

# What Every Missouri School Nurse Needs to Know About Tick-Borne Diseases



## Recognizing Symptoms of Tick-borne Diseases is Important

- ▶ Please see the “Tick-Borne Diseases Reported in Missouri” chart for symptoms most likely to be seen in children
- ▶ Ask children if they have been bitten by a tick and/or if they have been in an area near home or school where ticks might be present, noting that could even be in their own backyards
- ▶ Inquire if they have traveled outside the state recently (bite might have occurred elsewhere)
- ▶ Think “tick-borne disease” even in winter months. Tick bites and tick-borne diseases occur year ‘round in Missouri
- ▶ Encourage parents to take the child to a physician as soon as possible **if the child develops symptoms** (see "Tick-Borne Diseases Reported in Missouri" chart) after a tick bite
- ▶ Explain that antibiotics are needed (typically doxycycline) and should be administered before traditional diagnostic test results are available. Time is often of the essence.

## Strategies For Avoiding Tick Bites

- ▶ Dress properly—light colored fabrics, long pants tucked into socks, long sleeves, collared shirt
- ▶ Apply DEET-based repellent on exposed skin and on clothing. Use a product with at least 20% concentration. **Lower concentrations do not work. Other active ingredients are not as effective and not available in higher concentrations. Essential oils and “natural” products are not registered by the EPA for tick repellency.**
  - See Missouri video URL for “how to apply”  
<http://www.youtube.com/watch?v=hofkw4FOy9g&>
- ▶ Conduct thorough tick checks and shower as soon as possible upon returning inside to remove any unattached ticks
- ▶ Use permethrin (an insecticide) on clothing...NEVER on bare skin. Follow label instructions.
- ▶ Avoid tick habitat
- ▶ Check family pets for ticks, use vet-recommended tick products on them. Do not use repellents registered for humans on pets.

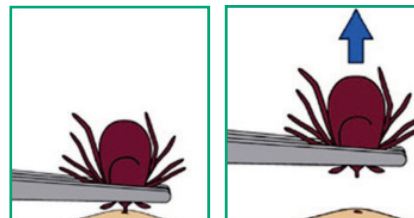
## Removing Ticks

- ▶ Always remove the attached tick as soon as possible. Experts suggest that ticks may infect humans in a matter of hours.
- ▶ Never squeeze ticks or use folklore remedies such as heat or “painting” the tick with nail polish or petroleum jelly to prompt it to detach from the skin. These actions often cause the tick to regurgitate fluids into the bite, increasing potential for disease transmission.
- ▶ Instruct students, parents, and responsible adults who can remove ticks from students in your absence.

(continued on back)

## Proper Removal Technique

1. Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
2. 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 you are unable to remove the mouth easily with clean tweezers, leave it alone and let the skin heal.
3. After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub, or soap and water.
4. Place the tick in vial filled with alcohol to kill it. Squeezing or mangling the tick body can release infectious fluids. Never put it outside or down the drain.



## Dealing with Parents

- ▶ Advise parents if their child had an attached tick and you removed it. If you can, note the type of tick in case the child becomes ill.
- ▶ If the child shows signs and symptoms of illness from Day 1 up to two weeks, urge parents to seek medical attention immediately. Many tick-borne diseases cause serious illness and even death if not treated quickly.
- ▶ Doxycycline is the **ONLY** antibiotic recommended by CDC for treatment of major tick-borne diseases such as Rocky Mountain spotted fever. The family physician or emergency room should not wait to administer this before diagnostic test results are available.
- ▶ ***If there are no symptoms, there is no need to take antibiotics.***
- ▶ The American Academy of Pediatrics notes that DEET-based repellents in concentrations up to 30% can be used on children as young as two months of age. If parents are using lower concentrations or products with other active ingredients on their youngsters, these children are not protected from ticks.
- ▶ Contracting Lyme disease is unlikely in Missouri. Not many ticks currently have it and those that do rarely bite humans. Still, parents may be concerned because they may have heard about ongoing health problems that **can occur with Lyme disease if it goes untreated**.
- ▶ Urge parents to remove ticks immediately. Show them the proper way to do so.

## MORE INFORMATION

- ▶ Missouri Department of Health and Senior Services  
<http://health.mo.gov/living/healthcondiseases/communicable/tickscarrydisease/index.php>
- ▶ Centers for Disease Control and Prevention [www.cdc.gov/ticks](http://www.cdc.gov/ticks)
- ▶ DEET Education Program [www.deetonline.org](http://www.deetonline.org)
- ▶ Tick-borne Disease seminar jointly sponsored by DEET Education Program, Missouri Department of Health and Senior Services, and St. Louis University available at <http://stateofmo.adobeconnect.com/p2azelm2lhb/>