Cattle or Bovine Tuberculosis (Bovine TB)

What is bovine TB?

Bovine tuberculosis (TB) is a type of TB that can affect animals such as cattle and deer, and some exotic animals such as rhinoceros and non-human primates. Bovine TB is caused by the bacterium *Mycobacterium bovis*, which is very similar to the bacterium that usually causes human tuberculosis. Bovine TB can also affect humans and is responsible for approximately 75 cases of human disease in California each year.

How is bovine TB transmitted to humans?

Transmission of bovine TB from infected cattle to humans occurs primarily through consumption of raw (unpasteurized) milk or raw milk products containing the bacteria. Transmission can also occur through prolonged exposure to bacteria in the air in the immediate vicinity of live infected cattle or their carcasses. On rare occasions, bovine TB is passed to a human when bacteria from the infected animal get into a cut on a person's skin.

What are the symptoms of bovine TB in humans?

In humans, bovine TB resembles human TB and can involve the lungs, lymph nodes, or organs of the digestive system. Initial symptoms of bovine TB disease may include a productive cough, fever, night sweats, chest pain, and loss of appetite. Additional symptoms may occur as other parts of the body are affected. Bovine TB disease can cause permanent damage and possibly death. Persons with bovine TB disease might also spread it to other people. It is important that people with bovine TB disease be treated with medications, to protect both their health and the health of the people around them.

Most people infected with bovine TB bacteria do not get sick. However, some infected people, particularly the very young or very old, or those with a weakened immune system, can develop bovine TB disease. Early treatment of bovine TB infection can significantly reduce the chance of developing bovine TB disease.

How is bovine TB diagnosed?

The first step to determine if you've been exposed to bovine TB is to have a TB skin test (TST) or one of the newer Interferon-Gamma Release Assays (IGRAs). In a TST, a health care worker injects a small amount of fluid under the skin on the patient's forearm and the patient returns in 2 to 3 days to have the test read and interpreted. An IGRA is a blood test for TB infection; three IGRAs are currently available in the U.S., the Quantiferon-TB Gold, Quantiferon- TB Gold In-Tube, and the T-Spot TB tests. A positive TST or IGRA indicates that the patient has been infected with TB bacteria at some time in their life. It cannot tell the difference between the various types of TB (human or bovine), nor can it tell if the infection is recent or from a long time ago. Patients with a positive test will likely undergo additional tests to determine whether their infection is recent and whether they have active TB disease. Additional tests may include a chest X-ray and examination of sputum, urine, or stool.

Who should be screened for bovine TB?
Individuals who have had close contact with animals from an infected cattle herd, including ranch staff, veterinarians, and other workers, should be considered for screening for bovine TB infection with a TST or IGRA. Others who may want to be evaluated include: persons who have TB symptoms or positive TST/IGRA AND have a history of consuming raw (unpasteurized) dairy products purchased in or transported from countries outside the United States, particularly Mexico.

Is bovine TB treatable in humans?
Bovine TB is curable. Both bovine TB infection and bovine TB disease are treated with specific antibiotics that kill the TB bacteria. The treatment consists of taking antibiotics for a period of 6 to 12 months. A treatment plan will be tailored for each individual patient according to his/her symptoms.

How can I decrease my chances of getting bovine TB?
Do not consume milk and milk products that have not been pasteurized. If you work in an occupation that requires you to come into close contact with known infected animals or their carcasses, read and follow your employer's infection control plan to protect yourself from airborne TB bacteria.

Should I be concerned about bovine TB from dairy products purchased in the United States/California?
Officials from the California Department of Food and Agriculture and the U.S. Department of Agriculture continually monitor dairy herds in California to ensure that they remain free of TB. Positive cattle are removed from the herd and their milk is diverted from the consumer market. The herd in which a TB animal is detected is quarantined and tested to ensure that the disease does not spread to other members of the herd or to other herds.

Pasteurized milk, cheese, and other dairy products pose no risk to people because the pasteurization process kills the TB bacteria. However, travelers to Mexico and other countries should exercise caution when consuming dairy products and should avoid entirely products that are not pasteurized.

Where can I find more information on tuberculosis?
For more information on TB visit:

California Department of Public Health
(https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/TB-Disease-Data.aspx)

California Department of Food and Agriculture
(https://www.cdfa.ca.gov/ahfss/animal_health/tb_info.html)

Centers for Disease Control and Prevention
(http://www.cdc.gov/tb/)