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May, 18, 2005

MEMORANDUM

IMPORTANT

Re: Tick-Borne Disease Information Bulletin
To: ALL LICENSED PEST CONTROL COMPANIES OPERATING IN NEVADA
From: Lee Lawrence-Agriculturist IV, & Jeff Knight-Entomologist

Attached to this Memorandum is: 1) an informational bulletin entitled "Tips for the Control of the Soft Tick *Ornithodoros hermsi*" which discusses the control of "soft ticks", and 2) a CDC brochure entitled "Tick-Borne Relapsing Fever - What is it and How to Prevent it".

The informational bulletin was developed by the Washoe County District Health Department's Vector-Borne Disease Program in an effort to inform the public about the tick which is known to vector the disease Tick-Born Relapsing Fever. Effects of the disease can be serious. Not all rodents carry the tick. As indicated in the information bulletin, rodent control inside structures at higher elevations (e.g. Mt. Charleston, Lake Tahoe and much of Northern Nevada), needs to include the removal of nesting materials and the ticks themselves. Removing only the rodents can actually increase the risk of people being bitten by the ticks as they seek out new mammal hosts upon which to feed.

Please read the information bulletin and CDC brochure carefully. If you have any questions you may contact the Washoe County District Health Department's Vector-Borne Diseases Program at (775) 785-4599, or the Nevada Department of Agriculture at (775) 688-1182, ext. 252, or 245.

Attached --

TIPS FOR THE CONTROL OF THE SOFT TICK *Ornithodoros hermsi*



(*Ornithodoros* sp. by CDC)

BIOLOGY

O. hermsi is a member of the family Argasidae, commonly known as “soft ticks”. In contrast with the hard ticks, its mouthparts cannot be seen when viewed from above. They are mainly found mainly in the mountains and foothills, between 3000 and 9000 feet elevation. Soft ticks live in dark, cool places such as rodent nests within snags, and decayed tree stumps and shaded woodpiles outside of buildings. During the winter rodents may move into buildings, especially those that are unoccupied and build nests within the walls and beneath floorboards. Soft ticks usually feed on small animals such as chipmunks, squirrels or mice. If the rodents become scarce or are excluded from the nest, they will take a blood meal from other warm-blooded animals including humans. Unlike hard ticks, they usually feed at night. Their bite is painless and feeding is accomplished in 15 to 30 minutes. Most people are unaware that they have been bitten. Soft ticks can survive without a blood meal for over 20 years. These ticks are also the vector of Tick-Borne Relapsing Fever, a disease of relapsing episodes of fever caused by spiral shaped bacteria (spirochetes). The spirochetes in infected ticks can remain infectious for over 10 years.

CONTROL

- It is important that the control of rodents in buildings where soft ticks are likely include removal of rodent nest materials and ticks from walls, ceiling and floors. Eliminating or excluding rodents without tick control can actually increase the risk of people being exposed to tick bites as hungry ticks will seek out other mammals upon which to feed when rodents are not available.
- Application of appropriate acaracidal pesticide (e.g., pyrethrins and permethrins). More than one treatment is often necessary to rid a building of soft ticks.
- Rodent-proof buildings to prevent re-entry of rodents.

For further information:

In Nevada contact: Washoe Co. Dist. Health Dept., Vector-Borne Diseases Program at (775) 785-4599
Nevada Dept. of Agriculture, (775) 688-1182

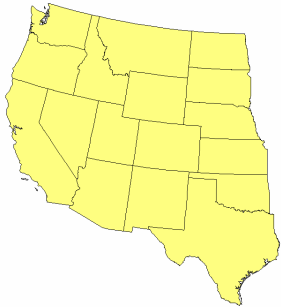
Sources: CDC-DVBID
DHS-VBDS
The Ticks of California by Furman, D. and E. Loomis

WHAT IS TICK-BORNE RELAPSING FEVER (TBRF)?

Relapsing Fever is a disease of relapsing episodes of fever caused by a spiral-shaped bacteria (spirochetes).

WHO CAN GET TBRF?

STATES WHERE TBRF OCCURS



Anybody of any age can develop relapsing fever. The disease occurs in the Western United States and is relatively uncommon. Most people become infected while vacationing in cabins in rural, wooded, mountainous areas. A few people have developed relapsing fever after being in caves.



HOW DOES SOMEONE GET TBRF?

In the United States, people get relapsing fever through the bite of an infected soft tick. These ticks, *Ornithodoros*, usually feed on small animals such as squirrels, mice, chipmunks, or rabbits. The ticks live in rodent nests under flooring and between walls. If these rodents are scarce, the ticks will take a meal from other warm-blooded animals including humans.

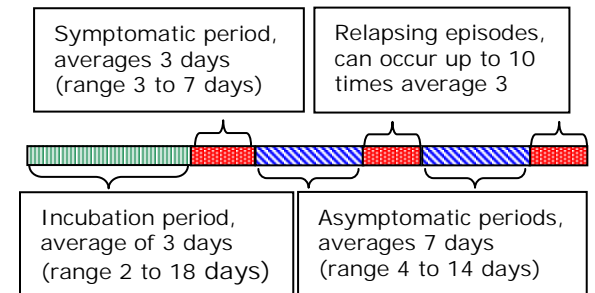


Soft ticks, unlike hard ticks, usually feed at night. Their bite is painless, and they feed between 15 and 30 minutes before they drop off. Most people are unaware that they have been bitten.

Relapsing fever can not be transmitted from person to person except in the case of pregnant women, who sometimes transmit the infection to their fetus.

WHAT ARE THE SYMPTOMS?

Symptoms usually develop within 7 days after being bitten. They include a sudden high fever with chills, sweats, headache, and body aches. Other possible symptoms include nausea, vomiting, loss of appetite (anorexia), dry cough, inability to tolerate bright lights (photophobia), rash, neck pain, eye pain, confusion and dizziness.



HOW IS TBRF DIAGNOSED AND TREATED?

When a person has fever it is often possible to see the spirochetes in a sample of the person's blood. Antibody tests are also available, but these are not useful in the early stages of the disease.

Although symptoms usually resolve on their own, treating relapsing fever with antibiotics will make the symptoms subside much more quickly.

If you think you may have relapsing fever consult a medical professional for further testing and treatment.

HOW CAN I PREVENT GETTING TBRF?

The best protection against relapsing fever is knowing where and how people get it and avoiding that exposure.

To prevent infection:

- Avoid sleeping in rodent infected buildings
- Use insect repellent containing DEET
- Rodent-proof buildings in areas where the disease is known to occur
- Identify and remove any rodent nesting material from walls, ceiling and floors
- In combination with removing the rodent material, fumigate the building with preparations containing pyrethrins and permethrins. More than one treatment is often needed to rid the building of the soft-ticks.

For more information contact either the CDC at 800-311-3435 or your local or state health department

Department of Health & Human Services
Centers for Disease Control and Prevention (CDC)
Division of Vector-Borne Infectious Diseases
PO Box 2087
Fort Collins, CO 80522-2087

TICK-BORNE RELAPSING FEVER



WHAT IS IT AND HOW TO PREVENT IT