
Abstract

Raw or heated cow milk consumption: Review of risks and benefits

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In the context of the prevailing trend toward more natural products, there seems to be an increasing preference for raw milk consumption, as raw milk is associated with several perceived health benefits that are believed to be destroyed upon heating. However, many human pathogens can be isolated from raw cow milk. The prevalence of foodborne pathogens in raw cow milk varies, but their presence has been demonstrated in many surveys, and foodborne infections have been repeatedly reported for *Campylobacter*, *Salmonella* spp. and human pathogenic verocytotoxin-producing *Escherichia coli* [VTEC]. In industrialized countries, milk-borne and milk product-borne outbreaks represent 2–6 per cent of the bacterial foodborne outbreaks.

The aim of this review is to present scientifically sound data regarding the risks and benefits related to the

consumption of raw and heated cow milk. Both microbiological aspects (such as the prevalence of milk-borne pathogens, pathogen growth inhibition by antimicrobial systems and by lactic acid-producing bacteria, probiotic bacteria, etc.) and nutritional or health aspects (nutritional value, immunity, allergies, lactose intolerance, diabetes, milk digestibility, etc.) are considered.

As such, it is demonstrated that consumption of raw milk poses a realistic health threat due to a possible contamination with human pathogens. It is therefore strongly recommended that milk should be heated before consumption. With the exception of an altered organoleptic profile [taste], heating (in particular ultra high temperature and similar treatments) will not substantially change the nutritional value of raw milk or other benefits associated with raw milk consumption.

Keywords: Raw milk; Pathogens; Risk/benefit; Nutrition; Heat treatment.

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