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## What's wrong with milk from a cow?

From coconut to camel, there are lots of trendy alternatives to dairy but are they any better for you, asks Peta Bee

Remember the milk moustache? For 20 years, from the mid-1990s, everyone who was anyone loved cow's milk. The world's top models (Naomi Campbell, Kate Moss) and the biggest stars of Hollywood (Harrison Ford, Susan Sarandon), pop (Taylor Swift) and sport (David Beckham) all appeared in adverts with their upper lips coated in the stuff.

Nowadays, celebrities encourage us to drink any milk as long as it is not dairy. Gwyneth Paltrow enjoys non-dairy smoothies, Kourtney Kardashian makes her own almond milk (her sister, Khloé, associates cow's milk with bloating), and David Cameron is reportedly partial to it on his cereal. Perhaps he heard about Jennifer Aniston, who attributes her good looks to a diet that includes "millet cereal with almond milk and bananas".

Such wholesomeness has an air of superiority and smugness about it. I've heard ten-year-olds mention breezily that they drink nothing but almond milk, and parents gasp at the prospect of their six-year-old consuming a normal milkshake. Even ordering a soya latte, once the worthiest way to drink your coffee, has been usurped by a chic newcomer: the coconut-milk latte. Browse the chiller cabinets of health food stores and you will find up to 15 varieties of milk that have never been near a cow.

Oat, goat, buffalo, hemp, coconut, pea, the choice is seemingly endless and the thirst for milk alternatives led to sales nearly tripling between 2011 and 2013, from 36 million litres to 92 million litres, according to Mintel.

Some are prepared to pay £5.49 for a 500ml bottle of chilled, raw milk sourced from grass-fed camels in the

Netherlands. Its manufacturers say the unpasteurised milk is not just rich in vitamins and minerals but lower in lactose than cow's milk.

Almost 12 million people in the UK consider themselves dairy intolerant, yet Dr Anton Emmanuel, a lecturer in neuro-gastroenterology at University College London, says that for many Britons milk phobia has little medical basis. "Studies show that formally diagnosed problems are a fraction of the figure who think they have a problem with milk," he says.

Most people who steer clear of cow's milk do so because they think they are unable to tolerate the milk sugar lactose. An enzyme, lactase, required to digest milk sugar is present in babies, but switches off in some adults, leading to symptoms such as bloating, cramps and diarrhoea.

Intolerance is widespread in southeast Asia, but in the UK primary lactose intolerance is rare. "Only 0.01 per cent of the European population lacks the enzyme needed to digest lactose," says Aisling Pigott, a spokesperson for the British Dietetic Association.

More common is secondary lactose intolerance, which can be temporary, occurring after a bout of illness. "Lactase efficiency is lost, but the enzyme regenerates in the gut over time," Pigott explains. Researchers have suggested that even those with



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fairly severe symptoms can consume moderate amounts (250-500ml a day).

Last week a study was published that suggested that people who struggle with dairy may be intolerant not to the sugars in milk but to a protein it contains called A1. Found in regular cow's milk, A1 is said to digest differently to a more preferable A2 beta-type protein present in milk produced from select herds. Certain types of cows, such as Jersey and Guernsey, produce a higher percentage of A2 than regular cow's milk while other milks, such as goat's milk and human breast milk, contain only the easy-to-digest A2 protein.

Studies have shown that a2 Milk — a trademarked product — is easier on the gut, a finding confirmed in the latest trial published in *Nutrition Journal* by Professor Sun Jianqin from Huadong Hospital, an affiliate of the Fudan University in Shanghai.

About 2 million litres of A2 milk were consumed in the UK last year. It costs about £1.39 per litre, and is sold

“Drinking rice or almond milk isn't a step towards better health

in whole, semi-skimmed and long-life packs at about 1,200 stores nationwide, including most major supermarkets.

"Some people with a sensitivity seem to benefit from the switch," says Emmanuel. "A big concern is that a perceived intolerance of milk and dairy can mean a lack of calcium and other bone-building minerals in the diet. We've seen problems such as thinning bones, particularly in women around the menopause, after spending so much time trying to avoid milk."

A2 milk isn't a blanket alternative for everyone, though, and a review of all available scientific literature, published by the European Food Safety Authority in 2009, concluded that there was insufficient evidence to confirm A1 milk was worse for health.

What about the dairy-free brigade? Pigott says that many commercial brands have a milky appearance but are otherwise pitiful by comparison. "They usually tend to be lower in energy, protein and vitamins," she says. They can also be loaded with sugar; the sweetness is added to disguise the watery, slightly oily flavour.

"Something like almond milk is basically nut juice with a slightly fatty taste to it," says Emmanuel. "It looks milky white but wouldn't be pleasant unless it were sweetened."

Even then, the benefits of many fashionable milks are questionable. "If you are switching to a milk alternative, you need to ask yourself why," Pigott says. "If you are doing it to become healthier, then you are very much mistaken. Drinking rice, hemp, almond or cashew milk is not a step towards better health. There's this sense you will feel better if you buy them, that they are some type of panacea for the modern diet. Nothing like that is guaranteed."

### The pros and cons of non-dairy

#### ■ Traditional cow's milk

**Pros** Rich in vitamins and minerals — particularly calcium (122mg per 100ml) — and protein (3.4g per 100ml).

Organic varieties contain higher levels of healthy omega-3 fatty acids.

**Cons** With 68 calories per 100ml, it is relatively energy-high, although not excessively so. Total sugars (in the form of lactose) come in at 4.7g per 100ml — higher than most alternatives.

#### ■ a2 Milk

**Pros** Contains only the A2 proteins and none of the A1 that might cause gut discomfort in some people. Looks and tastes the same as traditional whole milk and contains the same array of nutrients, protein and calories.

**Cons** Although evidence is mounting, there is no confirmation that it is better for your health. Not everyone finds their gastrointestinal symptoms improve when they drink it.

#### ■ Almond milk

**Pros** Fewer calories than skimmed milk (about 24 per 100ml compared with 35 per 100ml). Unsweetened varieties have 13 calories per 100ml and only 0.1g sugar.

**Cons** Low on protein (0.4g per 100ml). Almond content is about 2 per cent; sugar is usually the second ingredient in sweetened varieties (3g per 100ml). Unsuitable for babies and infants.

#### ■ Coconut milk

**Pros** Fat content is low (about 1.0g per 100ml) and it is naturally sweet and lactose free. Usually fortified with D2 and B12 and a good source of fibre.

**Cons** Can be anything from 20-53 calories per 100ml. Low in protein (0.1g per 100ml). It's mostly sold unsweetened, but sugar content varies too — from 1.9g to 4.2g per 100ml depending on the brand. Unsuitable for babies and infants.

#### ■ Hemp milk

**Pros** Usually fortified with calcium and vitamin D2. It contains 39 calories per 100ml and 1.6 grams of sugars.

**Cons** Many brands are a highly processed mix of emulsifiers and flavourings sweetened with grape juice. The flavour is an acquired taste. Unsuitable for babies and infants.

#### ■ Rice milk

**Pros** Made from rice, sunflower oil water. Best-selling brands are fortified with calcium and vitamins D2 and B12.

**Cons** Most commercial rice milks are made from white rice and are highly processed. There's little protein (0.1g per 100ml) and a fair number of calories for a milk alternative (50 per 100ml). It's relatively lacking in vitamins and minerals and fairly high in sugars (7.1g per 100ml). It tastes a bit thin and watery with a very neutral flavour. Parents have been warned not to give rice milk to infants for fear of its arsenic content.

#### ■ Oat milk

**Pros** Made from oats mixed with oil and water and enriched with vitamins and calcium. Rich in beta-glucans, the soluble fibre that has been linked to lowering cholesterol. Although low in protein (0.3 to 1.0g per 100ml), it has more than some alternatives.

**Cons** Contains 45 calories per 100ml and, although unsweetened, 4g of natural sugars. Low in fat (1.5g per 100ml), but has a powdery aftertaste. Unsuitable for babies and infants.

#### ■ Soya

**Pros** Comparable in protein content (3.1g per 100ml) to cow's milk and is low in fat with 1.7g per 100ml. Some studies show soya intake can help to control cholesterol levels.

**Cons** It is often highly processed and contains many additives. Some think soya is problematic unless it's in fermented form, and possibly disrupts hormones. Sugar content is anything from 0.1g to 2.7g per 100ml.

Got milk? Possibly not. Far left: model Naomi Campbell in the milk moustache campaign

