwise known as probiotics. And their effects are seen within the digestive and immune systems. Microscopic bacteria, residing in the intestinal tract, digest foods that are otherwise indigestible. With these foods the bacteria produce essential vitamin K, B-vitamins, as well as some antioxidants that can be absorbed into the body and used to promote health. The process of fermentation can be seen as a "pre-digestion", which makes it easier for the body to get the nutrients it needs from the food. As well fermentation can help the body tolerate foods that may be more difficult to digest, such as soy, milk, and wheat. Fermented forms of these foods may be better tolerated than the original. The bacteria, or microflora, found in fermented foods no only increase the body's capability to gain access to more nutrition, but also enhances the immune system.

Probiotics are known to compete with dangerous bacteria in the gut and throughout the body. Because of this, regular consumption of fermented foods or probiotics may lower susceptibility to disease. A greater variety of fermented foods consumed can contribute to expanding intestinal micro-biodiversity (essentially, increasing the number and assortment of bacteria in the gut), which is increasingly recognized as an indicator of health. So how can you begin to enhance your microbiodiversity? Start eating fermented foods!

Not all fermented foods are created equally. For example not all fermented foods are alive many are pasteurized. To ensure your fermented food is alive look for a label that states "raw," these products are often in the refrigerated section at the grocery store. For reference the following foods are all fermented and would help contribute beneficial bacteria to your body: amazake, tempeh, sauerkraut, miso, kimchi, yogurt, Kombucha, and kefir. Enjoy

## **Recommended Books**

**The Art of Fermentation** Sandor Ellix Katz and Michael Pollan

**Nourishing Traditions: The Cookbook That Challenges Politically Correct Nutrition and the Diet Dictocrats** Sally Fallon and Mary Enig

**Cooked: A Natural History of Transformation** Michael Pollan