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**MILK: BENEFICIAL OR ADVERSE EFFECTS ON HUMAN HEALTH?**

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Food is an important environmental factor that can influence the human genome. The most common products found in the Western diet are milk and sugar. Historically, milk consumption was limited to the nursing period of different mammals. Milk has remarkable characteristics, and by far, the most important fact is that milk is the only nutrient that has the ability to sustain postnatal growth in all mammals. Cow's milk is considered as the most available source for calcium, and dairy products are recommended by most nutritional societies as important protein sources and for their effects on calcium metabolism and bone mineralization. Milk has been identified to activate mammalian target of rapamycin complex 1 (a protein complex system that responds to various environmental stimuli in order to control diverse cellular processes) and to contain high amounts of growth-stimulating hormones, such as insulin-like growth factor-1, whose concentrations remain high even after the milk is processed by pasteurization, homogenization, or digestion. Milk consumption also has such well-established health benefits as increased bone mineral content, reduced risk of protein-deficiency malnutrition and protection against rickets, dental caries and fractures. As a consequence, milk is no longer regarded as "just food" but an important factor of mammalian evolution.

However, the latest research shows that milk consumption has not only beneficial but also harmful influence on the human health. For example, some of the side effects of milk consumption are acne, obesity, diabetes mellitus type 2, metabolic syndrome, cancer, neurodegenerative diseases and early aging.

The analysis of literature shows that the reported adverse effects of milk intake are very few, whereas the totality of available scientific evidence supports that milk and dairy products help to meet nutrient recommendations, and may protect against the most prevalent chronic diseases.