

Babesiosis

DISEASE IN ANIMALS

Babesiosis is caused by microscopic parasites that infect red blood cells and are transmitted by ticks. Over 100 species of *Babesia* have been identified in domestic animals and wildlife but only a few are considered important disease causing agents.

IMPORTANT *BABESIA* OF DOMESTIC ANIMALS:

Cattle	<i>B. bovis</i> , <i>B. bigemina</i> , <i>B. divergens</i> and <i>B. major</i>
Horses (Equine piroplasmiasis)	<i>B. caballi</i> and <i>T. equi</i>
Sheep and goats	<i>B. ovis</i> and <i>B. motasi</i>
Pigs	<i>B. trautmanni</i> and <i>B. perroncitoi</i>
Dogs	<i>B. canis</i> , <i>B. vogeli</i> , <i>B. rossi</i> and <i>B. gibsoni</i>
Cats	<i>B. felis</i>

Reporting: Equine piroplasmiasis is a reportable animal disease in Ohio and all suspected cases must be reported to the Ohio Department of Agriculture, Division of Animal Industry (ODA) at 614-728-6220 or 800-300-9755 or the USDA APHIS Veterinary Services at (614) 856-4735 or (800) 536-7593.

Clinical signs: Clinical signs vary by species but in acute cases generally include fever, weakness, anemia and jaundice.

Diagnostics: Examination of a blood smear for *babesia* parasites is the preferred method of diagnosis. A thin blood smear made from blood drawn from the capillaries of the ear or tail tip will increase the likelihood of identifying parasites in an infected animal.

Case classification:

- Suspected: a clinical case with signs consistent with babesiosis.
- Probable: a clinically suspect case with laboratory evidence from a screening or unvalidated test.
- Confirmed: a case that meets confirmatory testing criteria determined by a state or federal diagnostic laboratory.

DISEASE IN HUMANS

Reporting: Report by the end of the next business day in which the case or suspected case presents and/or a positive laboratory result to the local public health department where the patient resides. If patient residence is unknown, report to the local public health department in which the reporting health care provider or laboratory is located.

Human symptoms: *Babesia* infection can range from subclinical to life-threatening. Clinical manifestations, if any, can include hemolytic anemia and nonspecific influenza-like signs and symptoms (i.e., fever, chills, sweats, headache, myalgia, arthralgia, malaise, fatigue, generalized weakness). Splenomegaly, hepatomegaly, or jaundice may be evident. In addition to signs of hemolytic anemia, laboratory findings may include thrombocytopenia, proteinuria, hemoglobinuria, and elevated levels of liver enzymes, blood urea nitrogen, and creatinine. Risk factors for severe babesiosis include asplenia, advanced age, and other causes of impaired immune function (e.g. HIV, malignancy, corticosteroid therapy). Some immunosuppressive therapies or conditions may mask or modulate the clinical manifestations (e.g. the patient may be afebrile). Severe cases can be associated with marked thrombocytopenia, disseminated intravascular coagulation, hemodynamic instability, acute respiratory distress, myocardial infarction, renal failure, hepatic compromise, altered mental status, and death.

Personal protection: People become infected with *Babesia* parasites through the bite of an infected tick and occasionally through a blood transfusion from an infected donor. *Babesia microti* is the most frequently identified agent of human babesiosis in the United States. Preventing tick bites by avoiding tick habitats and using tick repellents is the best way to prevent babesiosis

FOR MORE INFORMATION

Disease in Animals

[Bovine Babesiosis](#)

[Equine Piroplasmiasis](#)

Disease in Humans

[CDC Babesiosis](#)

[ODH Infectious Disease Control Manual](#)