

# THE GUT CONNECTION

## CULTURING YOUR GUT

### What is a fermented food?

The fermentation of food products has been used for thousands of years to preserve foodstuffs and create flavour. Countries such as Japan and Korea have made fermented foods a fundamental part of their cultural cuisine, with foods like Kimchi, Miso and Soy Sauce. However fermented foods are all around us, cleverly disguised as every day products like cheese, beer, yoghurt and bread, all of which are made using fermentation processes.

Simply put, fermentation is a natural process that uses naturally occurring bacteria and yeasts to convert sugar and starch to acids. The fermentation process happens without the presence of oxygen - when naturally occurring Lactobacillus bacteria present in foods such as vegetables or flour, is added to water. The bacteria multiplies and begins to break down the ingredient, digesting natural sugars and producing lactic acid, beneficial enzymes and various other probiotics.

The result of this process is a rise in the acidity of the food leading to a transformation of the flavour, producing a slightly sour, tangy and tart taste, and the natural promotion of growth of "good" bacteria. The acidity also acts as a preservation method, preventing the growth of bad, food-spoilage bacteria and increasing the foods shelf life.

### Health Benefits

Did you know? A total of 1 trillion bacteria live happily together in our digestive system. This is about 4lbs in weight in digestive bacteria alone!

The majority of fermented foods contain live bacterial cultures, known as probiotics or "good", "friendly" bacteria. The consumption of these live microorganisms improve and restore the gut flora, and are thought to have a number of health benefits, specifically improving digestive health.

Some products use fermentation with the food processing, such as sourdough that proves for 24-48 hours to allow a long and slow fermentation of the flour to occur. This lengthy process allows a whole depth of flavour to develop, giving sourdough its' characteristic tang.

Because the bread is then baked, the heat kills the bacteria and the bread therefore no longer contains live bacteria cultures. However, the fermentation process in the earlier stages alters many properties of the dough, resulting in a loaf that is easier to digest and has prebiotic effects, supporting and "feeding" the friendly bacteria already present in the gut.

A “good”, healthy gut microbiome is associated with improved digestion, mineral and nutrient absorption and good immune function, with studies even suggesting that the ideal balance of good and bad gut bacteria is linked to improved emotional and mental wellbeing. Healthy gut = healthy mind and body!

### **How can we incorporate fermented foods into our diet?**

**Kefir** – Originally from Russia, Kefir is a probiotic, cultured drink, made by fermenting milk with the kefir grain. Fermented milk may sound unappealing, but with taste and texture not unlike a thin yoghurt, that is rich in vitamins and minerals, particularly B Vitamins and Vitamin K, it’s an easy and delicious way to improve your gut microbiome!

**Sauerkraut** – Sauerkraut is a household name when it comes to fermented foods! It is popular, widely used and easy to make at home. Shredded cabbage is combined with salt and water to produce a nutritional powerhouse that is full of Vitamin A, C and K, as well as being high in fibre, iron and calcium. Its light crunch and tart taste make it great in a sandwich, mixed into a salad or to top a hot-dog!

**Cultured Buttermilk** – Differing slightly from traditional buttermilk, which is the liquid leftover from making butter, cultured buttermilk is similar to yoghurt in the sense that it is cultured using live beneficial bacteria, producing a slightly acidic fermented-milk liquid that is a rich source of probiotics. It can be consumed as a thick, creamy beverage, or used for its’ remarkable properties in baking, such as pancakes. Be sure to look for the buttermilk with live cultures, or make your own!

**Kimchi** – A staple in Korean cuisine, Kimchi is made from salted and fermented vegetables, usually napa cabbage and radishes. Produced by lactic fermentation in brine, similar to that of Sauerkraut, Kimchi commonly sees the addition of other spices such as chilli, garlic, ginger and fish sauce, which produces a strong umami taste. It makes a delicious low-calorie, high-fibre and nutrient-packed side dish to rich meals!

**Tempeh** – pronounced “tem-pay”- is an Indonesian derived food, made from cooked soy beans that are then fermented. It comes in the form of a sliceable, cake-like product, in which you can see the whole soy beans throughout, with a firm texture and nutty, earthy flavour that lends itself well to a marinade before being grilled! It is extremely high in fibre and is a rich and complete protein source, which makes it a great choice for vegetarians and meat-eaters alike.

### **Our Verdict**

The scientific research has so far provided positive and encouraging results when looking at the health benefits of fermented foods, so although there is currently a limited body of evidence to be able to draw definitive conclusions on the direct health benefits, fermented foods are a great way to increase pre- and probiotic consumption, reduce food waste, and a clever, natural way to enhance flavours.

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