

# American Academy of Pediatrics

## Goat Milk Feedings and Infants Less than One Year of Age

*Pediatricians in the Twin Falls area have been asked by parents if they could feed and/or supplement their infants with goats milk instead of formula. Dr. Jennifer Merchant, MD asked Renee Birch PhD, LD, RD to research this issue and write an article for our newsletter. Please use this information to help with questions from your parents regarding goats milk.*

Goat's milk is not appropriate as the primary feeding for infants. Neither goat's milk nor cow's milk can adequately replace breast milk or infant formula. Children under one year of age need an approved infant formula if not breast fed. Premature infants will likely need supplementation with a specialized formula in addition to breast feeding.

An unmodified goat's milk diet can cause electrolyte imbalances, folic acid deficiency, and metabolic acidosis. Goat's milk contains 50 mg of sodium and 3.56 g protein per 100 mL approximately three times that of human milk (17 mg and 1.03 g per 100 mL). Unfortified goat's milk is an inadequate source of Vitamin C, D, folic acid, iron and zinc. Folic acid deficiency with anemia has been described in infants with homemade goat's milk formulas. Goat's milk has less folic acid than human milk: 6 micrograms/100mL compared to 50 micrograms/100mL. The recommended daily allowance of folic acid for infants younger than 6 months is 65 micrograms/100mL.

Even fortified goat's milk feedings may put an infant at risk. Goat's milk is lower in fat than cow's milk and thus to receive sufficient calories infants may consume more fluid milk. This will deliver feedings with a high renal solute load, excessive sodium intake and potential for dehydration because of the loss of water to excrete the waste products.

Human infants' sodium excretion capacity matures at about the second year of life and infants fed fresh goat's milk are at risk for hyponatremia and azotemia. Metabolic acidosis has been described in infants fed undiluted goats milk. Excessive protein load may result in accumulation of non-volatile acids and urea. A 5 month old boy developed severe hyponatremia, renal dysfunction and stroke as a result of being fed exclusively raw goat's milk

### Use of Goat's Milk to avoid Cow's Milk Allergy

Children who are allergic to cow's milk proteins are likely to also be allergic to goat's milk due to cross-reactivity with proteins.

### Raw Goat's Milk

Consumption of unpasteurized goat's milk can be a source for disease including Q fever, listeria, brucellosis, and toxoplasmosis, and brucellosis.

## Is Goat's Milk Right for Infants?

Goat's milk is not appropriate for babies younger than 1 year of age.

Goat's milk does not supply complete nutrition for infants because it does not contain the amounts of fat, folic acid (and other B vitamins), and iron, that very young babies need in order to grow and develop properly.

The American Academy of Pediatrics (AAP) recommends breast-feeding babies for 6 months if possible. Some breast-fed babies will need certain vitamin or nutritional supplements to maintain or improve their health, especially iron.

If you are unable or choose not to breast-feed, commercially prepared iron-fortified formula is recommended.

If at any time you are having trouble feeding your baby, talk to your doctor.

Remember that goat's milk is not recommended. Breast milk or formula is the best thing for your baby to ensure the right balance of nutrients.

## The American Academy of Pediatrics National Conference and Exhibition

The American Academy of Pediatrics National Conference and Exhibition is scheduled to take place October 24-27, 2015, at the Walter E. Washington Convention Center. The following guidelines have been developed to assist you in preparing for the meeting. If you plan to attend, here is some information:

The headquarter hotels are the Marriott Marquis Washington DC and the Renaissance Washington DC Hotel.

We encourage you to make hotel reservations as soon as possible. Book your hotel online at [www.AAPexperience.org/hotels](http://www.AAPexperience.org/hotels) or by calling [1-800-468-6322](tel:1-800-468-6322) starting **Monday, June 1**. You may also complete and fax the hotel reservation form to [415-293-4398](tel:415-293-4398). The deadline for hotel reservations is October 9<sup>th</sup>.

The registration opens **June 1** and **the fee for Chapter/District Executive Directors is waived and not available online**, so you must complete and return the attached ED registration form along with any payment, if applicable. If you plan on bringing any family/guests, the family registration fee is \$15/person.

The registration fee for Chapter staff is \$350 by the advance registration deadline of **September 11<sup>th</sup>**. Staff may register online at [www.AAPexperience.org/register](http://www.AAPexperience.org/register) and select the Allied Health registrant type, or they may complete and return the attached Chapter Staff registration form.

Registration materials will not be mailed in advance of the conference. Approximately two weeks before the conference, you will receive an e-mail confirmation containing a barcode that will be scanned on-site to print your registration materials (name badge(s) and any tickets for sessions/events).

Please feel free to contact me at [800/433-9016](tel:800-433-9016), extension 7657, or by e-mail at [jjesudoss@aap.org](mailto:jjesudoss@aap.org) if you have any questions or require additional information.

Jane Jesudoss, MA  
Registration Supervisor  
American Academy of Pediatrics

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The premier pediatrics conference of the West, designed for pediatricians, family physicians, advanced practice nurses, registered nurses, physician assistants, and medical assistants.

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**Colleen A. Kraft, MD**  
**The Future of Primary Care in a Changing Healthcare Environment**  
Medical Director, Health Network at Cincinnati Children's  
Associate Professor, University of Cincinnati  
Department of Pediatrics

**Stephen R. Cook, MD, MPH**  
**Managing the Impact of Early Childhood Obesity**  
Associate Professor, Department of Pediatrics  
Associate Professor, Center for Community Health  
University of Rochester Medical Center  
School of Medicine and Dentistry



*Additional topics will include:*

- Chronic constipation
- Type 2 diabetes
- Eating disorders
- Congenital heart defects
- Current epidemics
- Emergency preparedness in primary care settings







For more information and to register, please visit  
[primarychildrens.org/pediatricswest](http://primarychildrens.org/pediatricswest)