

Milk an Eternal Science: A Mini Review

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Abstract

With limited saturated fat intake from non-milk sources, increased milk consumption could bear a multitude of positive impacts on health even with high fat content. Milk is a collection of bioactive substances with unique nutritional properties that synergistically optimize the health of mind and physics in different age groups.

Keywords: Science; Milk; Pragmatic; Human health

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Critical Discussion

The rising concerns from cardiovascular, cognitive and aging complexities due to improper nutrition of non-milk ingredients appear to have alarmingly contributed to forming a fallacious public acuity about milk as a risk factor to optimum health. For instance, very early (< 3 mo post-birth) neonatal cow milk intake has been related to insulin-dependent diabetes. Apart from bioreasons for such a relationship, non-breast milk consumption during very early stages of life is unarguably uncommon. Modern nutrition does in no standard circumstances authorize feeding such quite young neonate's non-breast milks [1-3].

Population studies with compelling scientific application to real life scenarios demonstrated that unlike unsubstantiated beliefs, cow milk is not responsible for the major gastrointestinal related immune malfunctions. Moreover, consuming cow milk by lactating mothers has proved to enrich breast milk beta-lactoglobulin and ovalbumin components. Furthermore, youngsters consuming cow milk develop more standard body frame structure, whereas children deprived of milk intake exhibit poor bone health. In complementary addition, what make ruminant milk exclusive are its processing and manipulation opportunities to better meet human nutrient requirements with no major health compromises? Enrichment with vitamin E and skim milk production from immunized cows for lowering blood cholesterol in hypercholesterolemic patients are amongst key examples [4-7].

Conjugated linoleic acid (CLA) isomers of about 20, notably CLA_{cis9 trans11} (75-90%) and CLA_{trans10 cis12} from cow and goats milk are considered novel agents with anti-carcinogenic, anti-atherogenic, anti-inflammatory, and anti-lipogenic effects. These effects potentially

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protect against hypertension, cardiovascular disease (CVD) and progressive obesity. Accordingly, considerable research has focused on altering modern dairy cows and somewhat goat's nutrition programs to improve milk nutrient profile, and enhance components with human health implications.

These are besides milk immunoglobulins beneficial impacts against Enterotoxigenic *Escherichia coli*. Another group of milk bioactives include casomorphins, immunostimulating peptides, and ACE-inhibitory peptides. These substances form prime structures of milk proteins and act as plausible physiological modulators during milk digestion along the gut. Thus, such modulators can provide essential sources for designing commercial bioactive features or 'functional foods' [1,3,5,8 and 9].

Recent observational studies report no increased CVD with increased milk or other dairy products intake. Dairy consumption has in several cases reduced the incidence of one or more metabolic syndromes. Whey proteins are insulinotropic, medium chain fatty acids improve insulin sensitivity, and alongside calcium may favorably influence body weight and fat distribution. Peptides and calcium can reduce blood pressure and blood cholesterol. Additionally, dairy consumption benefits folate availability and thereby lowers circulating homocystein levels and heart attack risks [1-3].

Milk and yogurt are considered the most natural functional foods [4]. The increasing concerns from cardiovascular, cognitive and aging complexities in modern populations, mostly due to improper nutrition and lifestyle have wrongly contributed to forming a fallacious public perception about milk as a risk factor to optimal health. With limited saturated fat intake from non-milk sources, increased lower fat milk intake should lead to a multitude of health benefits. Substantive emphasis on public education of science and pseudo-science of milk intake is inevitable. Proper education is the gold missing piece of an accurate civic perception of milk intake relationship with the fitness of mind and physics in different human age groups [8-12].

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