

## Animal milk, a miracle food or a real poison ??

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### KEYWORDS

Animal milk, Benefits, Health risks.

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### Abstract

Animal milk is widely consumed in the world, its composition in macro and micro-nutrient, its availability have made it a key element in the basic diet of individuals. Between anti-milk speeches and those who present it as a miracle food, the liquid is the subject of many controversies.

This article reviews the debate about the health effects of consuming animal milk and its derivatives.

## Introduction

Milk and its dairy products are among the most important foods in the human diet. It is the first food for mammals and provides all the necessary energy and nutrients to ensure proper growth and development, being crucial in respect to bone mass formation [1].

For several million years, the precursors of man, then homo sapiens himself, absorbed only one milk, that of their mother, and only during infancy. The consumption of animal milk began with the domestication of dairy species, about 9000 years ago. The nomads have consumed milk and its derivatives provided by animals that vary according to the region:

cow, goat, sheep, mare, camel, dromedary and others. According to many researchers, Women's milk is the only food that is truly adapted to the needs of newborns and young children. Human beings are the only mammals that continue to consume milk after the petiode of breast feeding, drinking animal milk is an unnatural act. Darwin's laws suggest that women's milk is very well adapted to the needs of young children, while cow's milk, which is very well adapted to the needs of young calves, is not suitable for humans. The four stomachs of the calf have an enzymatic arsenal different from that of the single human stomach. Moreover, cow's milk contains important quantities of growth hormones intended to

make the calf take more than hundred kilos in one year this information is thus unsuitable for the man. Human milk contains 7% lactose, the highest amount observed in mammals. The hydrolysis of lactose is carried out by lactase, an enzyme located in the brush border of enterocytes, this enzyme becomes inactive between weaning and adulthood, making the assimilation of lactose much more complicated.

### **Animal milk is the best source of calcium and protein??**

Unlike breast milk, which is low in caseins, bovine proteins (caseins) have a different primary structure from human proteins with regions where the amino acids are not the same. Thus, some proteins are at least partially resistant to digestion by human enzymes and bacterial flora, both of which are poorly adapted. The small intestine of the infant, fragile and immature, often allows these undegraded macromolecules to enter the bloodstream. This is why clinical signs of cow's milk intolerance are often observed in early childhood [2]. Moreover, in order to be assimilated, calcium needs to be accompanied by an equivalent amount of magnesium, which is not very present in cow's milk: another reason why this «precious» calcium from animal milk is not properly integrated into the human body.

### **Animal milk and risk of pathologies**

Some epidemiological studies show a protective effect of the consumption of dairy products, others report a significant association between animal milk and certain pathologies, particularly bone pathologies such as osteoporosis.

### **Conclusion**

Animal milk is still a key food in the different food models, solid scientific studies must be undertaken to refute or confirm the dangers attributed to the consumption of this liquid. Plant foods such as vegetables, legumes, dried fruits, and oilseeds are a better alternative to cover the needs of calcium and other nutrients present in animal milk.

### **Conflicts of interest**

The authors declare that they have no conflicts of interest.

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