Food Safety
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Health Risks from Unpasteurised Milk

Introduction

A small number of people continue to drink raw milk in Ireland against the advice of food safety and public health professionals. Advocates of raw milk consumption claim additional nutritional qualities, taste, and health benefits as reasons for this practice; however, science-based data to substantiate these claims are limited. Illness linked to raw milk consumption continues to be reported from many parts of the world. In Ireland, in 2005, a family outbreak of tuberculosis on a dairy farm was linked to consumption of raw milk. The disease had a very severe impact on the health of two young children[1]. While the likelihood of acquiring tuberculosis from the consumption of raw milk is very low, it remains a possibility as the herd incidence of bovine tuberculosis is reported to be around 5%. More importantly, from a public health viewpoint is the risk of infection with *E. coli* O157:H7 or other verocytoxin producing *E. coli* (VTEC) from the consumption of raw milk.

Is unpasteurised milk safe to drink?

No. By consuming unpasteurised milk you are placing yourself at an unnecessary risk of serious illness. Unpasteurised milk can contain disease causing bacteria (pathogens).

Two major pathogens that may be found in milk include *E. coli* O157:H7 and *Campylobacter*.

***E. coli* O157:H7** is one of a group of disease causing *E. coli* bacteria known as VTECs (Verocytotoxigenic *Escherichia coli*). It can cause bloody diarrhoea and may result in kidney failure or even death. The most frightening aspect is that even tiny numbers of these bacteria can cause serious illness. Whilst there is limited information for Irish livestock, past studies have shown up to 20% of cattle and sheep to be excreting this pathogen. Recently completed Teagasc studies (2009) have shown cattle to be 2.7% positive for O157 with 6-7% positive for other VTECs.

Campylobacter can cause acute gastroenteritis with diarrhoea and/or vomiting. In most cases, the illness is self limiting, but it may be severe and life-threatening in susceptible people including young children, pregnant women, the elderly and the sick.

Other diseases that one could contract from the consumption of raw milk include Tuberculosis (TB), Salmonellosis and Brucellosis. In England and Wales, where some unpasteurised milk is still sold, 12 outbreaks of infectious diseases associated with unpasteurised milk were reported from 1992 to 2007.

[1] An outbreak of tuberculosis affecting cattle and people on an Irish dairy farm following the consumption of raw milk. Doran, P *et al.* Irish Veterinary Journal Vol62 (6) 390-297;2009

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How does milk become contaminated?

With healthy animals, the milk inside the udder has very few germs. However, if animals have diseases such as TB or mastitis, pathogens may be present in the milk even inside the udder. Also, even healthy animals may carry and therefore, excrete pathogens. During milking, there is the possibility of contamination of the milk from the animal herself (surfaces of teats, hairs, urine and faeces etc.) and from unclean milking equipment or the milking environment.

Who is at risk from unpasteurised milk?

Any person who consumes unpasteurised milk is at risk. Many dairy farm families and their visitors still drink raw milk. Such risk can be eliminated either by purchasing pasteurised milk or by using a small home pasteuriser. Home pasteurisers can be bought for approximately €490 (July, 2009) and thousands of these have been sold in the past few years.

Pasteurisation makes milk safer

Pasteurisation kills or inactivates milk pathogens including *E. coli* O157, *Campylobacter* etc. It involves heating the milk to a high temperature for a short time (72°C for 15 seconds). Rapid cooling after pasteurisation is important. Pasteurisation has little effect on the flavour or nutritional value of the milk.