

ANALYSIS OF THE DEGREE OF SATISFACTION OF HUMAN FOOD NEEDS THROUGH THE CONSUMPTION OF MILK AND DAIRY PRODUCTS

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Abstract: Viewed in terms of nutritional value, a liter of milk can be equivalent to: 400 grams of pork, 750 grams of veal, 600 grams of beef, 8-9 eggs, 500 grams of fish meat, 1.5 kg of apples or 125 grams of bread. Consumption of a liter of milk can provide 616 calories, which is more than a fifth of the daily requirement, meaning 31.5 grams of protein - about half of the need and in terms of daily ration of calcium and phosphorus is found to provide between 85-100% of daily human needs.

Key words: human needs, milk, consumption, products

INTRODUCTION

Milk is one of the vital products for human existence. Being still in a phase of regeneration [1,6], the agri-food sector, respectively the milk market from Romania is on the second place of agriculture after that of meat. Over 95% of total milk production is supplied by private farms [2].

The constant consumption of dairy products ensures the human body the calcium intake necessary for its proper functioning [3,7,10]. Acidic milk and dairy products have moderate calcium content, about 125 grams/100 ml, but in the case of cheeses, the amount of calcium is much higher, taking into account the large volume of milk used to prepare those [6,8].

The calcium contained in acid lactates is much more effective than the calcium found in drinking milk, being much more easily absorbed.

Dairy products are very rich in good quality proteins, with a significant biological value, in which casein predominates, in proportion of 80% [12,14]. The protein concentration of cheeses can reach up to 30% from the total composition, far exceeding the protein content of meat.

Vitamins are also found in fairly large quantities in dairy products, especially in the case of products that have not been defatted [11,15]. Fatty cheeses are excellent sources of vitamin A, B2, B6, B12, D, folic acid. Vitamin C is reduced in quantity, and can eventually be found in the warm season, when animals feed mainly on green meal [1,5].

Dairy products are also rich in various minerals, such as phosphorus, magnesium, sodium, iodine, and poorer in iron or copper [4,9,13].

The lipids contained in dairy products vary depending on the species of origin of the raw material, but also on the assortment of the product, the fatty cheeses, giving a much higher caloric value compared to the other derivatives.

MATERIALS AND METHODS

In order to carry out this scientific work, we undertook studies in order to determine the chemical composition of milk and to determine the nutritional needs of the body in order to establish their satisfaction through the consumption of milk and products obtained from milk processing.

RESEARCH RESULTS

Being considered a strategic product in the agri-food market, milk has a very high biological importance, due to its content in amino acids, proteins, lactose, fats, vitamins and minerals.

The chemical structure of milk comprises approximately 13% dry matter and 87% water (Figure 1). The dry matter comprises 4.8% lactose, 3.8% fat, 3.6% protein and 0.7% mineral salts.

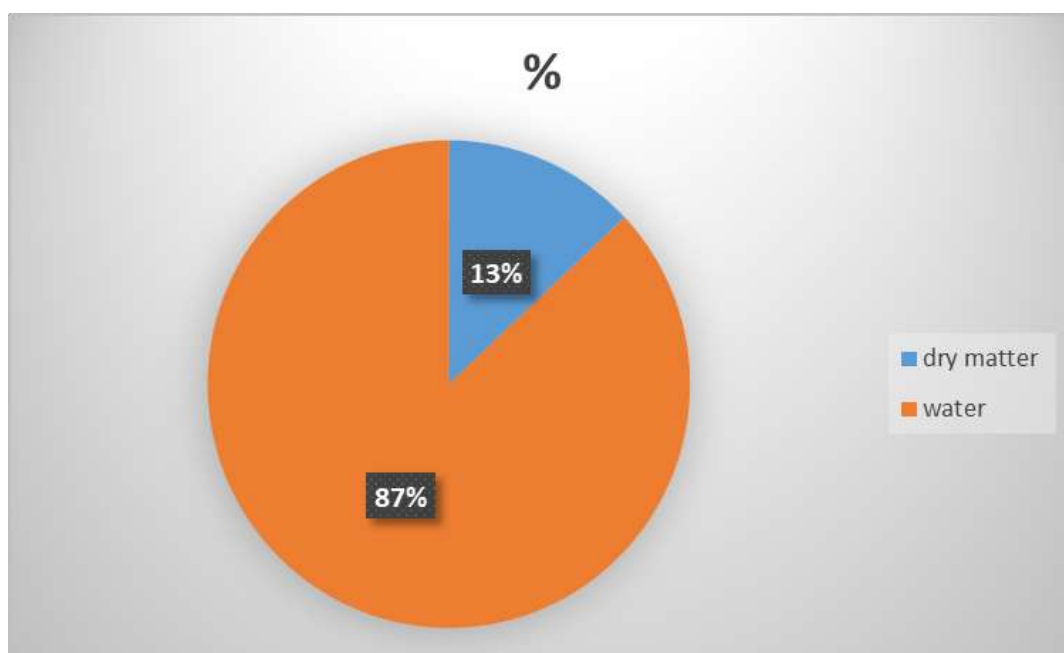


Figure 1. The chemical structure of milk

Source: processing of statistical data

In terms of nutritional value, one liter of milk is equivalent to 400 grams of pork, 750 grams of beef, 600 grams of beef, 8-9 eggs, 500 grams of beef fish, 1.5 kg of apples or 125 grams of bread.

For a good development of the human body, but also for maintaining its health and its normal functioning, in addition to the consumption of fresh milk, it is also recommended to consume its derivatives, various dairy products that are on the market in a very diverse range.

However, it is well known that not every milk or dairy product on the market meets hygiene standards, as products sold on the street can be a real source of disease for the human body.

The nutritional needs of an adult body can be met by consuming milk and dairy products in various proportions.

Below I will present some data on the body's dietary needs and the degree of their satisfaction, in adults, following the consumption of milk or other dairy products (Table 1).

Table 1.

The body's dietary needs satisfied by consuming milk and dairy products

Food needs	The daily necessities	Percentage provided by consuming one liter of milk (%)	The percentage provided by consuming 100 grams of fresh cheese (%)
Energy	2800 calories	22%	13%
Protein	70 R	45%	38%
Calcium	0.8 R	85%	70%
Phosphorus	0.8 R	100%	60%
Iron	15 g	6%	5%
Vitamin A	5000 UI	40%	30%
Vitamin B1	1.5 mg	30%	1.5%
Vitamin B2	2.5 mg	60%	8%
Vitamin PP	15 mg	8%	—
C vitamin	75 mg	25%	—

Source: our own research

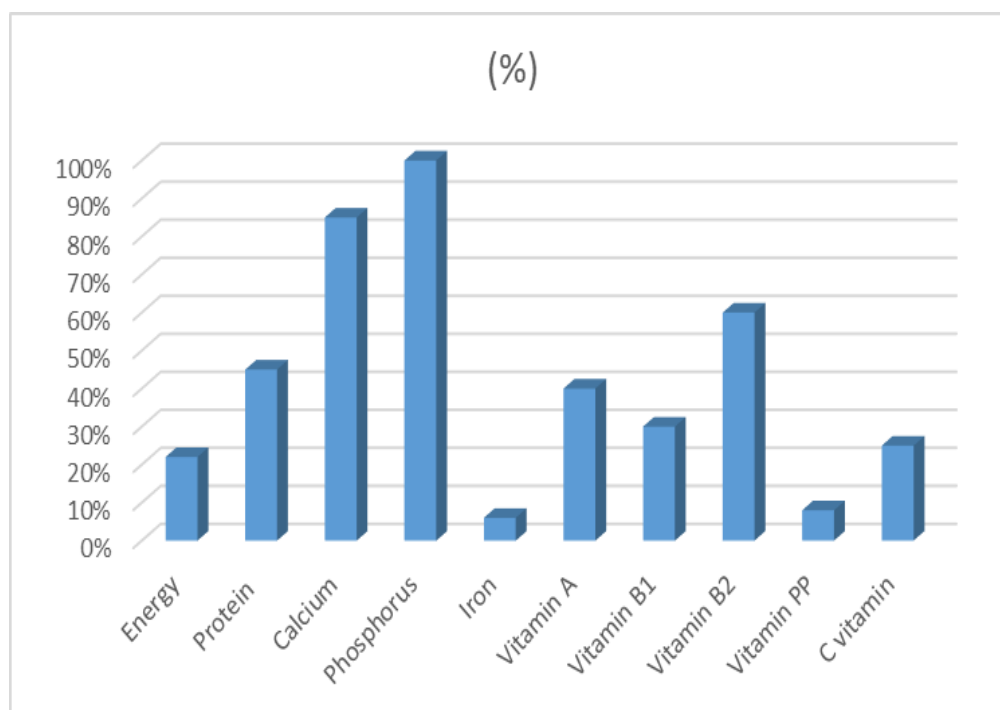


Figure 2. Percentage provided by consuming one liter of milk (%)

Source: our own research

Analyzing the data presented above, it can be seen that a single liter of milk can provide 616 calories, which is more than a fifth of the daily requirement, 31.5 grams of protein, meaning about half from the necessary and 85-100% of the daily ration of calcium and phosphorus.

The milk collection circuit includes milk collected from cows, buffaloes, sheep, goats and, more recently, donkey milk, but cow and sheep milk have the largest share.

CONCLUSIONS

In order to harmoniously develop the human body, but also to maintain its health and especially its normal functioning, in addition to the consumption of fresh milk, it is also recommended to consume products obtained by processing it, meaning various dairy products that exist on the market, being found in a very diverse range.

By consuming milk (1 liter/day) it is found that 616 calories can be provided from the daily energy requirement, meaning more than a fifth or 31.5 grams of protein, meaning about half of the need and 85-100% of the ration daily intake of calcium and phosphorus

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