

Submission concerning Proposal P1007 - Primary Production and Processing Requirements for Raw Milk

Are Dairy Products A Special Case For Our Food Laws?

Milk is the only food that is illegal to sell in its natural state. As a food, milk is also unique in also being a food designed by 100 million years of evolution, to be the perfect food for a growing mammal. It is therefore quite ironic that milk in its natural state should be considered inherently unsafe. Nethertheless, nature is never perfect, and there is no doubt that like any food, milk has the potential to carry dangerous pathogenic organisms, whether through contamination or from the original source. I propose, that in re-evaluating the laws concerning, FSANZ should not consider that it is their job to decide for all of us what we should eat and drink, instead, recognise that people have the right to make their own choice as to how they want their nourishment. While many of the panel will believe that the dangers of drinking milk unpasteurised far outweigh the benefits, I as a campaigner for raw milk, would never dream of telling them that they must drink milk raw.

So it is with this issue. I do not expect the FSANZ review committee to endorse the consumption of raw milk, but recognise that it is a valid food choice, and provide the best framework so that those who want access to this food, to be in the most empowered position to get the best benefits of their choice and minimise any risks.

In terms of risk, I propose that the FSANZ committee consider the risks in comparison to any other food that is available to us. In this light, we should consider, not that risk must be reduced to zero for a food to be legal, but that risks should be generally negligible.

The consumption of raw plant foods is something that is increasingly encouraged by our diet gurus. Salads with green lettuce leaves and tomatoes, raw nuts, and fresh fruit are said to be the basis of a healthy diet. Yet, just like any raw food, they contain a risk of food borne illnesses. Lettuce leaves and tomatoes have both been implicated recently in outbreaks of salmonella, so too have peanuts. A recent outbreak in Salmonella was attributed to Rockmelons.¹

Furthermore, uncooked foods are by no means the only means of acquiring food borne illnesses. Food borne illnesses are regularly contracted from foods that have been cooked, undercooked, or reheated. Indeed, pasteurised dairy products are not free of risk for food borne illnesses, and while it could be argued that this only occurs because procedures were not properly followed, it is nethertheless a risk to the consumer, as no system is fool proof. While proponents of pasteurisation will maintain that illnesses contracted from

¹http://www.health.nsw.gov.au/news/2006/20061026_03.html

pasteurised dairy should not be considered as evidence that pasteurisation is not safe, we would like this argument to work both ways. Cases of illness contracted from consuming raw dairy products are not necessarily evidence that raw dairy is inherently unsafe, but just cases of bad preparation, human error or just plain bad luck that can be associated with any food.

While most food borne illnesses can occur in dairy products, listeriosis is the most commonly cited illness most commonly attributed to being caused by consuming dairy products. According to a report by J. Lundén, R. Tolvanen and H. Korkeala ², Dairy products are associated with half of the reported cases of listeriosis. They cite other reports ³ that suggest that developed countries have 0.2 to 0.8 cases per 100,000 people, and that deaths from Listeriosis in Europe are between 320 to 2500 annually. To put this in perspective, based on the upper limit quoted here, your chance of dying from listeriosis in Europe is about 6 times greater than your chance of dying from lightning strike. Based on the lower value, it is about the same. ⁴(see footnote for deaths from lightning rates – England).

In the report by J. Lundén, R. Tolvanen and H. Korkeala ⁵, they cite a few outbreaks of listeriosis in Europe within the last twenty-five years. Apart from one incident involving pasteurised butter, they recall mostly incidents involving raw dairy products.

“In Austria, 39 cases of listeriosis occurred in 1986. The epidemiological survey of 28 culture-confirmed cases revealed that some of the patients had consumed raw milk and organic vegetables. It was concluded that raw milk and vegetables were possible sources of infection ([Allerberger and Guggenbichler, 1989](#)).”

In the above example – how many cases were caused by consuming raw milk? In this case we only know that of 39 cases, 28 were culture confirmed, and out of the 28 some had consumed raw milk. Is the link here then proven or circumstantial?

*“In Denmark, 69 cases of listeriosis were diagnosed between 1989 and 1990, with 26 cases being caused by the same phagotype. The outbreak was associated with 2 vehicles. Epidemiological studies revealed an association between listeriosis and blue-mold cheese, although *L. monocytogenes* was not isolated from the cheese. Dairy control samples, by contrast, showed that the epidemic phagotype was present in hard cheese during this period ([Jensen et al., 1994](#)).”*

2J. Dairy Sci. 87:E6-E12 American Dairy Science Association, 2004.

3Gellin et al., 1991; McLauchlin, 1996; Anonymous, 2001; Lukinmaa et al., 2003

4<http://cat.inist.fr/?aModele=afficheN&cpsidt=959978> [Atmospheric research ISSN 0169-8095

5 J. Dairy Sci. 87:E6-E12 American Dairy Science Association, 2004.)

In this situation the attention has been drawn to a blue mold – but strangely, the blue-mould cheese did not betray any evidence? Was this a failure in detection or was the blue-mould cheese innocent. On the other hand the hard cheese did contain the culprit, but this was not linked to the outbreak.

*“In 1995, there was a listeriosis outbreak in France, and 37 cases were associated with consumption of a Brie-type cheese made of raw milk ([Goulet et al., 1995](#); [Rocourt et al., 1997](#)). The same *L. monocytogenes* PFGE type isolated from patients was traced to 4 Brie-type cheese sample isolates received earlier that year by the National Reference Center. Epidemiological studies indicated that all patients had consumed Brie-type cheese ([Goulet et al., 1995](#)). A similar type of epidemic caused by soft cheese made of raw milk occurred in France in 1997. Fourteen epidemic-related cases were recognized. Epidemiological investigations implicated 2 cheeses manufactured by the same establishment as the vehicles of the outbreak ([Jacquet et al., 1998](#)).”*

In the above example, the evidence is compelling that the Bri-type cheese was the cause of the outbreak, but nevertheless, spurious links are also used as evidence for raw milk products causing listeriosis, we can then only suppose that the extremely low risk of developing listeriosis from consuming a raw dairy product may yet be overstated!

Listeria monocytogenes, the bacteria responsible for listeriosis, is said to be common, found in soils water and the intestinal tracts of animals. In fact wikipedia⁶ cites a study⁷ suggesting 10% of human gastrointestinal tracts may be colonized by *L. monocytogenes*. Given the prevalence of this bacteria in nature, and the extremely rare occurrence of listeriosis, we must assume that everyone is exposed to this bacteria regularly without harm. Even pregnant women or people with weakened immune systems must be exposed to *Listeria monocytogenes* more often than we suspect. The pathogenesis of this bacteria is therefore more relevant than its occurrence. We might assume that raw milk will regularly contain *Listeria monocytogenes* when tested, but so may many other foods we rarely bother testing as well.

We could assume that *Listeria monocytogenes* becomes pathogenic when it is in high enough quantities, however I am not aware of any studies to confirm this hypothesis. So while raw milk may be a vehicle for *Listeria monocytogenes*, it is extremely rare for it to cause listeriosis.

⁶ http://en.wikipedia.org/wiki/Listeria_monocytogenes

⁷ Ramaswamy, Vidhya and Cresence, Vincent Mary. "Listeria - Review of Epidemiology and Pathogenesis." *J Microbiol Immunol Infect.* (2007). 40:4-13

Listeria was detected in raw milk from a Pennsylvania farm in 2007. Yet despite attempts to create panic, and profitable law suits from this ⁸ no one reported any ill-effects from this detected outbreak.

In regard to making raw dairy products available to the public, the possibility of food borne illness from Listeria should not be considered so frequent to deter a liberalisation of these laws. However, good handling procedures at farm and processing sheds should still be maintained to keep the threat of Listeria caused illnesses low as it is currently in other Western countries where raw dairy products are legal. While Listeria is not the only potential pathogen that can be found in raw dairy products, most other pathogens are just as common in other foods which are not so strictly controlled as dairy products. Bovine brucellosis appears to have been eradicated in Australia, so too has bovine tuberculosis ⁹ leaving only campobacter and salmonella as the other possible food borne pathogens that could possibly occur in raw dairy products. Campobacter and salmonella are pathogens that can be contracted from many sources, and raw dairy is possibly the least optimal vehicle for these microbes. The reason I suggest this is that it contains among other compounds – lactoferrin. This enzyme found in raw milk is now being used as a disinfectant in the meat industry. It is said to be effective against E Coli, Salmonella and even Listeria ¹⁰

the occurrence of this anti-pathogen component in raw milk is nature's design to protect milk from passing pathogens to a young baby mammal.

Given that raw dairy is consumed safely most of the time around the world and in countries where it is legal, and even consumed safely in Australia by people with their own milking animals, we may assume that most of the time, raw dairy is safe. The exceptional cases should be examined for what went wrong rather than assuming that raw dairy is inherently unsafe. Given Australia's good track record in maintaining high food standards, there is no reason why we cannot benefit from the unique qualities that raw dairy provides to our food culture, without compromising on safety.

I consider that farmgate sales of milk no longer need to be outlawed, as our food laws have no business in interfering with private transactions occurring between a consumer and a food supplier. The risk borne by a consumer in this situation is negligible, and one they bear upon themselves. Where food is distributed beyond the farm, the consumer has no relationship with the supplier, and hence is dependent on our food authority to ensure standards are met. I believe that in this situation, FSANZ can recommend sensible

⁸ <http://foodpoisoning.pritzkerlaw.com/archives/listeria-piney-ridge-dairy-milk-recall-and-duncan-farm-milk-recall-in-pennsylvania.html>

⁹ <http://www.animalhealthaustralia.com.au/aahc/index.cfm?7339E022-B68F-AB04-264E-AAA1B958ED0D>

¹⁰ <http://www.meatupdate.csiro.au/new/Activated%20Lactoferrin.pdf>

achievable standards for dairy farms and dairy processing businesses to provide raw dairy products with minimal risk to public health.

I am affiliated with the Weston A Price Organisation, but my views presented here do not necessarily represent those of the organisation.

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