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No Nonsense Nutrition!

10 Myths About Dairy Debunked

With plant-based diets becoming increasingly popular, dairy has been getting a lot of bad press recently.

There are valid arguments about the negative impact of dairy production from an ethical and environmental point of view. However, many of the negative messages about the health impact of dairy simply aren't true.

In fact, dairy is a highly nutritious food which provides:

- High quality protein
- Important minerals such as: calcium, iodine, phosphorus and potassium
- Vitamin B2, B5 and B12

Dairy is also great for muscle recovery and hydration after exercise, and some types of fermented dairy (like kefir and live yoghurt) contain probiotics which are great for our gut health.

Myth 1: "All Dairy is High in Fat and Sugar"

Some types of dairy do fit into these categories, such as cheese which is high in fat, and yoghurt made with added sugar.

But in its less processed form, dairy foods aren't naturally high in fat or free sugars.

For example, no type of milk falls into the 'high fat category':

- Whole milk (A.K.A. 'full-fat milk') contains: 3.5g of fat and 2.3g of saturated fat per 100ml – which falls into the 'medium fat' category.
- Low-fat milk (A.K.A. 'semi-skimmed milk') contains: 1.8g of fat and 1.1g of saturated fat per 100ml – which falls in the low fat category.
- Skimmed milk (A.K.A. 'slimline milk') contains: 0.3g of fat and 0.1g of saturated fat per 100ml – which is also in the low fat category.

Natural yoghurt, low-fat natural yoghurt and 0% fat natural yoghurt have a similar fat profile to the type of milk which they are made from (i.e. whole milk, low-fat milk and skimmed milk respectively).

Dairy contains a natural type of sugar called lactose – but this [doesn't count as a 'free sugar'](#) that we need to limit, because it is combined with many beneficial nutrients within dairy foods. Free sugars include: table sugar, honey, syrups, jam (and products which contain these).

Milk usually contains 3-5g of sugar per 100ml, which falls into the low sugar category. Natural yoghurt usually contains 5-9g of sugar per 100ml, which falls into the 'medium sugar' category.

Because flavoured yoghurts can have a lot of free sugar added to it, it is often a good idea to either read the label to choose lower sugar options, or to go for natural yoghurt and add your own fruit for sweetness.

Myth 2: “Raw or Organic Milk is Healthier Than Ordinary Milk”

[Raw milk](#) is cow's milk which hasn't been pasteurised – so this poses the risk of food poisoning, especially in vulnerable groups such as young children or those with a compromised immune system.

There are [some reports](#) of a reduced risk of allergy or asthma in children who grow up on farms drinking raw milk – however there is no clear link from the research that this is caused by the raw milk itself (as it could be due to the impact of other factors in the farm environment).

Raw milk is actually banned in certain countries (such as [Scotland](#)), and there is no evidence that it has a health or nutritional advantage.

There is [some evidence](#) that organic milk may contain slightly more omega-3, CLA (a type of trans fat which is thought to have health benefits), iron and vitamin E – but less iodine and selenium than ordinary milk. However this difference was very small – for example this would be an extra 25mg of omega-3 in a glass of organic milk (vs. the recommended [250 – 500mg of omega-3](#) per day for healthy adults).

Furthermore, this association may have been related to grass-fed dairy cows rather than organic milk in general – and in the UK and [Ireland](#) the vast majority of dairy cows are grass-fed.

For more information about organic food, check out [this article I wrote for The Food Medic Educational Hub](#).

Myth 3: “There are ‘Pus Cells’ in Dairy”

‘Pus cells’ aren't even a thing!

Milk does contain white blood cells, but pus is very different to this as it would also need to contain bacteria, specific proteins and specific neutrophils etc.

The levels of white blood cells present in milk are also closely monitored, and the milk is not sold if levels are too high – as this means that the cow might have an infection.

For example, milk which has a white blood cell level (SCC) [higher than 400,000 is deemed unfit for human consumption](#) by the EU.

You can read [this post by Fitness Reloaded for more information about this](#).

Myth 4: “Dairy Causes Cancer”

There are some mixed findings in relation to dairy and cancer risk. But overall, no strong evidence shows a link between consuming dairy and an increased risk of cancer.

In fact [research is emerging](#) which suggests that dairy consumption may actually reduce the risk of certain types of cancer risk – especially [colorectal cancer](#), although more studies are needed to investigate this.

Some people are concerned about consuming dairy from cows which have been treated with the growth hormone recombinant bovine somatotropin (rBST), as this increases levels of insulin-like growth factor 1 (IGF-1) in milk.

Use of rBST in dairy production is banned in many countries, including in the EU, but it is used in [about 15% of dairy products in the US](#).

There is [some evidence](#) that consuming hormone treated milk can increase IGF-1 levels in humans (which can be associated with an increased risk of prostate cancer) – but [cancer experts in the US](#) state that more research is needed to investigate this possible link.

Myth 5: “Dairy Leaches Calcium From the Bones”

This myth relates to the alkaline diet, as dairy is high in protein it is classed as an ‘acidic’ food which can weaken the bones. This theory is based on pseudoscience, and the alkaline diet is a prime example of nutribollocks – [you can read this post for more information about this fad diet](#).

Another argument for this is that some [studies](#) have found high fracture rates in countries with a high intake of dairy. However, these studies tend to be based on self-reported intake, (which is often not very accurate) and often don’t account for important factors such as vitamin D and vitamin K intake – as vitamin D is needed in order to absorb calcium and vitamin K is needed for calcium to be properly deposited in the bones and teeth.

Furthermore, there is good evidence which shows the [important impact of dairy and dietary calcium on bone health](#) – especially during [childhood and adolescence](#).

And a [large study from the UK](#) found that vegans tend to have lower bone mineral density compared to vegetarians who consume dairy – due to a lower intake of calcium.

Dairy also contains other important nutrients for good bone health including: protein and phosphorus.

Myth 6: “Dairy Causes Acne”

There is [some evidence](#) that dairy ([especially low-fat versions](#)) is associated with a higher risk of acne. But this isn't very strong as the studies have been small and observational (so no direct link can be identified).

In fact diet may not play a role in acne risk for everybody, as this is influenced by a number of factors including our genetics and hormones.

However, eating a balanced and nutritious diet which is good for our overall health is [also good for our skin](#) and may reduce the risk of acne for some people (i.e. Mediterranean-style diet which includes plenty of fruit, vegetables, wholegrains, not too much sugar, healthy fats from nuts, avocados, oily fish etc).

So it is possible that dairy might impact acne risk for some people, but there isn't enough evidence to say that this is a definite link.

There is also much more evidence for other more well-established dermatological treatments for acne, as compared with cutting out dairy.

Myth 7: “Dairy is Bad for Our Heart”

[More evidence](#) is emerging that consuming dairy may actually reduce the risk of heart disease.

This applies to both low fat and full fat versions. However national guidelines don't currently recommend choosing full-fat dairy for heart health – most likely due to high saturated fat intakes in Western Countries.

The possible heart healthy effect of full-fat dairy is thought to be related to the specific type of saturated fat found in full fat milk, yoghurt and cheese – which contains an [odd number of carbon atoms](#), and is enclosed in a specific membrane called a [milk fat-globule membrane](#) (MFGM).

Whereas the type of saturated fat found in butter, coconut oil and fried food (etc.) tends to be even-chain and not encased in a MFGM.

This may also be related to the ‘whole-food’ effect of dairy, as the various nutrients dairy contains may interact with each other in a beneficial way.

Myth 8: “Milk Causes Mucus Production”

Although milk can leave a slightly filmy coating in the mouth, [studies](#) have found that it does not impact mucus production, or increase the risk of asthma.

However, if a child has an allergy to cow’s milk, symptoms may include difficulty breathing (see [this article](#) for more information on cow’s milk protein allergy).

Myth 9: “Dairy Allergy or Intolerance is Common”

An allergy to dairy occurs when our body mistakenly identifies the protein found in cow’s milk as harmful and creates an immune response against this – this is called cow’s milk protein allergy (CMPA).

CMPA most commonly occurs in infants, and is very rare in adults as [most infants outgrow this by the age of 5](#).

[This article](#) discusses CMPA in more detail.

Lactose is the type of sugar which is naturally found in most dairy products. Lactose intolerance occurs when we don’t have enough lactase in our body – which is the enzyme needed to breakdown and absorb lactose.

When this happens lactose can build up in the gut where it becomes fermented by bacteria which causes gas production and movement of water to the bowel, leading to problems such as: diarrhoea, bloating, gas and abdominal pains.

Lactose intolerance occurs more commonly in adults than CMPA.

The overall [prevalence in the UK and Ireland is around 5%](#) – which still isn’t very high.

[You can read this article for more information about lactose intolerance.](#)

Myth 10 “It is Unnatural’ to Consume Dairy”

Most food that we eat has been processed in some way to make it safer for us to consume, or improve its quality (by filtering, pasteurising, canning etc).

Even fresh fruit and vegetables have changed a lot over time, as farmers have been selectively breeding these for hundreds of years – so the banana that we know today is very different from the type of [banana that was cultivated 7000 years ago!](#)

And the [genetic change](#) which allowed humans to consume dairy was thought to have occurred about 7500 years ago.

So it isn't more 'unnatural' to consume dairy as compared with other types of food

Although, as I mentioned there are valid arguments about the negatives of dairy production from an ethical, animal welfare and environmental point of view. For information about the environmental impact of dairy you can check out this article I wrote for [The Food Medic Educational Hub: Is Dairy Bad for the Environment?](#)

If you do decide to cut out dairy for any reason then it is important to make sure that your diet remains nutritionally balanced. [This post](#) provides some advice about this, but you may need to consider getting individualised advice from a Dietitian