

**What is babesiosis?**

Babesiosis is a tick-borne disease caused by microscopic parasites, *Babesia microti*, which infect red blood cells. It is transmitted to people through the bite of an infected black-legged deer tick (*Ixodes scapularis*).

Who is at risk for babesiosis?

Anyone can get babesiosis. People who spend time outdoors in tick-infested areas are at an increased risk of becoming infected. People who may be at a greater risk for severe illness include elderly people, people with other illnesses, people with weak immune systems and individuals without a spleen.

What are the symptoms of babesiosis?

Many people who are infected with *Babesia microti* do not have any symptoms. Some people develop flu-like symptoms which include fever, sweats, muscle and joint pain, headache, loss of appetite, nausea and vomiting. Hemolytic anemia is the destruction of red blood cells which can develop because *Babesia* parasites infect red blood cells. Babesiosis can be a severe, life-threatening disease, particularly among the elderly or in people who do not have a spleen, are immunocompromised or have other serious health conditions.

How soon do symptoms appear?

Symptom onset can range from one to three weeks or longer for tickborne transmission and from weeks to months for bloodborne transmission.

How is babesiosis spread?

Babesiosis is caused by *Babesia microti*, a parasite transmitted by the bite of an infected deer tick. Transmission to people usually occurs from the bite of the nymph stage (very young stage) of the tick, although adult ticks can also transmit the disease. Although very rare, transmission can also occur via a contaminated blood transfusion or from mother to child during pregnancy or delivery.

When and for how long is a person able to spread the disease?

Human-to-human transmission does not occur, but it can be spread via contaminated blood transfusion or from an infected mother to her baby during pregnancy or delivery.

How is a person diagnosed?

Babesiosis is usually diagnosed by examining blood under a microscope and seeing the *Babesia* parasite inside red blood cells.

What is the treatment?

This disease is treated with antibiotics taken orally. For critically ill patients, exchange blood transfusions (a procedure in which portions of a patient's infected blood or blood cells are replaced with transfused non-infected blood components) are considered.

Does past infection make a person immune?

It is not known whether past infection with babesiosis can make a person immune.

Should children or others be excluded from day care, school, work or other activities if they have babesiosis?

No.

What can be done to prevent the spread of babesiosis disease?

If you are in areas where ticks may be present, the following precautions can reduce the risk of acquiring Babesiosis:

- If a tick-infested area cannot be avoided, wear a long-sleeved shirt, long pants and high socks with pant cuffs tucked into the socks. Light colored clothing will make ticks easier to find. Walk in the center of mowed trails to avoid brushing up against weeds, grasses and bushes.
- Conduct thorough "tick checks" on yourself and your children after spending time outdoors. Prompt removal of ticks, even after they have attached, can reduce the chance of babesiosis transmission.
- Insect repellents containing 20 percent or more DEET have been shown to be effective in repelling ticks. Use products that contain permethrin on clothing and gear. If such products are used, be sure to follow the manufacturer's directions on the label.
- Making sure pets are free of ticks will also reduce the amount of tick exposure.

To remove an attached tick, grasp with tweezers or forceps as close as possible to attachment (skin) site, and pull upward and out with a firm and steady pressure. If tweezers are not available, use fingers shielded with tissue paper or rubber gloves. Do not handle with bare hands. Be careful not to squeeze, crush or puncture the body of the tick, because it may contain infectious fluids. After removing the tick, thoroughly disinfect the bite site and wash hands. See or call a health-care professional if there is a concern about incomplete tick removal. It is important that a tick be removed as soon as it is discovered.

Additional Information:

For more information, call the North Dakota Department of Health at 800.472.2180 or visit www.ndhealth.gov/disease/Tickborne.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.

Resource: American Academy of Pediatrics. [Babesiosis]. In: Pickering LK, Baker CJ, Kimberlin DW, Long SS, eds. *Red Book: 2012 Report of the Committee on Infectious Diseases*. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2012:[244-245]