

## Goats and CAE: How do we keep herds free?

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### Key Points

- CAE- a viral disease that results in life-long infection
- Not all goats infected show clinical signs
- Best to test and cull or demand test-negative goats before you buy

### The Disease, its Transmission and Clinical Signs

Caprine arthritis and encephalitis (CAE) is a viral disease of goats that is spread mainly through infected milk or colostrum from doe to offspring. The virus can also be spread through the blood and contaminated equipment, as well as shoes and clothing.

Only about twenty percent of CAE-infected goats will show clinical signs of the disease. In adult goats, it can cause pneumonia, arthritis and subsequent lameness, as well as mastitis, poor hair coat, and weight loss. In kids, the disease shows more neurological signs such as weakness, a lack of coordination, head twitching, wobbly gait and may progress to paralysis.

Infection with CAE results in life-long infection. There are no effective vaccinations to prevent infection and no effective treatments once an animal shows signs of disease. Because CAEV develops slowly, it is more of a concern in dairy goat herds compared to those being kept for meat, since meat goats are often slaughtered prior to development of disease. Milk produced by CAE-positive does will not differ in nutritional quality or wholesomeness from uninfected animals and there is no risk to humans from consuming milk or meat from an infected animal.

## Preventing the Disease

Purchase of new animals should be restricted to CAE free herds. All adult animals in a herd should be tested annually. If CAE is present in a herd, isolating new kids at birth and feeding them only pasteurized colostrum and milk can help prevent transmission, or kids can be fed colostrum or milk from a CAE-negative doe. Many goat breeders will not allow outside goats on their premises for breeding without documentation of negative CAE status. The only way to truly eliminate CAE from a herd is to cull infected goats. To truly prevent the disease, goats should be purchased from a CAE-free herd.

## Testing

Because only about twenty percent of CAE-infected goats will actually show clinical signs, it is critical to do testing to ensure infected animals do not enter the herd. In Washington State, there is a caprine biosecurity screen at the Washington Animal Disease Diagnostic Laboratory (WADDL) at WSU. This screen will test for CAE, Johne's, and caseous lymphadenitis (CL). See the WADDL webpage for details and pricing of tests or the Caprine/Ovine Biosecurity Screen:

<http://waddl.vetmed.wsu.edu/fee-schedule#immunodiagnostics>. Results are available within about a week of submission.

False positive CAE results happen about 0.4% of the time, so any positive animals should be retested. A negative test means the animal either is not infected or has just recently been infected, which can take several months after infection. This means that CAE should be tested for twice, at least 30 days apart, then annually for 3 years. One warning is that it's possible for a kid to have received heat-treated colostrum from a CAE positive doe. In this case, the kid can have circulating CAE antibodies but no infection. Retesting for CAE after 3-6 months should result in a negative test for kids.

## Conclusions

Caprine Arthritis Encephalitis Virus infects goats for life and can manifest in various ways, most commonly arthritis in adults and encephalitis in kids. While not all infected animals show clinical signs of disease, the manifestations of CAE are very difficult to treat and can be emotionally and financially taxing. Testing is relatively inexpensive and, combined with good biosecurity, can help prevent CAE-associated disease in your herd.



## Resources and References

[http://www.merckmanuals.com/vet/generalized\\_conditions/caprine\\_arthritis\\_and\\_encephalitis/overview\\_of\\_caprine\\_arthritis\\_and\\_encephalitis.html](http://www.merckmanuals.com/vet/generalized_conditions/caprine_arthritis_and_encephalitis/overview_of_caprine_arthritis_and_encephalitis.html)

[http://www.aphis.usda.gov/animal\\_health/emergingissues/downloads/prcaevinfosheet.pdf](http://www.aphis.usda.gov/animal_health/emergingissues/downloads/prcaevinfosheet.pdf)

<http://waddl.vetmed.wsu.edu/animal-disease-faq/cae>

<http://www.goatmilkstuff.com/CAE-Goats.html>

<http://www.tennesseemeatgoats.com/articles2/CAE.html>

<http://vetmed.iastate.edu/vdpam/new-vdpam-employees/food-supply-veterinary-medicine/small-ruminants/diagnostic-testing>

*Edited by Dale A. Moore*

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