Babesiosis and the U.S. blood supply

Babesiosis is a preventable and treatable disease spread in nature by the bite of certain types of ticks. These ticks carry microscopic parasites that can infect and destroy red blood cells in humans. People can get infected with *Babesia* parasites in several ways:

- by the bite of an infected tick (most common)
- by getting a blood transfusion from an infected donor of blood products
- by congenital transmission—from an infected mother to her baby (during pregnancy or delivery)

Nymphal tick (above) is approximately the size of a poppy seed.

Tick-transmitted infections with the parasite *Babesia microti*, the most common cause of babesiosis, have been reported from parts of the Northeast (New England, New York, New Jersey) and parts of the upper Midwest (Wisconsin and Minnesota). Ticks carrying other types of *Babesia* have been detected in different areas of the country, including the West Coast. Transmission from ticks to humans usually peaks during warm months. However, transfusion and congenital cases can occur anywhere, at any time of the year.

Babesiosis can be a severe, life-threatening disease, especially in people who have other illnesses, who are elderly, or who do not have a spleen. However, some individuals may have no symptoms and feel fine despite being infected.

Can babesiosis be transmitted by transfusion in areas where it's not spread by ticks?

Yes. Because individuals who donate blood travel, and blood products are shipped around the country, **babesiosis can be transmitted in areas that are not considered high risk for infection.** In addition, bloodborne babesiosis may occur year-round, not only in warmer months when risk for tickborne infection peaks.

Are U.S. blood donors being tested for babesiosis?

No. There currently is no *Babesia* test approved by the Food and Drug Administration (FDA) available for screening prospective blood donors. Some manufacturers are working with investigators at blood establishments to develop FDA-approved tests for *Babesia* for donor-screening purposes.

Does *Babesia* pose a risk to people who receive blood products?

Yes. Although bloodborne transmission is thought to be uncommon, babesiosis is the most frequently reported transfusion-transmitted parasitic infection in the U.S. It remains an important concern.

Center for Global Health
Division of Parasitic Diseases and Malaria

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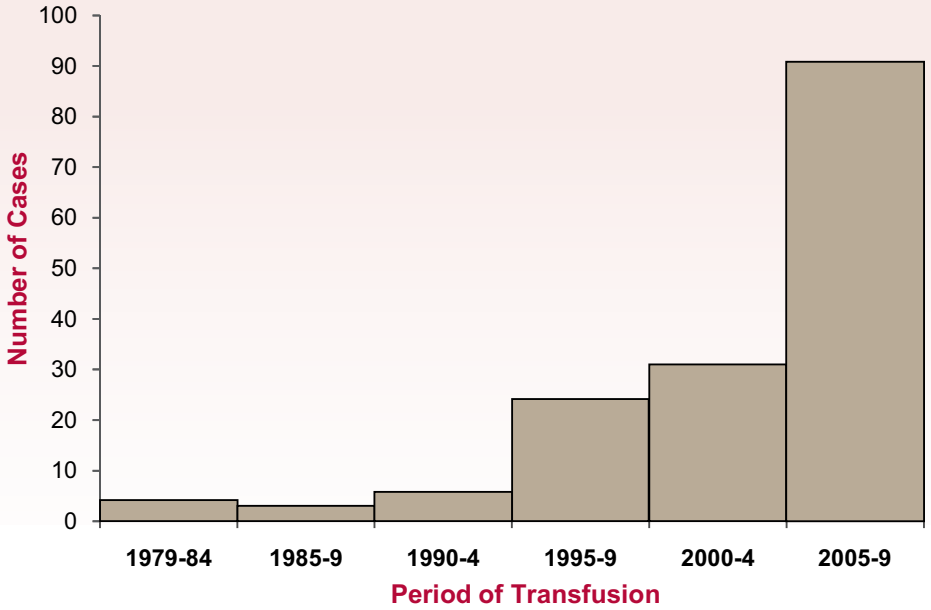
How to protect yourself from tickborne babesiosis:

The best ways to prevent tickborne babesiosis are by avoiding areas where ticks live, controlling ticks around your home, wearing repellent when outdoors, finding and removing ticks from your body, showering soon after being outdoors, and examining outdoor gear and pets for ticks.

Reported Cases of Transfusion-transmitted Babesiosis: United States 1979-2009



From 1979–2009, 159 transfusion-related *Babesia microti* cases were identified, most (77%) from 2000 to 2009. Adapted from a graph published in the *Annals of Internal Medicine* in 2011.

What CDC is doing to address babesiosis:

CDC and state health departments conduct surveillance to monitor babesiosis across the U.S. In January 2011, the disease was added to the list of Nationally Notifiable Conditions, which means state health departments are encouraged to share information about cases of babesiosis with CDC.

CDC works in partnership with state and local health departments to:

- Provide reference diagnostic testing for babesiosis
- Provide consultation for health professionals to help them care for patients with babesiosis

Future plans include:

- Continue to track transfusion-transmitted infections in collaboration with state and local health departments
- Monitor reports of tickborne infection to determine if the disease is spreading to other parts of the country and to identify emerging strains of *Babesia* that may cause human disease
- Work with partners to develop prevention strategies, including a potential blood donor screening test for babesiosis

For more information on babesiosis, please visit www.cdc.gov/parasites/babesiosis