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Kimchi and sauerkraut: What are the benefits of eating fermented foods?

TikTok and Instagram are teeming with influencers who claim superfood status for all sorts of food products – some of which are not even healthy, let alone super. But when it comes to kimchi and sauerkraut, research suggests these fermented foods may actually contribute to a healthy digestive system. But why?

What are fermented foods?

Long before we had fridges, fermentation was used to preserve goods to give them a longer life. Fermentation is when bacteria and yeast – microorganisms – break down carbohydrates such as starch or sugar and turns them into alcohol or acids. This acts as a natural preservative and gives the foods a stronger, tangy taste. Fermentation also creates good [bacteria](#), which help to promote a healthy [gut](#).

People across the world ferment foods. Kimchi is a traditional, slightly spicy Korean dish made from fermented vegetables. Usually, the ingredients include raw cabbage, daikon radish, carrots, garlic, ginger, and gochugaru – a Korean chilli. The mix is then lacto-fermented in brine, which is salted water. The water is salty enough to kill off harmful [bacteria](#), leaving behind the good bacteria – in this case, lactobacillus organisms. Kimchi is usually eaten as a side dish to a meal.

Sauerkraut is a similar European dish made from cabbage and other vegetables, such as carrots. It is popular in Germany, but it is also a traditional dish in other eastern European countries including Poland and Ukraine. The vegetables are fermented in the same way as Kimchi, using salted water. It is eaten in a similar way too, often as a side dish to make a meal more interesting.

Why are kimchi and sauerkraut healthy?

Reema Patel, a registered dietitian at [Dietitian Fit](#), explains that these dishes are healthy for a number of reasons. Firstly, they are made from vegetables – typically cabbage, but can also contain onions, carrots, radish, as well as garlic and ginger. She says: "All of these are great for our health and provide a range of nutrients, such as Vitamins A, B, C, and K, as well as being a good source of [fibre](#)."

Fermented foods are also useful because they help provide a spectrum of [probiotics](#). "Probiotics are the healthy bacteria that are found in our body, especially our gut. These help our [immune](#) function, [mental health](#), digestion of foods, and so much more," Patel says.

The body is home to trillions of microorganisms, including bacteria, known as the microbiome. [Probiotics](#) are living microorganisms that are thought to boost your microbiome's diversity by introducing bacteria that can help promote healthy digestion and immunity and keep bad bacteria at bay.

The gut microbiome has been linked to having an affect on our health – including behaviour, mood, appetite, immunity, and weight – as well as having anti-inflammatory properties, which can reduce the risk of health issues such as [type 2 diabetes](#) and high blood pressure.

Research has also linked the gut microbiome to mental health. This is because the brain and gastrointestinal system are connected by the [gut-brain axis](#) – a term for the communication network that links the pair¹.

Some studies suggest fermented foods like kimchi can improve symptoms of [irritable bowel syndrome](#) and help with digestive issues such as [heartburn](#), [bloating](#) and [reflux](#)². This may be because it is high in fibre and contains lactic acid.

Research suggests that fermented foods may also help to reduce the risk of cancer³. However, other studies have linked the high salt content of fermented foods such as kimchi to stomach cancer⁴.

Are there any downsides to fermented foods?

Fermented foods like kimchi and sauerkraut may offer healthy benefits, but they may not be suitable for everyone. Firstly, the process of fermentation in brine means these foods are often quite salty. "We need to keep in mind that kimchi can be high in sodium, so it is important to include it as part of an overall balanced and varied diet in moderation," says Patel.

Also, fermented foods are high in substances called amines and people who are sensitive to these may experience headaches and other issues after eating them⁵.

However, there is a significant body of research to suggest that fermented foods can help to boost your health when eaten as part of a balanced diet.

Best ways to eat kimchi and sauerkraut

Kimchi is often eaten as a side dish, but it can also be added to stews, soups or dumplings. It is delicious served alongside cooked meats, fish or rice dishes. A popular way to eat sauerkraut is alongside meat, such as German sausage, and potatoes.

For a healthy option, try vegetarian sausages, lean or low-salt sausages or look for nitrate-free meat. Nitrates, often found in processed meats to preserve the food for longer, have been linked to cancer⁶.

Both kimchi and sauerkraut are versatile dishes and can be eaten however you like, or as a healthy snack.

Further reading

1. [Clapp et al: Gut microbiota's effect on mental health: The gut-brain axis.](#)
2. [Hee-Young et al: Kimchi improves irritable bowel syndrome: results of a randomised, double-blind placebo-controlled study.](#)
3. [Sehadet-Tasdemir et al: An insight into the anti-cancer effects of fermented foods: A review.](#)
4. [Hong-Nei Nan et al: Kimchi and soybean pastes are risk factors of gastric cancer.](#)

5. [Skowron et al:Two Faces of Fermented Foods—The Benefits and Threats of Its Consumption.](#)
6. [Chazelas et al: Nitrites and nitrates from food additives and natural sources and cancer risk: results from the NutriNet-Santé cohort.](#)

An insight into the anticancer effects of fermented foods: A review.

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