FIRE Diabetes In 40 Days

- Your Online Journey to Reverse Diabetes -

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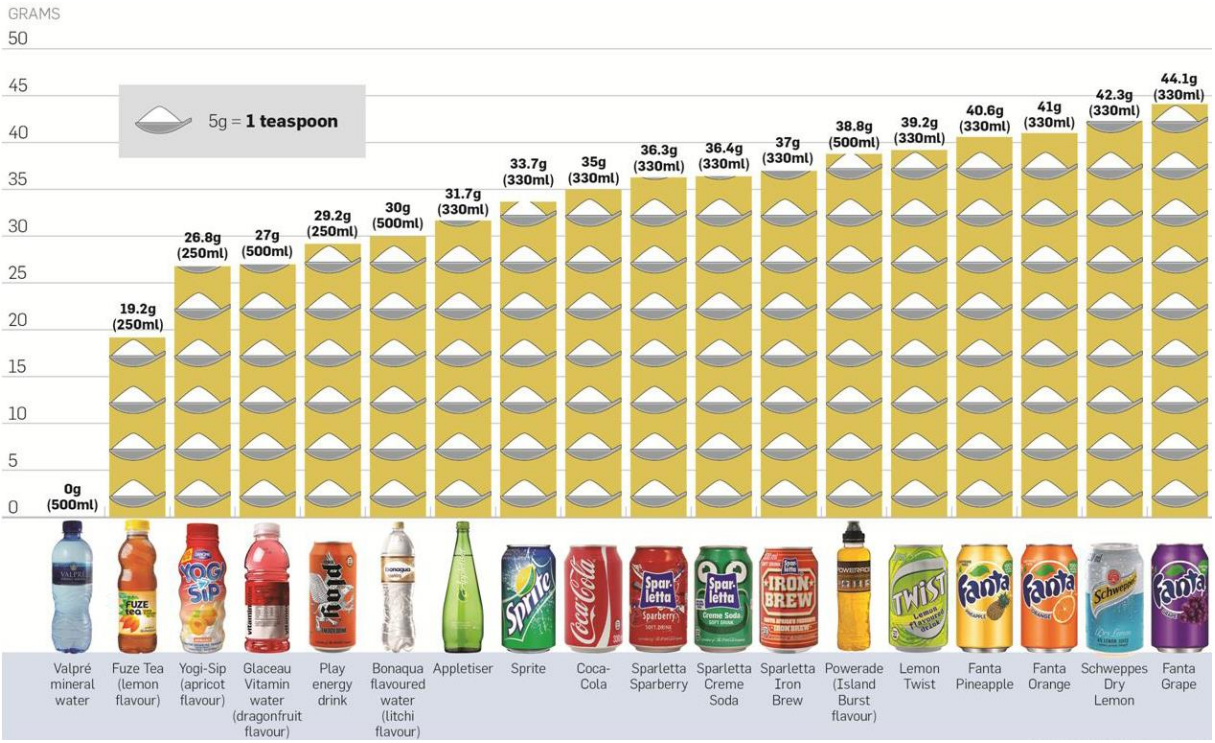
FLUIDS ARE FOOD, TOO

What to drink and why?

Once you realise that carbs are the problem in Type 2 diabetes, it doesn't take you long to realise that most of the sugar in your diet slip under the radar in the form of fluids. We drink sugar-filled beverages all day long. The belief that "Sugar is energy" has so saturated our society that we think we cannot live and work without sugar-loaded drinks. How on earth did our ancestors survive without Coke?



WHAT SHOULD I DRINK?

Going low-carb doesn't mean a life that's less juicy. But it does mean that you will have to think before you drink. It also means you will likely have to mix your drinks yourself. It doesn't just have to be water. Below are some tips and options to help you add some spice to your juice life. Before we get there however, let's just recap the beverages that are taboo:

FORBIDDEN FLUIDS

- Milk and/or sugar in tea or coffee. Rather use cream and / or xylitol
- Sweeteners in tea or coffee. Rather use xylitol or stevia
- Any fizzy drink, whether sweetened with sugar, fructose, zero-calorie sweeteners, or just unsweetened, plain sparkling water. The taste additives mess with your tongue and your brain. The fizziness (carbon dioxide) is instantly absorbed into your bloodstream, where it acidifies the blood
- Smoothies, milk shakes, iced coffees, iced teas, etc that you did not make yourself
- Any alcohol-containing beverage other than red wine
- Artificially flavoured water

- Any drink in a restaurant, cafeteria, take-away or other eating establishment, except those listed below.
- Anything sold in a bottle, box or can. Basically, any drink sold in a container (other than still water).

PERMITTED FLUIDS

COLD DRINKS

Water, including:

- Fruit-infused water
- Spice-infused water (e.g., cinnamon)
- Lemon water
- Baking soda & lemon water

Fermented drinks, including:

- Kombucha
- Milk kefir
- Water kefir

ICED DRINKS

- Iced tea
- Iced coffee

ALCOHOL

Red wine, one glass (150 ml / 5 fl. oz.) per 24 hours

HOT DRINKS

Teas

- English / Ceylon tea
- Rooibos tea
- Herbal teas

Coffee

- Caffeinated or decaffeinated
- Bulletproof coffee (once per 24 hours)

HOW MUCH SHOULD I DRINK?

There is no clear scientific answer to this question. As a general rule, aim for about 30 ml / kg lean body weight (0.5 fl. oz. per pound lean body weight) per 24 hours. Your lean body weight is easily estimated as your height, in centimetres, minus 100. If you're from the US, then your height in inches minus 40, and the answer multiplied by 5.5 equals your approximate lean body mass in pounds.

To get to your target fluid intake, it is best to have one or two water bottles (preferably non-plastic) that makes up the full volume you want to drink per 24 hours. This way, you can easily see how close you are getting to your target fluid intake. Having a bottle / flask with you, means you can quickly drink while busy with something else. If you are only relying on fluids taken at meal times, you will dehydrate.

WHEN SHOULD I DRINK?

Try to drink at least 1 litre before breakfast. If you have to drive a long distance to work, maybe wait till you reach the office, in case there is a traffic jam - highly uncomfortable with 1 litre in your bladder!

By lunchtime, you need to be close to the 2 litre mark, with the remainder (±500 ml) being drunk until suppertime.

It is generally not a good idea to drink too much at or after supper, since the chances are you will have to get up a few times during the night to keep the bladder empty. However, don't drink too little before supper, either, since this leads to an overnight increase in the stress hormone cortisol, which will result in a blood glucose spike in the morning.

There is an urban myth that drinking fluids during mealtimes dilutes the enzymes and thus dilutes the digestion of food. This myth is based on a simplistic understanding of human biology. The stomach is a flexible, responsive organ. It is able to squeeze fluids in the gastic cavity into a tunnel (called the "Magenstrasse" = "stomach street" in German). The fluid is then fast-tracked out of the stomach before the solid food remains are allowed to pass through.

In fact, studies show that people who drink water directly before a meal lose weight, even though they do not change their diet. This has to do with the satiety response. The stomach feels fuller and triggers the brain to stop the eating process earlier.

WHY SHOULD I DRINK?

The short answer is: Your life depends on it. Without enough fluid in your arteries, your blood will clot, your organs will fail and you will die. If you get dehydrated, this process begins deep inside of your organs without you even knowing it. It is therefore crucial to stay ahead of your fluid demands, and not to allow yourself to dehydrate first, before tanking up fluid levels.

It is also important to note that feeling thirsty is often confused with feeling hungry at the brain level. The two sensations are pretty close together, since a dry mouth can signal either a lack of saliva due to dehydration, or a lack of food stimulation (which causes saliva to form).

Keeping your mouth wet will suppress the hunger cravings quite well. Keeping the mouth wet can be achieved in a number of ways:

- Make sure you stay well hydrated. Don't fall behind on fluids (see previous section)
- Sip little sips from a glass of water at regular intervals
- Suck on bits of crushed ice
- Eat small amounts of something sour, like a citrus fruits cut up in small blocks.
- Suck on a sugar-free sweet, or even a pebble!

All of the above will reduce hunger cravings by helping the mouth remain wet.

Sour tastes are particularly good at stimulating saliva flow and suppressing hunger cravings. These are particularly effective in people with sugar addiction, since it helps to down-regulate the demand for a sweet taste.

PERMITTED DRINK IDEAS

FLAVOURED WATER

INGREDIENTS

1 L Cold water

Flavouring of your choice, for example fresh orange slices, fresh mint or sliced cucumber

INSTRUCTIONS

Pour fresh, cold water into a pitcher.

Add flavouring of your choice and let sit in the fridge for at least 30 minutes.

Possible additions include berries, fruit, fresh mint, or citrus fruits like grapefruit, lime and lemon in thin slices. Cucumber is another classic with a neutral but refreshing taste.

ICED TEA

INGREDIENTS

1 L Cold water

2 Tea bags

475 ml Ice cubes

Flavourings of your choice, such as sliced lemon or fresh mint

INSTRUCTIONS

Combine the tea, flavouring and half of the cold water in a pitcher and leave it in the refrigerator for 1-2 hours. Remove the tea bags and the flavouring. Replace with new, fresh flavouring if you want to. Add the rest of the cold water and serve with lots of ice cubes.

ICED COFFEE (1 SERVING)

Handy Tip: Cinnamon can also add extra flavour.

INGREDIENTS

225 ml Coffee

60 ml Cream

Ice cubes

Vanilla essence (optional)

INSTRUCTIONS

Brew the coffee twice as strong as you'd normally make it. Allow it to cool completely. Fill a large glass with ice cubes. Pour in the coffee and then cream. Serve immediately.

BUTTER COFFEE (1 SERVING)

INGREDIENTS

225 ml Hot coffee

2 tbsp Butter

1 tbsp MCT oil or coconut oil

INSTRUCTIONS

Combine all ingredients in a blender. Blend until smooth and frothy. Serve immediately.

FERMENTED DRINKS

KOMBUCHA

Kombucha has had quite a surge in popularity lately, and there are now several brands (depending on where you shop) to choose from. Depending on what you read or who you talk to, kombucha has been attributed with health benefits that range from clearing up acne to curing cancer, but many of these are unsubstantiated thus far.

Kombucha has been around for a least a couple thousand years in Asia and other countries. It is said that the drink originated with doctor Kombu, a Korean, who brought the drink to Japan to cure the Emperor Inkyo. The "cha" derives from the Chinese word for tea. The Chinese called it an “immortal health elixir”.

Because it’s fermented, you get billions of powerful probiotics in your system when you drink it. Traditional kombucha comes from black and/or green tea, water, and sugar. During fermentation, the bacteria and yeast in the SCOBY actually ‘eat’ up most (not all) of the sugar and part of the caffeine, creating vinegar and other acidic compounds, with trace amounts of alcohol, and gases that make it carbonated.

The colony of friendly bacteria that ferments the tea – looking like a giant mushroom – is called a “SCOBY” which stands for “symbiotic culture of bacteria and yeast”. While the tea ferments, the SCOBY helps create B vitamins, enzymes, acetic acid (found in apple cider vinegar), gluconic and lactic acid, and a ton of great probiotics!

This blob is a biochemical powerhouse that produces amino acids, enzymes, polyphenols (antioxidants), antibiotic type substances, and a whole array of phytochemicals that are beneficial to your health. Kombucha has been scientifically studied for its ability to:

- Detox the liver
- Increase energy
- Improve digestion
- Boost immune system
- Help prevent or fight cancer
- Aid in weight loss
- Improve mood / decrease anxiety and depression

Kombucha has also been touted as being beneficial for acne, anxiety, arthritis, eczema, hangovers, hair growth, and more, but many of these claims have not yet been backed up with conclusive scientific evidence on humans.

In research published in the Journal of Medicinal Food (2014), researchers from the University of Latvia did say the following about the genuine health benefits of kombucha:

"It is shown that [kombucha] can efficiently act in health preservation and recovery due to four main properties: detoxification, anti-oxidation, energising potencies, and promotion of boosting immunity."

DETOXIFICATION

Kombucha is known for its detoxing capabilities, especially in the liver. One study reported that kombucha could actually decrease levels of toxins known to cause liver damage. Another study of kombucha on animals showed similarly decreased levels of certain toxins that are known to cause liver damage. And one other study evaluated toxicity, anti-stress capability, and liver-protective properties on rats with very favourable results.

Kombucha can overcome 'bad' bacteria and yeasts. Since kombucha contains acetic acid, similar to vinegar, it appears to have strong anti-fungal and antibacterial properties, particularly against infection-causing bacteria, and harmful yeasts, like Candida. Some people may avoid kombucha because it contains yeast, but the important thing to know is that kombucha contains *beneficial* yeasts and bacteria, which help to crowd out and cut off the harmful pathogens, like candida, in the body.

INCREASE ENERGY

Kombucha has the ability to invigorate and energise people. It's very energising! It is thought that this energising effect is from the formation of iron and B vitamins that are created from the black tea during fermentation. The iron from the tea helps to boost haemoglobin in the blood, which improves oxygen in the body's tissues, which in turn, is very energising. There is a small amount of caffeine left in the tea, depending upon fermentation time, but generally most of this caffeine is 'eaten' up in the fermentation process. The energising feeling that comes from kombucha, is from ingesting the raw cultures and live enzymes, as well.

DIGESTION

Kombucha's high levels of organic acids, probiotics and live enzymes aid in digestion and are especially helpful if you have any type of digestive disorder like leaky gut, irritable bowel disease, celiac disease, food allergies, and imbalances due to things like a poor diet or previous antibiotics. Kombucha is also naturally high in live enzymes that help the digestive process. Kombucha helps to repopulate the digestive system with beneficial bacteria and yeasts protecting it from the more harmful types that may exist in the gut. One thing to note about kombucha - depending on your current health and the health of your gut, you may actually feel worse the first few times you ingest kombucha. This is because of a 'die-off' reaction from the harmful pathogens that may live there. This is a good thing!

IMMUNE BOOSTING

Because kombucha is naturally high in antioxidants and probiotics, it helps to support and strengthen the immune system. Scientific studies show probiotics' power in fortifying the immune function, and since a large portion of immune function is a result of gut health, it only makes sense to be sure to keep the digestive tract supplemented with a wide variety of beneficial bacteria. Kombucha also contains massive antioxidants, like D-saccharic acid lactone (DSL), which results from the fermentation of the tea. DSL is known for its ability to detoxify cells.

CANCER PREVENTION

Much has been written and studied about cancer prevention and kombucha. A study published in Cancer Letters found that consuming glucaric acid found in kombucha reduced the risk of cancer in humans, as well as the antioxidant, DSL. In test-tube studies, kombucha helped prevent the growth and spread of cancerous cells, due to its high concentration of tea polyphenols and antioxidants. Scientists theorize that the DSL and the vitamin C often found in kombucha, are its primary oxidation weapons, protecting against inflammation, tumours, and overall depression of the immune system. As you may know, immune function is one of the body's main protection systems against most cancers.

WEIGHT LOSS

Evidence shows that kombucha can improve and speed up metabolism (partially due to the small amount of caffeine it contains). Since kombucha is high in acetic acid (similar to apple cider vinegar), probiotics, and polyphenols, it can help with weight loss through various mechanisms, including through improved digestion and nutrient absorption. Some research also shows that acetic acid can help with weight loss by lowering blood sugar, decreasing insulin levels (which favours fat burning - instead of fat storing), and helps to suppress appetite.

In one specific human study on acetic acid and weight loss over 12 weeks, it was found that the subjects averaged 1.5 kg (3.7 lbs) weight loss, 0.9% decreased body fat, 2cm waist circumference reduction, and a whopping 26% decrease in dangerous triglycerides!

MOOD BOOSTING

Kombucha has been known as a mood booster, helping to alleviate both anxiety and depression. Although the exact mechanism of this is not known, it is most likely due to a combination of the antioxidants in the tea, the polyphenols (green tea is known to be high in these as well), and the beneficial bacteria.

Medical research is discovering a direct link between gut health and mental health - primarily anxiety and depression. When healthy bacteria, in the form of fermented foods, are introduced into the digestive system on a regular basis, they help to restore the delicate balance of the gut microbiome. Serotonin is a natural brain chemical that controls and stabilises your mood and functions in your brain. Since your gut produces about 95% of your serotonin, keeping your gut healthy and 'well fed' with beneficial bacteria and yeasts should help boost your moods.

WHAT ABOUT THE SUGAR?

Important to note however: sugar content in kombucha can vary widely, so be sure to check label for lowest sugar content. Home brewed versions have less sugar the longer time they ferment, and more acetic acid, making them ideal for weight loss and other health benefits. With that said, most brands of kombucha only range from 2 grams of sugar to 7 grams of sugar per 240 ml (8 oz.). This is very small compared to 40-60 grams of sugar in 340 ml can of most soft drinks. Therefore, there is very little blood sugar impact from kombucha, which is great.

WHAT ABOUT THE PROBIOTICS?

What exactly are the beneficial bacteria found in kombucha? In an article published from the Journal of Food Microbiology, it was found that the following probiotics are generally found in kombucha—although the actual amounts and types of organisms in the culture can vary widely, based on geography, preparation, temperature, climate, local bacteria in the environment, and yeasts present.

- *Gluconacetobacter*: An anaerobic bacteria unique to kombucha. It feeds on nitrogen from the tea and produces acetic acid and gluconic acid, as well as building the SCOBY.
- *Acetobacter*: Bacteria that produce acetic acid and gluconic acid, along with the actual SCOBY mushroom. *Acetobacter xylinoides* and *Acetobacter ketogenum* are two of the usual strains you find in kombucha.
- *Lactobacillus:* A type of bacteria sometimes in kombucha that produces lactic acid.
- *Saccharomyces*: Includes a number of yeast strains that produce alcohol and are the most common types of yeast found in kombucha.
- *Zygosaccharomyces*: A yeast strain unique to kombucha. It produces alcohol and carbonation, as well as contributing to the mushroom body.

The different types of bacteria and yeast in kombucha are what make it behave and appear the way it does, including the fizz and its somewhat unique flavour.

> *And if you see funky looking things floating around in your kombucha, don't worry about it - just drink up - it's little colonies of healthy yeast and bacteria.*

Other, not so beneficial organisms, have been found in some cultures as well, and if you are making your own brew, you need to be *very careful* to keep everything touching the kombucha and the SCOBY very clean. Penicillin, Asperigillus, and Candida are common invaders, and rarely, even more harmful bacteria can take up residence, but those cases are few and far between.

How do you know if your home brewed kombucha has unhealthy moulds? It's pretty easy to spot. It usually looks very similar to the mould that you would see growing on bread, fruit or cheese. Green, black, or gray - and fuzzy. Just be sure to dump everything if you see mould on it, and start over with a new SCOBY.

Buying a kombucha from the store every day can get expensive, so you may want to make your own. Making it at home, as long as you adhere to very clean standards and avoid contaminating it, creates

the freshest kombucha with the most active enzymes and ingredients. Commercially prepared kombuchas lose many of their antioxidants when stored for long periods of time, and some varieties have far less beneficial bacteria in them.

BASIC KOMBUCHA RECIPE

INGREDIENTS

- 4-6 black tea bags
- 1 cup organic granulated cane sugar
- 1-2 litres filtered rain or spring water (don't use tap water as it often contains chlorine and other chemicals which will kill or prevent the growth of the beneficial bacteria and yeasts)
- Large glass container with wide mouth
- SCOBY (you can use a starter from someone else who makes kombucha or obtain a starter from a health food store or online)
- Clean dish cloth and rubber band

DIRECTIONS

Be sure your kitchen and utensils are all very clean. Just to be sure, rinse all under boiling hot water.

Bring water to boil in a large pot. Once boiling, remove from heat and add teabags and sugar and let it steep, stirring occasionally with clean spoon to dissolve sugar.

Remove and discard tea bags after about a half hour or so. Let mixture cool to room temp - do not pour boiling hot tea over SCOBY or you may kill the live bacteria and yeasts.

When cool, add to jar with an equal amount of filtered water. Add SCOBY and cover with clean cloth and rubber band to secure it. Do not add a lid as the fermentation will build up and could explode it!

Allow the tea to sit for 7-14 days. Less time produces a tea with more sugar and caffeine. More time creates a more sour, fizzy brew, but it will be full of antioxidants, enzymes, and probiotics. Much depends on the temperature and storage of the tea. This stage is first fermentation and needs some experimentation, but for the first time, try 10 days. Use a paper straw to draw up small tasting samples from the mixture. The ideal is for the sweetness to be replaced by a somewhat tangy taste.

There is a second fermentation stage, where the kombucha, with added fruits or fruit juice, can be poured into smaller glass bottles with tight closures for carbonation (fizz), as shown in many recipes on the Web and YouTube. However, this additional stage is unnecessary – and it is not recommended (see the information about carbonated drinks above).

Instead, remove the newly formed SCOBY from the brewing jar, as well as some of the fresh kombucha, and keep for the next brew recipe (give the previous SCOBY to a FIRE friend or compost it). Then some flavouring can be added such as ginger and/or grated apple, if preferred. Store in the fridge to stop the second fermentation.

Enjoy!

KEFIR

Kefir is a fermented milk product having natural carbonation, aroma, and slight acidic taste. It contains water, sugars, protein, ash, fats, lactic acid, and minor amounts of alcohol. Kefir is differentiated from other fermented milk beverages due to its changeable microflora which can also be isolated and reused several times for kefir fermentation. Traditionally, kefir is produced by kefir grains, which have a complex microbiological composition in a matrix of polysaccharides and proteins. Kefir grains contain yeast cells, lactic acid bacteria, and acetic acid bacteria (i.e., *Leuconostoc*, *Lactobacillus*, *Kluyveromyces*, and *Saccharomyces*). The microorganisms in kefir grains produce effective compounds, such as organic acids, several types of bactericide, which have a lethal effect on pathogenic bacteria.

The type and quantity of kefir grains affect the carbon dioxide level. During fermentation, acids (lactic, acetic, pyruvic, hippuric, butyric, and propionic), diacetyl, and acetaldehyde generate the taste and aroma of kefir. In addition, kefir also includes vitamins, macro elements, and microelements. Milk fat content, grain types, and the manufacturing process play an important role on the composition of kefir (Hui and Evranuz, 2012; Ahmed et al., 2013).

The nutritional benefits of kefir are related to nutrients such as carbohydrates, proteins, minerals, and vitamins. The health effects caused by kefir and kefir products may be attributed to several components such as lactic acid bacteria, yeasts, exopolysaccharides, organic acids, antioxidants, and bioactive peptides.

The reported health benefits of kefir include anti-carcinogenic, antimutagenic, anti-inflammatory, antimicrobial, antihypertensive, and anti-diabetic activity, immune modulation effects, enhanced lactose utilisation, and hypocholesterolaemic effects. Kefir also has important potential as an alternative treatment for osteoporosis. Although there are some evidence and promising results concerning the health effects of kefir and kefir products, further clinical studies are needed to clarify those therapeutic and nutraceutical activities in humans.

Kefir contains higher levels of vitamin B1, B2 and folic acid than milk. Throughout the world, kefir has been credited with myths of healing power and various, not always substantiated, nutritional and therapeutical claims. Research on the probiotic properties of kefir microflora is limited compared with that on milk fermented with classical probiotic bacteria. Most of the benefits are similar to those attributed to typical probiotics. Particular for kefir, are the nutraceutical properties of kefiran. Technologies for probiotic kefir have been developed. Modified kefir-like drinks contain microorganisms from kefir grains and bifidobacteria and are supplemented with immunoglobulins obtained from bovine colostrum.

9 EVIDENCE-BASED HEALTH BENEFITS OF KEFIR

Kefir is the rage in the natural health community. High in nutrients and probiotics, it is very beneficial for digestion and gut health. Here are 9 health benefits of kefir that are supported by research.

1. KEFIR IS A FANTASTIC SOURCE OF MANY NUTRIENTS

Kefir is traditionally made by fermenting cow's milk or goat's milk. The grain-like colonies of yeast and lactic acid bacteria resemble a cauliflower in appearance.

Over approximately 24 hours, the microorganisms in the kefir grains multiply and ferment the sugars in the milk, turning it into kefir. Then the grains are removed from the liquid and can be used again. In other words, kefir is the drink, but kefir grains are the starter culture that you use to produce the beverage.

Kefir originated from parts of Eastern Europe and Southwest Asia. The name is derived from the Turkish word KEYIF, which means "feeling good" after eating.

The grains' lactic acid bacteria turn the milk's lactose into lactic acid, so kefir tastes sour like yogurt, but has a thinner consistency.

1 cup (240 ml) serving of low-fat kefir contains:

- **Protein:** 5,5 grams
- **Calcium:** 14% of the RDI
- **Phosphorus:** 20% of the RDI
- **Vitamin B12:** 16% of the RDI
- **Riboflavin (B2):** 14% of the RDI
- **Magnesium:** 4% of the RDI
- A decent amount of vitamin D

In addition, this size serving of kefir has about 420 kJ (100 calories), 7–8 grams of carbs and 3–6 grams of fat, depending on the type of milk used.

Kefir also contains a wide variety of bioactive compounds, including organic acids and peptides that contribute to its health benefits.

Dairy-free versions of kefir can be made with coconut water, coconut milk or other sweet liquids. These will not have the same nutrient profile as dairy-based kefir.

Summary

Kefir is a fermented milk drink, cultured from kefir grains. It is a rich source of calcium, protein and B vitamins.

2. KEFIR IS A MORE POWERFUL PROBIOTIC THAN YOGURT

Some microorganisms can have beneficial effects on health when ingested.

Known as probiotics, these microorganisms may influence health in numerous ways, aiding digestion, weight management and mental health.

Yogurt is the best-known probiotic food in the Western diet, but kefir is actually a much more potent source. Kefir contains a much broader spectrum of microorganisms and nutrients than yogurt.

Kefir grains contain up to 61 strains of bacteria and yeasts, making them a very rich and diverse probiotic source, though diversity may vary. Other fermented dairy products are made from far fewer strains and don't contain any yeasts.

Summary

Kefir may contain up to 61 different microorganisms, making it a much more potent source of probiotics than many other fermented dairy products.

3. KEFIR HAS POTENT ANTIBACTERIAL PROPERTIES

Certain probiotics in kefir are believed to protect against infections. This includes the probiotic *Lactobacillus kefiri*, which is unique to kefir. Studies demonstrate that this probiotic can inhibit the growth of various harmful bacteria, including *Salmonella*, *Helicobacter pylori* and *E. coli*.

Kefiran, a type of carbohydrate present in kefir, also has antibacterial properties.

Summary

Kefir contains the probiotic *Lactobacillus kefiri* and the carbohydrate kefiran, both of which protect against harmful bacteria.

4. KEFIR CAN IMPROVE BONE HEALTH AND LOWER THE RISK OF OSTEOPOROSIS

Osteoporosis is characterized by deterioration of bone tissue and is a major problem in Western countries. It is especially common among older women and dramatically raises your risk of fractures. Ensuring an adequate calcium intake is one of the most effective ways to improve bone health and slow the progression of osteoporosis.

Full-fat kefir is not only a great source of calcium but also vitamin K2, which plays a central role in calcium metabolism. Supplementing with K2 has been shown to reduce your risk of fractures by as much as 81%.

Recent animal studies link kefir to increased calcium absorption in bone cells. This leads to improved bone density, which should help prevent fractures.

Summary

Kefir made from dairy is an excellent source of calcium, and full-fat dairy kefir also contains vitamin K2. These nutrients have major benefits for bone health.

5. KEFIR MAY BE PROTECTIVE AGAINST CANCER

Cancer is one of the world's leading causes of death. It occurs when abnormal cells in your body grow uncontrollably, such as in a tumour. The probiotics in fermented dairy products are believed to reduce tumour growth by stimulating your immune system. Therefore, it is possible that kefir may fight cancer. This protective role has been demonstrated in several test-tube studies.

One study found that kefir extract reduced the number of human breast cancer cells by 56%, compared to only 14% for yogurt extract.

Keep in mind that human studies are needed before firm conclusions can be made.

Summary

Some test-tube and animal studies indicate that kefir can inhibit cancer cell growth. However, there are no current studies in people.

6. THE PROBIOTICS IN IT MAY HELP WITH VARIOUS DIGESTIVE PROBLEMS

Probiotics, such as kefir, can help restore the balance of friendly bacteria in your gut. This is why they are highly effective at treating many forms of diarrhoea. What's more, ample evidence suggests that probiotics and probiotic foods can alleviate many digestive problems.

These include irritable bowel syndrome (IBS), ulcers caused by *H. pylori* infection and many others. For this reason, kefir may be useful if you have problems with digestion.

Summary

Probiotics, like kefir, can treat several forms of diarrhoea. They can also lead to improvements in various digestive diseases.

7. KEFIR IS LOW IN LACTOSE

Regular dairy foods contain a natural sugar called lactose. Many people, especially adults, are unable to break down and digest lactose properly. This condition is called lactose intolerance. The lactic acid bacteria in fermented dairy foods - like kefir and yogurt - turn the lactose into lactic acid, so these foods are much lower in lactose than milk.

They also contain enzymes that can help break down the lactose even further. Therefore, kefir is generally well tolerated by people with lactose intolerance, at least compared to regular milk. Keep in mind that it is possible to make kefir that is 100% lactose-free by using coconut water, fruit juice or another non-dairy beverage.

Summary

Kefir is low in lactose because its lactic acid bacteria have already pre-digested the lactose. People who have lactose intolerance can often drink kefir without problems.

8. KEFIR MAY IMPROVE ALLERGY AND ASTHMA SYMPTOMS

Allergic reactions are caused by inflammatory responses against certain foods or substances. People with an over-sensitive immune system are more prone to allergies, which can provoke conditions like asthma.

In animal studies, kefir has been shown to suppress inflammatory responses related to allergies and asthma. Human studies are needed to better explore these effects.

Summary

Limited evidence from animal studies suggests that drinking kefir may reduce allergic reactions.

9. KEFIR IS EASY TO MAKE AT HOME

If you are unsure about the quality of store-bought kefir, you can easily make it at home. Combined with fresh fruit, kefir makes for a healthy and scrumptious dessert.

Kefir grains are available in some health food stores and supermarkets, as well as online.

You can also find many blog posts and videos that teach kefir production, but the process is very simple:

- Put 1–2 tablespoons of kefir grains into a small jar. The more you use, the faster it will culture.
- Add around 2 cups (500 ml) of milk, preferably organic or even raw. Milk from grass-fed cows is healthiest. Leave 2.5 cm (1 inch) of room at the top of the jar.
- You can add some full-fat cream if you desire thicker kefir.
- Put the lid on and leave it for 12–36 hours at room temperature. That's it.

Once it starts to look clumpy, it's ready. After you gently strain out the liquid, the original kefir grains are left behind. You can now put the grains in a new jar with some milk, and the process starts all over again. It's delicious, nutritious and highly sustainable.

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