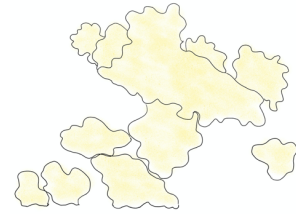


How to make and manage your own MILK KEFIR

Before we talk you through the making process, why not take a moment to have a closer look at your grains? They represent thousands of years of history and are direct descendants of those that spontaneously developed in goat skin bags in the Caucasus mountains around 2,000 years ago. They aren't actually "grains" at all, but little lumps of bacteria and yeast that look like tiny cauliflower florets, living together in perfect harmony, bound together in a kefiran polysaccharide matrix (kefiran provides additional health benefits too).

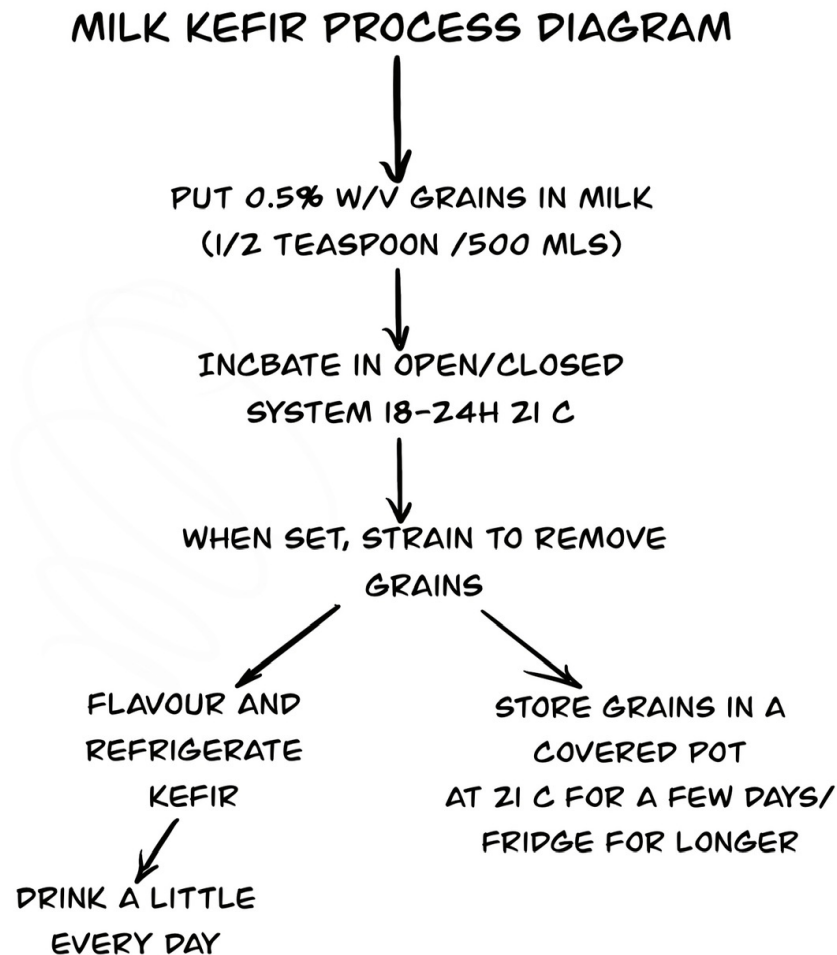


Kefir is a fermented milk that contains about 40 different species of probiotic (health-benefiting) bacteria and yeasts, bioactive peptides, vitamins, minerals and enzymes. It has been studied by scientists for over a hundred years and has both proven and anecdotal health benefits, though human trials are as yet rather thin in the ground.

Anecdotally, regular kefir users report: more energy, fewer illnesses, improved digestive transit, reduced allergies, quicker recovery from colds etc and fewer cravings. It is also possible that a daily dose of kefir could prevent the future onset of inflammatory diseases.

What is fermentation?

In food terms, it's a process where we provide microbes with an energy source (here we are using milk), and they use it to grow, making end products that are useful to us: kefir!



How to make Milk Kefir

If you've received your grains in the post.

To re-invigorate them after their journey, put your grains in a small jar, and cover with whole milk - you won't need more than 100mls. Put a lid on top and leave on the side for 12-48 hours until the milk has set (depending upon milk used,

temperature). When it does, you're good to go and can scale up.

You will need:

½ teaspoon of Kefir grains

1 pint of fresh milk (preferably Organic Whole Milk).

1 500 ml kilner jar with gasket for fermenting (or jar/cover/rubber band (see below)

Suitable Jars for Fermenting



People usually use glass vessels because then you can see what is going on. For a stronger flavour, use an open system - cover the jar with a paper towel and rubber band (on the right), as opposed to a closed system (on the left), which will make kefir with a much less yeasty fizzy flavour (my choice!)..

Method

Ensure your equipment, hands and work surface are clean and free from possible contamination by raw animal, pet or grubby-vegetable matter.

Place the kefir grains in your kilner jar

Add a pint of milk, leaving about 2 cm head room (no more)

Close the lid

Leave the jar on the worktop for approx. 18-24 hours to ferment. You've got your kefir when the milk has thickened (and may have set and separated, with pockets of whey forming - quite normal).

To strain:

A spoon

A sieve and jug/bowl and storage bottle or a straining funnel and wide necked bottle

Optional - A slice of lemon / drop of lemon oil

When set, (according to milk, the temperature of your kitchen), this will be obvious by tilting the jar. If you can't strain it straight away, put it in the fridge to stop it fermenting further, as the flavour can get quite strong – you can strain it anytime over the next 48 hours.

Then, strain it through the sieve or straining funnel into the jug/bottle. The grains are quite robust and will withstand gentle stirring. This is your kefir. You can drink it straight away, flavour and refrigerate it, or "second ferment" it to make it taste stronger. A slice of lemon peel in the jar is the way to go in my opinion 😊 .

Wash out the kilner jar, put the grains back in (no need to wash them), fill it up with milk again and leave at room temperature to make some more.

If you are completely new to kefir, you will need to **acclimatise** with a spoonful or two a day at first and build up to about 150 mls a day.

FINE TUNING THE PROCESS – Q and As

What should it taste and look like?

The kefir should taste yoghurt and tangy, but it lacks the slightly sweet aftertaste of yoghurt. If you've tasted shop bought-kefir, you might be in for a bit of a surprise at first, but you really can learn to love it. If you use lots of grains and grow in an open system it can taste fizzy and yeasty. It might take a

couple of cycles for your kefir to settle down and get used to its new home – the grains are, after all, an extremely complicated living thing. Pockets of whey might have appeared, don't worry this is normal.

How should Kefir be stored & how long does it keep?

Once strained, keep it in the fridge. This will slow down the fermentation by the microbes. It should remain pleasantly useable for at least 7-10 days. Gradually it will become sourer until it's good for nothing except baking with (see below!).

I don't want to make kefir every day?

In between making batches of kefir, keep your grains covered in a little jar of milk on the worktop for up to a week or up to three weeks in the fridge. Change the milk if you're still not using them or they will starve.

How full should the jar be?

In a closed system, fill the jar with milk to leave a couple of centimetres of head room. The bacteria and yeasts in the kefir grains are able to grow well with just a little oxygen present. Many surface moulds, however, require oxygen to thrive. By having just a little headroom in your vessel, you will make it very difficult for contaminating moulds to grow. These conditions will also ensure that the lactobacilli grow better than the other types of microbes, reducing yeasty flavours and fizz.

What type of milk should I use?

Use whole organic milk (usually blue top) for the best tasting kefir as the grassy diet for organic cows makes milk of superior nutritional quality. Any fresh animal milk works, from skimmed

to full fat Jersey (yum!), goat, cow or even sheep! The higher the milk's fat content the thicker the kefir.

Use fresh milk that is not on the turn - pasteurised milk contains some non-harmful bacteria that can grow at low temperatures and eventually change the flavour of the milk which can make your kefir taste odd.

You can use homogenised or unhomogenised milk. But it's worth noting that with high fat varieties of unhomogenised milk, sometimes the grains get stuck in the cream and don't make the milk curdle – if you are using this kind of milk you'll need to stir or shake it a few times whilst it's fermenting.

You can use raw (unpasteurised) milk if you want. Sometimes people find that it's hard to make kefir from unpasteurised milk because there are so many other bacteria already in the raw competing with the kefir bacteria for food. However, one could say that turning raw milk into kefir could be a safer way of consuming raw milk: there are so many "good" microbes in the kefir grains that they can usually inhibit the growth of small numbers of pathogenic (harmful) bacteria that could be present in unpasteurised milk

When will it be ready?

The grain/milk ratio and the temperature both affect how quickly your milk will become kefir. Put your jar somewhere (out of direct sunlight) where you can keep an eye on it. Try to catch it when just set, as the flavour is nicer. If it separates into curds and whey don't worry as it can be easily mixed back together. With practice you'll be able to time it just right. It's

harder to tell with skimmed milk which gives a much softer set. Poke with a spoon if you aren't sure if it's thickened, and smell it – if it smells slightly yoghurt or mildly cheesy it's done.

I haven't got a kilner jar?

An anaerobic system makes the nicest kefir but you can use a normal jar with a lid not screwed on too tightly, or even kitchen towel on the top if you like a stronger more yeasty/vinegary flavour

How many grains should you use? What's the ratio?

To make a nice mild tasting kefir, use 5- 10g grains per litre of milk.

The grains are growing what is to be done?

Good! That means that they are happy! If there are too many grains in your jar, as explained above, your kefir will start to taste stronger. When your grains have about doubled in size, take out half of them and give them to a friend. Or the dog. Or freeze them just in case you murder yours at some later stage 😊.

Contamination Problems

Contamination is rare because the well-established community of microbes do not welcome outsiders. Especially in a closed jar it's difficult both for surface moulds to grow, and for contaminants to enter the jar. There are so many millions of bacteria in the kefir and grains that it is difficult for pathogens and moulds to take hold. Bacteria and yeasts produce antibacterial substances that inhibit growth of other species. Also, kefir is acidic, which inhibits the growth of many

pathogens. If you are using pasteurised milk, it has already been treated to kill pathogenic bacteria.

Contamination is more likely to occur post fermentation – putting used spoons into your kefir jar for example... and even then, the same protection from billions of protective bacteria applies.

Can Everyone Have Kefir?

Almost, unless you have an actual milk allergy (as opposed to lactose intolerance). It's worth bearing in mind that these are uncharacterised kefir grains – the exact bacterial and yeast composition of them is not yet known (though I am working on it!). I have not been able to find any reports of serious illness arising from kefir consumption, but if you are immunocompromised, have had recent gastric surgery, or have an underlying serious health condition please do check with your GP. Milk intolerant people can often tolerate kefir as it has lower levels of lactose. You can also use A2 milk to make kefir. People with IBS/IBD must try a tiny amount as results can be unpredictable if you take a large quantity.

How much kefir is a good idea?

Please Start Slowly. Occasionally, people have gone at it with gusto and the massive sudden influx of new microbial species has caused diarrhoea. Please start with just a teaspoon or two the first day, and build up slowly especially if you have IBS/IBD – 5, 10, 20, 50, 75 to a maximum of 125 mls I would suggest. This is a perfect sized portion for some muesli or to form the basis of a daily smoothie.

Stomach acid levels are lower in the morning. For this reason it is often suggested that kefir is taken in the morning to increase the chances of the bacteria and yeasts surviving their passage through your gut to your colon. Though as a delivery system, dairy products are quite good for helping them survive the acid. Also, in post-menopausal women, taking at night has been shown to be beneficial in terms of bone remineralisation

You've made your kefir – what should you do with it?

Your strained kefir can go straight in the fridge if you want to have it plain. Refrigerating it for a few hours certainly improves the flavour and also the texture as it tends to thicken a little. It might separate upon standing – don't worry, whisk with a fork to re-homogenise it.

Nut Milk Kefir

You can make water kefir from nut milks including coconut, almond and cashew, oat or soya. Soya milk kefir has been shown to have some health benefits, due to the production of short-chain peptides. Whichever you use, it must have a high calorie content and be as complex as possible so avoid ones that boast of being only 12 calories per 100 ml as they won't have enough nutrients to sustain the microbes in the grains. You are looking for ones containing about 3.5g sugar per 100 mls , as this will be their source of carbohydrate.

The resulting kefir is not as thick and unctuous as milk kefir, but is a good substitute for those who are allergic to milk or don't drink milk from animal sources. With the exception of Soy milk, health benefits of other non-dairy milk substitutes

have not yet been investigated. If you are able, the “proper” stuff is what I would recommend..

Milk kefir grains will need to be revived in milk after a couple of cycles of fermenting most nut milks or they will eventually give up the ghost completely. They are often not able to make their gloopy polysaccharide coat, kefiran, in these media. If the sugar content is less than 3% (3g/100 mls) you will need to add some or they'll not have enough to eat.

Seven things to do with your kefir

1. Add it to any smoothie
2. Have a 125 ml daily shot
3. Add to frozen mango or banana for instant ice cream
4. Strain it through a coffee filter to make a labneh (if the flavour is too strong, add some natural yoghurt before straining. Keep the whey and use for a smoothie or in sourdough making.
5. As above, then add some herbs and garlic and make herby kefir delphia
6. Add to cream cheese icing to make it probiotic
7. Use in recipes in place of buttermilk

Troubleshooting

Trouble? Hopefully you won't have any but if you do, just get in touch with me by email at info@everygoodthing.co.uk or join Every Good Thing Fermenter's Club on Facebook.

Most problems are changes in flavour due to an increase in grains in the jar – remove all but ½ teaspoon in ½ litre and start again.

or

Fear of having killed grains by neglect. Can happen, though rarely – go back to your freezer stock, thaw out in a covered ramekin of milk for up to 3 days till milk is set.

NB

The microbes in these kefir grains have not yet been identified. They have, however, been tested to ensure that they do not contain any known food pathogens. We have no knowledge of your state of health or your microbiota. Side effects are rare – a mild upset stomach could result, but the microbes within are not likely to permanently take up residence in your gut and will pass through. If you have any concerns please consult a registered health professional.