Consumption of unprocessed cow’s milk protects infants from common respiratory infections

Background

Breast-feeding is protective against respiratory infections in early life. Given the co-evolutionary adaptations of humans and cattle, bovine milk might exert similar anti-infective effects in human infants.

Objective

To study effects of consumption of raw and processed cow’s milk on common infections in infants.

Methods

The PASTURE birth cohort followed 983 infants from rural areas in Austria, Finland, France, Germany, and Switzerland, for the first year of life, covering 37,306 person-weeks. Consumption of different types of cow’s milk and occurrence of rhinitis, respiratory tract infections, otitis, and fever were assessed by weekly health diaries. C-reactive protein levels were assessed using blood samples taken at 12 months.

Results

When contrasted with ultra-heat treated milk, raw milk consumption was inversely associated with occurrence of rhinitis (adjusted odds ratio from longitudinal models [95% CI]: 0.71 [0.54-0.94]), respiratory tract infections (0.77 [0.59-0.99]), otitis (0.14 [0.05-0.42]), and fever (0.69 [0.47-1.01]). Boiled farm milk showed similar but weaker associations. Industrially processed pasteurized milk was inversely associated with fever. Raw farm milk consumption was inversely associated with C-reactive protein levels at 12 months (geometric means ratio [95% CI]: 0.66 [0.45-0.98]).

Conclusions

Early life consumption of raw cow’s milk reduced the risk of manifest respiratory infections and fever by about 30%. If the health hazards of raw milk could be overcome, the public health impact of minimally processed but pathogen-free milk might be enormous, given the high prevalence of respiratory infections in the first year of life and the associated direct and indirect costs.

Key words:

Respiratory infections, rhinitis, otitis, fever, inflammation, C-reactive protein, infancy, milk, prevention, epidemiology
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