

What is kombucha and how do the health claims stack up?

January 24 2018, by Evangeline Mantzioris And Permal Deo



Kombucha is made from either a green or black tea base, with some interesting additions. Credit: Matt Hoffman

The drink kombucha was previously only popular in hipster cafes, but is now vying for space on the supermarket shelves. Many claims are made about the health benefits of drinking kombucha, but what does the science say?

For those of you who haven't tried it, kombucha is a quirky-tasting



drink. Depending on what's added to it, it's best described as a sour apple cider, perhaps with vinegary notes.

Kombucha is an ancient beverage that was <u>originally consumed</u> in China more than 2,200 years ago for its detoxifying and energising properties. As trade routes expanded, kombucha <u>found its way to Russia</u> and then into other eastern European areas.

During the second world war, kombucha was introduced into Germany, and in the 1950s it became popular in France and North Africa. By the 1960s, Swiss scientists claimed that kombucha was beneficial for the gut in a similar way to yoghurt.

How it's made

Kombucha is made from either a green or black tea base. Added to that is white sugar, which has been fermented with a type of "tea fungus" called a <u>symbiotic culture of acetic acid (vinegar) bacteria and yeast</u>, or SCOBY, for one to two weeks.

Detailed scientific recipes are available for how to prepare kombucha. The taste of the kombucha changes during fermentation from a pleasantly fruity sour-like sparkling flavour, to a mild vinegary taste after a long incubation period.

The <u>fermentation process</u> is important, as the SCOBY changes the <u>polyphenols</u> – compounds normally found in tea, fruits and vegetables – into other organic compounds. This increases the acidity, which prevents other micro-organisms growing.

It is these new organic compounds that are claimed to provide health benefits beyond those already found in green or black tea.



The fermentation process

The fermentation process extends the shelf-life of kombucha, as it does with other historically popular foods and drinks such as cheese, yoghurt, sauerkraut, kimchi, wine and beer.

Beer and wine become alcoholic during the fermentation process, whereas kombucha generally contains less than 0.5% alcohol. Food Standards Australian and New Zealand classifies foods and drinks below 0.5% as non-alcoholic.

Ethanol, the alcohol you can drink, is produced when the yeasts and bacteria in the SCOBY interact via a process called <u>glycolysis</u>. The <u>acetic acid</u> bacteria in the SCOBY make use of the ethanol to produce vinegar (acetic acid), which contributes to its sour taste.

Gut health

Lightly fermented foods, made from bacteria, contain <u>healthy bacteria</u>. The theory is that these bacteria help colonise our gut, which <u>early</u> <u>research suggests</u> may improve a range of bodily functions from our mood and stress levels, to our weight and cravings for food.



The SCOBY is a type of "tea fungus." Credit: Sterling College, CC BY



But simply ingesting healthy bacteria won't necessarily cause these bacteria to permanently live in, or colonise, the gut. To gain any long-term <u>health benefits</u> from foods containing live bacteria, known as probiotics, the current research suggests you would need to take them continuously.

There is some evidence that probiotics can be useful in some groups of people, such as those who suffer from certain gut problems like *C*. *difficile* infection. But the effect on other diseases like inflammatory bowel disease is uncertain.

The jury is still out on whether probiotics are beneficial to the wider population. So kombucha – or yoghurt, for that matter – won't necessarily improve the health of your gut. To maintain good gut health, the best thing you can do is eat a wide variety of <u>healthy foods</u>.

Testing the other health claims

A quick Google search will produce many exciting health claims about kombucha. These include detoxifying the blood, reducing cholesterol levels, reducing blood pressure, protecting against diabetes, antibacterial effects, and counteracting ageing.

When scientists want to evaluate the effect of a nutrient on health, we like to see that the studies have been done in humans, rather than animals. Many "lab bench" studies may begin by looking at isolated cells and then animals. This provides us with limited evidence, as human biological systems typically work differently.

For kombucha, there is only evidence from lab bench studies and animal studies. No published studies come from human clinical trials of



drinking kombucha.

Two reviews of the lab bench and animal studies on kombucha from 2014 and 2000 suggest the drink may have antimicrobial, antioxidant, anti-cancer and anti-diabetic properties.

The reviews also note some exciting mechanisms by which kombucha could potentially be used to treat gastric ulcers and high cholesterol, and improve the body's immune response and liver detoxification. But they do not yet tell us if they translate to humans.

A chemical called DSL (D-Saccharic acid-1,4-lactone) is potentially the most beneficial component in kombucha. DSL has the <u>potential to</u> <u>inhibit</u> an important enzyme, β -glucuronidase, which may be linked to cancer growth. But once again, this has not been shown in humans.

Lab-bench <u>studies</u> have, however, detected the presence of polyphenols, acids and vitamins that are also found in regular green and <u>black tea</u>.

What's the verdict?

Based on the current evidence, we can say the health properties of kombucha are likely to be similar to drinking tea or other fermented foods. If you enjoy kombucha, continue drinking it, but if you favour the traditional black and green tea, there are good <u>health</u> reasons to continue drinking those.

While some exciting properties have been shown from lab bench and animal studies, it doesn't necessarily follow that we will see these benefits in humans.

Keep in mind that some of the kombuchas on the market have fruit juice added after the fermentation process, which will contribute to your



overall sugar intake. The amount of sugar in these varieties can range from 10-15g per serve (two to three teaspoons), so if you have regular tea without sugar, drinking kombucha will increase your sugar intake.

This article was originally published on <u>The Conversation</u>. Read the <u>original article</u>.

Provided by The Conversation

Citation: What is kombucha and how do the health claims stack up? (2018, January 24) retrieved 1 May 2024 from <u>https://medicalxpress.com/news/2018-01-kombucha-health-stack.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.