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## More local cases of Lyme?

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Nearly half the wood ticks collected at three Winona County sites last fall carried the bacteria that causes Lyme disease, a rate that far exceeds the state average of about one in three ticks with the microbes.

About 49 percent of the 295 ticks collected in October carried the bacteria, according to a Saint Mary's University study. But the study should not cause residents to shutter their doors and stay inside, health officials said. Ticks typically need to be attached for 24 to 48 hours to transmit the disease, and residents can take steps to avoid getting sick.

"Those infection rates are nothing to laugh at, and it's something that can really show the importance of taking precautions," said Melissa Kemperman, a Minnesota Department of Health epidemiologist specializing in tick-transmitted diseases.

Saint Mary's biology professor Jeanne Minnerath collected about 100 ticks each at the three locations — on the city of Winona's western edge, the city's eastern edge and near Elba, Minn. She analyzed each insect's DNA, looking for the disease-causing bacteria. Winona County provided \$500 for the research, and Minnerath shared her findings with the county commissioners Tuesday.

Each of the locations had higher-than-expected rates of bacteria linked to Lyme disease, with nearly 58 percent of ticks at the eastern city site, about 52 percent at the Elba site and about 39 percent at the western city site.

About 25 percent of the ticks at the Elba site also had the bacteria linked to anaplasmosis, an infection of white blood cells seen increasingly in area hospitals. That rate exceeded state averages as well.

The high numbers surprised state officials, though they noted that rates can vary "from place to place and year to year." But Winona County has been identified as a place where the insects thrive — a swath of the county along the Mississippi River is among the regions highlighted as a "high risk" area for tick-borne disease by the department of health.

The area's woods and animal population make it a place where ticks can thrive, Kemperman said. Ticks typically get the bacteria from, and give it back to, small woodland creatures such as mice, chipmunks and shrews, but they also need a large population of deer in the area, which is where they mate, she said.

"It's like having a whole lot of honeymoon spots for the ticks," she said.

That high rate of bacteria may have contributed to local hospitals treating more cases of tick-borne diseases in recent years. The Winona Health emergency room treated between 30 and 40 people for tick bites in each of the past two years. In 2006, the hospital treated just 25. And 50 cases of anaplasmosis have been diagnosed in the La Crosse, Wis., area in the last three years.

Minnerath plans to expand the study to other sites in Winona County to see if the high rates are found elsewhere, but officials stress that residents can continue to enjoy the outdoors, even if there are more disease-carrying ticks in the area.

Using tick repellents containing DEET, focusing on the area below the knees, and applying permethrin-based products to clothing can keep the insects away. Wearing light-colored clothing can make any ticks that do attach easier to spot, and residents should always check thoroughly for the bugs after being outside.

"We're not saying people need to stay inside," Minnerath said.