

## BENEFITS AND HARMS OF MOULDY CHEESE FOR THE BODY (КОРИСТЬ ТА ШКОДА СИРУ З ЦВІЛЛЮ ДЛЯ ОРГАНІЗМУ)

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*У цій роботі порушено питання різновидів сирів із пліснявою, їх вплив на здоров'я та організм людини, мінуси та плюси вживання сирів у щоденному раціоні.*

*Ключові слова: здоров'я, людина, організм, сир, цвіль, поживна цінність, норма вживання.*

*The publication raises the issue of varieties of cheeses with mould, their impact on human health and the human body, the pros and cons of eating cheeses in the daily diet.*

*Key words: health, human, organism, cheese, mould, nutritional value, consumption rate.*

The present is an unusual thing. Everything is changing every day. This applies not only to people themselves. The food we eat, the drinks we get, even the clothes we wear are subject to change because it is impossible to keep up with fashion.

Eating cheese with mould has recently become a new delicacy. Not everyone has tried it, and only a few know its composition. Some people are still afraid to eat it, while others eat it only. But is this product healthy? And how to eat it correctly?

This publication raises the question of whether this type of cheese is healthy or dangerous to consume.

First, let's talk about what mouldy cheese is. Mouldy cheese is not spoiled cheese. In fact, it is prepared in a special way, namely by adding fungi of the genus *Penicillium*, which trigger the fermentation process and form the very mould for which this cheese is valued. However, it should be understood that this fungus is edible, specially bred and contains a natural antibiotic that kills pathogenic bacteria. This is not the kind of mould we encounter in damp rooms, basements and on spoiled food. No, this is a special fungus [5].

If you think about how people came up with the idea of eating cheese with a hint that it was spoiled, you should look at history [2].

We enjoy eating this product thanks to a forgetful shepherd. A young man was tending a flock of sheep near the village of Roquefort, and after getting too hot in the sun, he went to eat bread, cheese and water in a cool limestone cave. Here he was distracted by a beautiful maiden walking nearby, and the boy, forgetting about his lunch, started to follow the beauty. A month later, he returned there, being terribly hungry, and found his abandoned lunch and... ate it! He was so impressed by the taste that he immediately told his fellow villagers about his discovery [6].

There are many types of cheese. All of them are divided according to the types of mould used for these cheeses.

White mould is *Penicillium camamberti* or *candidum* [1]. Its specificity is that it grows on the outer surface of the cheese head without penetrating inside. According to the official legend, Marie Arel was the first to introduce the "white fluff" cheese to the world. During the French Revolution, the peasant woman rescued a monk, who revealed the secret of the amazing cheese to her in gratitude. According to other sources, an unknown doctor treated seriously ill people with this cheese. Whatever the case, today we can taste a wide variety of flavours of this delicacy. The main representatives of this cheese are: Brie, which has a spicy and tangy taste and is very popular with the French; Camembert, made from cow's milk, has a creamy mushroom flavour; and Neschatel, which has a spicy mushroom flavour and a dense, dry cheese rind [4].

Next is greenish-blue mould – *Penicillium roqueforti* [1]. This mould does not cover the cheese on the surface, but is found in the middle of the product. The production technology for this cheese is quite special. The mould is added to the curd mass using special tubes, where it safely

brings the cheese to the desired condition. Typical examples of this type of cheese are: Roquefort – made from sheep’s milk, then sent for maturation in special conditions for three months. Needles are used to pierce holes in the cheese to prevent mould from penetrating it; gorgonzola is an Italian cheese made from cow’s milk; and Dorblu is a German cheese whose recipe is kept secret [4].

Also there is red mould. These varieties, including Livaro and Munster, are covered with red mould, which appears on the product during the ripening process when it is treated with special bacteria [1]. “Red” cheeses have a rather pungent specific aroma and sharp taste. Red mould is the same as white mould of the *Penicillium camemberti* or *Penicillium candidum* species. It gets its reddish-orange colour from exposure to salt water or alcohol, which is used to wash the edges of the cheese to produce a specific flavour. They are called “washed rind cheeses” [3].

The amazing variety of flavour combinations and the desire to “try another slice” makes us wonder about cheese with white mould: is it good or bad?

First, let’s look at the health benefits of cheeses with mould:

- Cheese with blue mould has a beneficial effect on metabolic processes and intestinal microflora, and improves stomach function.
- Blue mould stimulates the production of melanin, which protects us from the harmful effects of ultraviolet rays.
- Even a small piece of mouldy cheese will allow your body to get the necessary protein, which helps to strengthen and grow muscles.
- Cheese with mould contains a large amount of calcium, which also allows it to be well absorbed.
- These cheeses also contain the amino acids histidine and valine, which allow damaged tissues and organs to recover faster. They are not produced by the body itself, so I recommend adding mould cheese to your diet.
- White mould cheese prevents the aging process, strengthens the skeleton and reduces the risk of cancer [5].

Despite its invaluable benefits, mouldy cheese can be dangerous. Everything is good in moderation, which in this case is 50 grams per day. But don’t forget that mould is good for you in small doses, but in large quantities it can be harmful, because it will be difficult for your stomach to process it. This means that if abused, even the healthiest person may experience problems associated with a violation of the normal intestinal microflora.

If consider in which cases cheese with mould can cause harm, it is this:

- Such cheeses should not be consumed by those who are allergic to penicillin. There is a possibility of a severe allergic reaction [4].
- Cheeses with mould contain a fairly large amount of allergens, so pregnant women and small children, even those who have not been allergic before, should not eat these types of cheeses.
- For a healthy person, the permissible rate of mouldy cheese is no more than 50 grams per day. This cheese is quite high in calories. But if we take into account the cost and exclusivity of noble cheeses, then 50 grams per day is quite expensive. But on a festive table, as a delicacy, cheese with noble mould can be very appropriate [6].

In conclusion, I would like to say that mouldy cheese is a unique product containing the most valuable amino acids, trace elements and vitamins. However, we should not forget about the “golden mean” rule. In other words, mouldy cheese, whose benefits and harms go hand in hand, should be consumed in moderation. Find and choose your favourite delicacy.

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