

Tickborne Illness - Prevention and Control

Limiting exposure to ticks is the most effective way to reduce the likelihood of Rocky Mountain Spotted Fever, Colorado Tick Fever, and Tularemia infections. In persons exposed to tick-infested habitats, prompt careful inspection and removal of crawling or attached ticks is an important method of preventing disease. It may take extended attachment time before organisms are transmitted from the tick to the host. Currently, no licensed vaccines are available for the prevention of any tickborne disease found in Montana.

Personal Protection Against Ticks

It is unreasonable to assume that a person can completely eliminate activities that may result in tick exposure. Therefore, prevention measures should emphasize personal protection when exposed to natural areas where ticks are present:

Wear light-colored clothing which allows you to see ticks that are crawling on your clothing.

Tuck your pants legs into your socks so that ticks cannot crawl up the inside of your pants legs.

Apply repellents to discourage tick attachment. Repellents containing permethrin can be sprayed on boots and clothing, and will last for several days. Repellents containing DEET (n, n-diethyl-m-toluamide) can be applied to the skin, but will last only a few hours before reapplication is necessary. Use DEET with caution on children. Application of large amounts of DEET on children has been associated with adverse reactions.

Conduct a body check upon return from potentially tick-infested areas by searching your entire body for ticks. Use a hand-held or full-length mirror to view all parts of your body. Remove any tick you find on your body.

Parents should check their children for ticks, especially in the hair, when returning from potentially tick-infested areas. Ticks may also be carried into the household on clothing and pets and only attached later so both should be examined carefully to exclude the ticks.

To Remove Attached Ticks:

1. Use fine-tipped tweezers or notched tick extractor, and protect your fingers with a tissue, paper towel, or latex gloves (see figure). Persons should avoid removing ticks with bare hands.

2. Grasp the tick as close to the skin surface as possible and pull upward with steady, even pressure. Do not twist or jerk the tick; this may cause the mouthparts to break off and remain in the skin. *(If this happens, remove mouthparts with tweezers. Consult your health care provider if illness occurs.)*

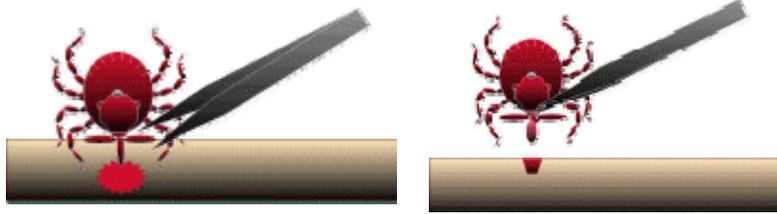
3. After removing the tick, thoroughly disinfect the bite site and wash your hands with soap and water.

4. Do not squeeze, crush, or puncture the body of the tick because its fluids may contain infectious organisms. Skin accidentally exposed to tick fluids can be disinfected with iodine scrub, rubbing alcohol, or water containing detergents.

5. Save the tick for identification in case you become ill. This may help your doctor make an accurate diagnosis. Place the tick in a sealable plastic bag and put it in your freezer. Write the date of the bite on a piece of paper with a pencil and place it in the bag.



Removal of an embedded tick using fine-tipped tweezers



Tick Removal

Folklore Remedies Don't Work!

Folklore remedies, such as the use of petroleum jelly or hot matches, do little to encourage a tick to detach from skin. In fact, they may make matters worse by irritating the tick and stimulating it to release additional saliva or regurgitate gut contents, increasing the chances of transmitting the pathogen. These methods of tick removal should be avoided.

Tick Control

Strategies to reduce populations of vector ticks through area-wide application of acaricides (chemicals that will kill ticks and mites) and control of tick habitats (e.g., leaf litter and brush) have been effective in small-scale trials. New methods being developed include applying acaricides to animal hosts by using baited tubes, boxes, and feeding stations in areas where these pathogens are endemic. Biological control with fungi, parasitic nematodes, and parasitic wasps may play supportive roles in integrated tick control efforts. Community-based, integrated, tick-management strategies may prove to be an effective public health response to reduce the incidence of tick-borne infections. However, limiting exposure to ticks is currently the most effective method of prevention of tick-transmitted diseases.

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