

BACKGROUND

Babesiosis is caused by microscopic *Babesia microti* parasites that infect red blood cells and are spread by certain ticks.

WHO DOES THE ISSUE IMPACT?

In the United States, tickborne transmission is most common in particular regions and seasons; it mainly occurs in parts of the Northeast and upper Midwest, and usually peaks during the warm months. Babesiosis can be a severe, life-threatening disease, particularly in people who are elderly, do not have a spleen, have a weakened immune system because of diseases like cancer or AIDS, or have other serious health conditions like liver or kidney disease.

COMPLICATIONS

Complications of babesiosis can include a low and unstable blood pressure, severe anemia (hemolysis), a very low platelet count (thrombocytopenia), disseminated intravascular coagulation (also known as “DIC” or consumptive coagulopathy) resulting in blood clots and bleeding, malfunction of vital organs, and even death.

SIGNS AND SYMPTOMS

For some people infected with *Babesia* parasites, they have no symptoms. Others develop flu-like illness like, fever, chills, sweats, headache, body aches, loss of appetite, nausea or fatigue. When *Babesia* parasites infect and destroy red blood cells, anemia, jaundice, and dark urine can develop. Symptomatic individuals should seek medical care.

Individuals most at risk of serious illness include people who do not have a spleen, people who have a weakened immune system, people with other serious health conditions, and the elderly.

CAUSES AND TRANSMISSION

The main way people are infected with *Babesia* parasites is through the bite of an infected deer tick (also called a black legged tick) during outdoor activities in areas where *B. microti* infected ticks are found. The deer tick is found throughout Pennsylvania in wooded or brushy areas, on the edge of hiking or animal trails, or the edge of a lawn where it meets a wooded or brushy area. Deer are the hosts upon which the adult black-legged ticks feed prior to laying their eggs on the ground. Therefore, when deer populations increase, the tick population also increases, heightening the potential for disease transmission.

TESTS AND DIAGNOSIS

In symptomatic people, babesiosis usually is diagnosed by examining blood under a microscope.

TREATMENTS

Antiparasitic and antibiotic therapy often results in rapid improvement. People who do not have symptoms or signs of babesiosis usually do not need treatment.

WHAT CAN YOU DO?

To prevent babesiosis:

- The risk of being bitten by an infected tick can be decreased by using the following precautions:
 - Use insect repellent containing low concentrations (10 to 30%) of diethyltoluamide (DEET) on clothing and exposed skin;
 - Apply DEET sparingly on exposed skin. Do not apply to the face. Do not use under clothing.

- Do not use DEET on the hands of young children. Avoid applying to areas around the eyes and mouth.
- Do not use DEET over cuts, wounds or irritated skin. Wash treated skin with soap and water after returning indoors, and wash treated clothing.
- Avoid spraying in enclosed areas. Do not use DEET near food.
- Avoid tick-infested areas;
- Wear light colored clothing so ticks can be spotted more easily;
- Tuck pant legs into socks or boots, and shirts into pants;
- Tape the areas where pants and socks meet;
- Wear a hat, long sleeved shirt, and long pants for added protection;
- Walk in the center of trails to avoid overhanging brush; and
- Check yourself, family members and pets for ticks after leaving potentially tick infested areas and promptly remove any ticks detected.

If you find a tick:

- If you find a tick attached to your skin, there is no need to panic. There are several tick removal devices on the market, but a plain set of fine-tipped tweezers will remove a tick quite effectively. [Prompt and proper tick removal is very important for preventing possible disease transmission.](#)
 - Use fine-tipped tweezers and protect your fingers with a tissue, paper towel, or latex gloves. Avoid removing ticks with your bare hands.
 - Grasp the tick as close to the skin surface as possible and pull upward with steady, even pressure. Don't twist or jerk the tick; this can cause the mouth-parts to break off and remain in the skin. If this happens, remove the mouth-parts with tweezers. If you are unable to remove the mouth easily with clean tweezers, leave it alone and let the skin heal.
 - After removing the tick, thoroughly disinfect the bite and your hands with rubbing alcohol, an iodine scrub, or soap and water.
 - Avoid folklore remedies such as "painting" the tick with nail polish or petroleum jelly or using heat to make the tick detach from the skin. Your goal is to remove the tick as quickly as possible; do not wait for it to detach.

If you suspect that you or a family member might have babesiosis:

- See your healthcare provider if you become ill after having been bitten by a tick or having spent time outdoors participating in activities that may result in tick bites like hiking, camping, yard work, gardening, fishing, hunting, dog walking, etc.

RESOURCES FOR MORE INFORMATION

CDC babesiosis website: <https://www.cdc.gov/parasites/babesiosis/index.html>

This fact sheet provides general information. Please contact your physician for specific clinical information.

If you have any questions, contact us at 1-877-PA-HEALTH