

# Goat Milk Considerations

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## Goat milk is not a safe choice for infants

Goat milk is an important beverage for many cultures. Others may use it as an alternative to cow's milk. However, just as with cow's milk, goat milk is inappropriate for infants and can be harmful. It has caused significant morbidity and even mortality in infants. Unfortunately, the internet and some social media present false information that goat milk is an option for infants.

Concerns include:

- The protein content is excessive, nearly three times that of human milk. The high renal solute load can place stress on an infant's kidneys and put some at risk for dehydration, especially younger infants and those with health issues. It can cause metabolic acidosis in vulnerable infants.
- Potassium, calcium, phosphorous and chloride are excessive and can lead to electrolyte imbalances affecting the kidneys and other organs.
- Goat milk does not provide complete nutrition. There are inadequate amounts of vitamin C, vitamin D, iron, zinc, folate, and B vitamins.
- The low folate content can lead to megaloblastic anemia.
- For infants and children allergic to cow's milk, many goat milk proteins can co-react with cow's milk proteins so that children allergic to milk are or will become allergic to goat milk.
- Some children may be allergic to goat milk even though they are not allergic to cow's milk.
- Unpasteurized goat milk carries the risk of harmful pathogen transmission.

## Goat milk-based infant formulas

Goat milk-based infant formulas are available in some countries and can provide similar nutrition as infant formulas in the U.S. They are being considered for accelerated import approval by the USDA. Because they contain modified goat milk and the nutrients have been significantly adjusted, they can be a suitable alternative for infants.

If these become available in Minnesota, more information will be shared with you.

## Goat milk for children over 1 year and adults

- Goat milk may be helpful when there is a cow's milk sensitivity (not allergy) and/or intolerance or allergy to soy beverage. Goat milk is not advised for the management of cow's milk allergy.

- The types of casein in goat milk, as well as the evaporation process (in evaporated goat milk) may render the milk protein more digestible.
- The fat has a high proportion of short chain and medium-chain fatty acids which can be more digestible.
- The lactose content is slightly less (9 gm/ 8 oz) than cow's milk (12 gm/8 oz).

WIC provides goat milk that has been pasteurized and fortified with vitamin D as an option for women and children one year and older.

### **Talking points for WIC families considering goat milk for infants**

- Parents are doing the best they can to feed their babies, especially during this challenging time. WIC can help support them to do this in a safe and healthy way.
- Goat milk can be harmful to infants and should never be used.
  - It has too much protein and certain minerals which can be harmful to the kidneys and other organs.
  - It does not have enough essential nutrients important for tissues, brain development and growth.
- Commercial goat milk-based infant formula has been modified and fortified to be safe and match what babies need to grow and be healthy.
  - Although there are recipes online, it is very difficult to create a homemade goat milk formula with the correct amount of calories, protein and nutrients.
- WIC can help families find formula alternatives if they cannot find their regular formula. They do not need to use goat milk as a substitute.
- Goat milk is great for baby goats, but not for human babies.

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