



Behind the hype: **Fermented Foods**

Why is this an issue?

Interest in the health benefits of fermented foods has surged in recent years. There is emerging evidence that regularly eating fermented foods may provide a range of benefits^{1,2}. However, this is still a new area of research. No health claims have been approved on fermented foods in New Zealand under the Food Standards Code, owing to the lack of conclusive evidence for specific health effects.

What are fermented foods?

Fermentation is a food preservation technique with a long history across the world. Fermentation is the process by which bacteria and yeast digest the sugars and starches present in foods and drinks to produce a range of organic acids and other by-products. This process has been used throughout human history to increase shelf life and add flavour to foods¹.

Examples of fermented foods are shown on page 2.

Evidence of health benefits

Fermentation increases the content of certain bacteria in foods, which may be beneficial because when consumed, they could help displace harmful bacteria in the gut¹. These are often described as probiotics.

The limited clinical evidence available suggests that including fermented foods in the diet may provide some health benefits. Some promising individual studies have looked at the potential association between fermented foods and benefits relating to immunity and gastrointestinal function^{3,4}. However, more evidence is required to substantiate general level or high level health claims being made on specific fermented foods.

There is still a lot to learn about all the different types and strains of potentially probiotic bacteria (microbes) in fermented foods. Current evidence is strain-specific and the stability of these microbes in foods is unknown.

It is also unclear whether any health benefits observed to date are due to the microbial composition, related effects, or the food itself⁴. There are currently no pre-approved health claims in relation to fermented foods within the Food Standards Code⁵.

Health and safety

Fermented foods may cause mild gut issues in some individuals, although this can be minimised by introducing these foods slowly into the diet.

Some traditional fermented foods, such as sauerkraut and kimchi, can be quite high in salt⁴. Commercially available fermented foods such as soy sauce and miso are also high in salt.

If making fermented foods at home, it is important to be aware of spoilage and to take care with food hygiene and safety. If not carefully prepared, other pathogens may grow as well as good bacteria.

It is important to follow any directions on the label for storage of these products. If not kept in chilled storage, the sugars in fermented drinks, such as kombucha, may undergo further fermentation and be converted to alcohol. This is particularly important for pregnant or breastfeeding women, and young children, who are advised to avoid alcohol^{6,7}.

Individuals undergoing treatments, such as chemotherapy, which may compromise their immunity, as well as other immunocompromised individuals, should consult their medical team prior to consuming fermented foods.

In a nutshell

- Fermented foods contain live microbes (commonly known as 'good bacteria').
- Research is ongoing into the potential health impacts of fermented foods; specific health benefits are unproven.
- Reducing intake of energy-dense foods with low nutrient quality, and eating a wide range of high fibre whole foods such as vegetables, fruit, whole grains, nuts, and seeds, promotes many benefits for health, including gut health.
- Fermented foods may have a place in a healthy balanced diet, but more evidence is needed before they can be recommended for specific health benefits.

Examples of fermented foods



- Kombucha (fermented tea made using sugar and specific cultures of microbes).



- Kefir (fermented milk drink).
- Yoghurt (fermented milk food, which may contain probiotics).



- Sauerkraut (fermented vegetables, mainly cabbage).



- Kimchi (fermented vegetables).
- Miso (fermented soybean paste).
- Soy sauce (seasoning made from fermented soybeans).
- Sourdough bread.
- Fermented tofu.
- Ginger beer (fermented sugar and fruit sugar beverage).
- Tempeh (fermented soybean curd with the whole soybeans retained).

References

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Eating for a healthy gut

Our digestive system (gut) is home to trillions of different types of bacteria as well as other microorganisms⁸. Emerging evidence has shown that gut bacteria are thought to be involved in a number of critical functions, including immune regulation and lowering risk of disease⁹.

The foods we eat have an important influence on our gut bacteria¹⁰. Eating a poor quality diet high in energy-dense processed foods and low in fibre may compromise our gut 'microbiome' (the range of bacteria in the gut), which may in turn make us more susceptible to conditions affecting physical and mental health. Foods that feed the good bacteria in our gut (known as pre-biotics), on the other hand, tend to be fibre-rich plant foods, including fruits, vegetables, wholegrains, nuts, and seeds¹⁰. A diet high in these foods is also good for overall health and wellbeing. Fermented foods can be included as part of a healthy, balanced, and gut-friendly diet, though further evidence is required to substantiate specific health benefits.



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