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Public Health Update: Tularemia on Martha's Vineyard

Since 2000, there have been over forty people diagnosed with tularemia of the lung (pneumonic tularemia) on Martha's Vineyard. Most of these people have had outdoor jobs such as landscaping. Tularemia is caused by bacteria (germs) and symptoms of tularemia are different depending on how the germs get into the body. If someone breathes in the germs that cause tularemia, they may develop tularemia of the lung (pneumonic tularemia). Other ways the germs can be spread to people include through a tick bite, contact with an infected animal, or drinking water or eating meat that has been contaminated by an infected animal. Many different types of animals can be infected, particularly rabbits and rodents. Tularemia is not spread from person to person.

Public health workers from the Centers for Disease Control and Prevention (CDC) and the Massachusetts Department of Public Health (MDPH) did a study in 2000-2001 that found that people on Martha's Vineyard with pneumonic tularemia most likely got sick by breathing in contaminated dust, soil, or grasses while brush cutting, lawn mowing or doing other similar landscaping activities.

Seek medical attention immediately if you develop fever and/or respiratory symptoms within seven days of breathing in dust, soil or grasses while landscaping. Also, seek medical attention if you develop a skin sore, swollen lymph glands or a rash after a tick bite.

To help prevent you from getting sick from tularemia when you do outdoor landscaping activities, it is recommended that you:

- Check the area you are working in for dead animal bodies before using any lawn mowing or brush cutting equipment. Never touch an animal body with your bare hands. Always use gloves or a shovel to gently clean up the body and either bury it or double bag it in plastic and throw it in the trash.
- Keep all landscaping equipment (e.g., lawnmowers, brush cutters, weed whackers) well maintained and use equipment according to the manufacturer's instructions. When using such equipment, try not to create a lot of dust from the soil or grass. Grass catchers might help reduce the amount of dust that is created.
- **Use a mask (respirator).** Masks are not expensive and can be bought at hardware supply stores. Look for masks that say "N-95" and "NIOSH certified" on the package.

- Masks make breathing harder. If you have a medical condition that affects your heart or lungs such as heart disease or asthma, talk to your doctor before using a mask.
- Masks only work when they fit snugly to your face. Follow the instructions on the product label to make sure you use the mask correctly.



Other important steps you can take to reduce your chances of getting tularemia include:

- **Protect yourself against tick bites.** The common dog tick can carry the germs that cause tularemia. These ticks are often found in brushy, wooded, or grassy areas. When you are working in areas likely to have ticks:
 - Use a repellent with **DEET** (the chemical N-N-diethyl-meta-toluamide) or **permethrin** according to the instructions given on the product label. Repellents containing DEET should not be used on children less than 2 months of age and should be used in concentrations no higher than 30% on older children. Permethrin products are intended for use on items such as clothing, shoes, bed nets and camping gear and should not be applied to skin.
 - Wear long, light-colored pants tucked into your socks or boots, and a long-sleeved shirt. This may be difficult to do when the weather is hot, but it will help keep ticks away from your skin and help you spot a tick on your clothing faster.
 - After spending time in an area likely to have ticks, **always check your body for ticks.** Be sure to check the back of your knees and neck, armpits, scalp, and groin. Adult dog ticks are about the size of a small watermelon seed. Attached ticks should be removed using fine-point tweezers to grasp the tick as close to the skin as possible and to pull straight out with steady pressure.
- Don't touch wild animals, their droppings, or dead bodies.
- Keep rodents and other wild animals away from your home by keeping woodpiles off the ground and in sunny areas, fencing off any garden areas, never leaving pet food outside after your pet has eaten, and putting garbage in rodent-proof containers.
- Use gloves, an appropriate mask (respirator), and appropriate eye protection (e.g., goggles) when skinning or dressing wild animals. Any wild game should be cooked completely before eating it.
- Because pets can get sick with tularemia, they should be watched when they are outdoors or put in a secured yard or kennel. If your pet is sick (for example, it has a fever, doesn't want to eat, or seems very tired), talk to your veterinarian.
- Avoid drinking water that may have been contaminated by wild animals. If you receive your drinking water from a well, be sure it is protected from contamination by wild animals.

The Massachusetts Department of Public Health (MDPH) wants to make sure that people stay healthy. If you have questions or want more information on tularemia, tick repellents, or diseases spread by ticks, talk to your doctor or to a public health worker at the MDPH at 617-983-6800 or toll free at 1-888-658-2850