

Therapeutic Uses of Goat Milk

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If we are searching for an alternative source for cow milk, one of the best alternatives is goat milk. Goat milk contains higher amount of calcium, magnesium and phosphorus than cow and human milk. It is widely used to produce different types of cheese and yoghurt. In several countries, goat farming is essential for their livelihood, mostly in the Middle East and the Mediterranean regions. Goats are considered as “Cow of Poor Man”. Around 49% of total world goat milk is produced by Bangladesh, India, Pakistan, and Sudan. Goat’s milk has a soft, creamy texture and rich in vitamin and mineral content. Therefore, it may be better than cow milk as it is easier to digest.

Properties of goat milk

Goat milk contain the following properties:

- Act as antioxidant
- Act as an anti-inflammatory
- Act as anti-mucosal
- It may boost the immunity
- Act as anticancer
- Act as prebiotics
- Act as anti-microbial

Table 1. Composition of cow, goat and human milk (Alichanidis and Polychroniadou 1996)

Components	Cow (/100g)	Goat (/100g)	Human (/100g)
Total solid	12.3	13.2	12.4
Fat	3.4	4.0	3.8
Total protein	3.2	3.6	1.2
Casein	2.5	2.9	0.4
Whey protein	0.65	0.61	0.70
Lactose	4.6	4.5	7.0
Minerals	0.7	0.8	0.2
Energy (kcal/100g)	66	70	63

Benefits of goat milk

Increased digestibility

There are number of reasons why consumers experience more optimal digestion when drinking goat’s milk.

- In comparison to cow’s milk, raw goat’s milk contains less alpha-s1-casein, a protein found in milk that has been identified as an allergen. In turn, goat’s milk offers a softer curd, leading to greater digestive health support.

- Although the fat content is similar between cow and goat milk but fat globules from goat’s milk are much smaller, making it easier for our body to digest.
- It also contains less lactose, which may be ideal if we suffer from a sensitivity.

Table 2. Mineral composition of goat milk

Nutrient	Amount
Iron	0.05 mg
Calcium	134 mg
Potassium	204 mg
Magnesium	14 mg
Phosphorus	111 mg
Sodium	50 mg
Copper	0.046 mg

Beneficial vitamins, minerals and enzymes

- It is evident that raw milk maintains its nutritional value, offering key enzymes, vitamins, and minerals. In fact, when consuming raw goat’s milk, we benefit from 50 nutrients, including vitamins A, C, B-complex vitamins, amino acids, fatty acids, zinc, calcium and much more.
- Natural enzymes such as lipase, lactase and phosphatase help our body metabolize essential nutrients. For example, phosphatase allows your body to better absorb the calcium content of milk and since these enzymes are so delicate, they only remain intact within raw milk.
- It also offers more oligosaccharides than cow’s milk, providing an amount that’s similar to human milk. These beneficial probiotics support the growth of beneficial bacteria, promoting positive gut health. After all, raw milk is essentially a “living” food, offering health-promoting components that would otherwise be destroyed by heat during pasteurization.

Alkaline-forming to help P^H balance of the body

Unlike cow’s milk, as well as the majority of animal and dairy products which are acid-forming, goat’s milk is alkaline. When your body is acidic, this

is when disease and other damaging conditions are able to thrive, due to increased inflammation. You can directly influence your body's pH by changing your eating habits.

Contains more beneficial medium-chain fatty acids

When consuming goat's milk, you benefit from more essential fatty acids, offering around 30 to 35 percent medium-chain fatty acids in comparison to 15 to 20 percent in cow's milk. Medium-chain fatty acids have been shown to increase energy without being deposited as fatty tissue. Meaning, goat's milk is naturally superior in terms of medium-chain fatty acids, which can be enhanced even further when goats are pasture-raised.

Less allergenic

- Although goat's and cow's milk share similar proteins, goat's milk has been widely studied based on its level of tolerance among children. As stated in a study, published in Bioinformation, approximately 26 percent of children suffer from a cow milk protein allergy. Within clinical studies, when treated with goat's milk, 93 percent of children with a cow's milk allergy displayed positive results.
- While studied in 38 children over a five-month period, it was found that those who drank goat's milk surpassed those drinking cow's milk in terms of weight gain, skeletal mineralization, height and blood serum levels of niacin, riboflavin, calcium, vitamin A, hemoglobin and thiamin.

Potential uses of goat milk for overall health

Potential uses of goat milk for heart

- Goat milk might contain antioxidants that may inhibit low-density lipoprotein (LDL) which is also called bad cholesterol.
- Goat milk contains medium chain triglyceride (MCT), monosaturated fatty acids (MUFA) and polyunsaturated fatty acids (PUFA), which might be beneficial for heart-related diseases (Yadav et al., 2016).
- It may have low levels of cholesterol when compared to cow milk and a balanced fatty acid profile.

- The presence of all these compounds may prevent heart diseases like heart attack, atherosclerosis and stroke.

Potential uses of goat milk for boosting immunity

- Selenium is one of the key nutrients that is involved in the proper functioning of the immune system.
- This nutrient is present in cow milk in small amounts and more amount of selenium is present in goat milk.
- Therefore, goat milk may act as an immunity booster and might help in protecting a person from diseases.
- Recent studies have shown that goat milk may have immunomodulatory effects in both animal and human studies.

Potential uses of goat milk as a prebiotic

- Goat milk contains a high level of oligosaccharides (carbohydrates) derived from lactose which act as a prebiotic.
- We all know that prebiotics in the stomach may improve the health of the digestive system.
- They promote bifidobacterial (good bacteria) in the intestine, which may benefit other activities such as stimulating immunity, preventing infection, fighting against cancer, lowering cholesterol and improving lactose maldigestion.

Potential uses of goat milk for cancer

- Goat milk contains high levels of conjugated linoleic acid (CLA) which has been reported that it may have anticancer properties in animal models and human cancer cells.
- The CLA mechanism to inhibit cancer growth is not yet understood fully and more research is required.
- However, the antioxidant effect and another related mechanism of fermented goat milk might benefit cancer.

Potential uses of goat milk for bone

- In naturopathic medicine, cows are called calcium animals and goats are referred to as bio-organic sodium animals.

- This bio-organic sodium is a crucial element that may maintain joint movement.
- Goat milk may provide 35% of the daily calcium needed in a cup.
- At the same time, a cup of goat milk may provide 20% of the daily needs of vitamin B2.
- It also contains phosphorus and high level of vitamin B12 and potassium.

Potential uses of goat milk for diabetes

- In a study, kefir made from goat and soya milk may improve pancreatic β cells, reduce glucose levels in the blood and exhibit an anti-diabetic effect.
- Therefore, it might be helpful for diabetes. However, human studies are needed to confirm its effectiveness. Do not self-medicate.

Prevents Anaemia

Goat milk is rich in calcium, iron, magnesium and phosphorus. Our bodies easily digest and absorb these minerals. As a result, goat milk helps to treat nutritional deficiencies such as bone demineralisation. It also fixes iron and magnesium deficiency. It further enhances the ability of the body to use iron. Goat milk boosts the formation of RBCs too. Therefore, patients suffering from anaemia, mal-absorption issues, or osteoporosis should consume goat milk.

Increases Platelet Count

Dengue fever's significant complications are selenium deficiency and a drop in blood platelet count. Goat milk may help to treat dengue patients by increasing blood platelets, because selenium is its main component. In addition to this, it also helps in digestive and metabolic utilisation of various minerals present in the body.

Promotes a Healthy Weight Gain

A healthy weight, lowers the risk of heart disease, stroke, diabetes and high blood pressure. Furthermore, it also prevents the chance of contracting cancer. Compared to other milk types, goat milk has more calories per serving. However, it has a similar nutritional profile to cow's milk. Therefore, the extra calories lead to a healthy weight gain.

Good for Skin

Milk is an active ingredient for improving skin conditions. For example, it helps to reduce acne and blackheads. In addition to this, it help to moisturise, smoothen and whiten your skin.

- Goat milk and human skin have the same skin pH. It means that when you use goat milk to cleanse your skin, it does not disturb the skin's natural microbiome or acid mantle. So, if you have sensitive skin issues like psoriasis or eczema, goat milk will help immensely.
- Goat milk has lactic acid and fatty acids, which repair the skin barrier. The low alpha hydroxy acids (AHA) concentration in goat milk helps hydrate, gently exfoliate and treat sun-damaged skin. In addition, it contributes to noticeably softer skin. They also have probiotics to encourage the growth of normal skin flora.

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