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What is the risk that a blood donation might cause transmission of Lyme Disease?

A concerned physician reports on a 40-year-old woman who was **diagnosed recently with Lyme disease based on positive serology and joint symptoms**. According to the concerned physician, the infected woman grew up near Lyme, CT, and had multiple tick bites during adolescence, but no symptoms until recently. He reports that she was never treated for Lyme disease, and that **for the past 10 years she has been a regular blood donor at a local pediatric medical center** because she is CMV-negative. The inquiring physician wants to know what is the risk that this woman's blood donations might cause transmission of Lyme Disease.

The following responses have been submitted.

1. **A retired blood center medical director from Palo Alto** offers this [1994 study](#) reported from Connecticut, the "Lyme state". In this prospective serologic study of 155 patients undergoing cardiothoracic surgery, no one developed Lyme disease or antibodies to *Borrelia burgdorferi*. This study did not address the risk of transmission from donors known to be seropositive, which is the question raised by the above case.

ADDENDA Nov. 10, 2002

2. **A blood banker in Maryland** who is an expert in transfusion transmitted infectious diseases (especially with regards to the American Red Cross system) reports that to date, there has been **no recorded case of transmission of Lyme disease by transfusion**. Interestingly, he reports that there was one case of a donor dually infected with Lyme disease and *Babesia* and only the latter was transmitted to the recipient.

ADDENDA Aug. 13, 2003

3. **Editor's note:** Although there have been no reported cases of transmission of Lyme Disease by transfusion, that theoretic possibility remains, especially in view of studies showing that *B. burgdorferi* inoculated into blood may survive storage under blood banking conditions

- Nadelman RB et al., *Transfusion*. 1990 May;30(4):298-301
- Johnson SE et al., *J Infect Dis*. 1990 Aug;162(2):557-9

As vividly described recently by writer Amy Tan, Lyme Disease manifestations may be very atypical, protean and prolonged, resulting in delayed or missed diagnoses. (Although her disease was not related to blood transfusion, it is a reminder to clinicians to consider Lyme Disease in patients with unexplained chronic illnesses who may have been exposed to the causative organism by any route.)

Please submit comments to the [e-*Network Forum*](#).



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