

Mycobacterium bovis (M. bovis) tuberculosis in Maryland - Healthcare Provider Information

Statement of Problem

In the last eight months in Maryland, *M. bovis* tuberculosis has been detected in three (3) U.S. born children of Latin American parents, with one (1) death. This number of cases is a substantial increase from previous years. Two (2) children presented with abdominal symptoms, and one (1) with meningitis. All had eaten different Mexican-style soft cheeses, which were likely contaminated with *M. bovis*. In prior years, two (2) other cases were diagnosed in the lymph nodes, and both children have suffered a recurrence of *M. bovis* tuberculosis. One (1) case recurred again in the lymph nodes, and the other case recurred in the brain.

How do humans acquire M. bovis tuberculosis?

Humans may acquire *M. bovis* by eating or drinking unpasteurized (raw) milk products produced in regions or countries where *M. bovis* disease is common in cattle, such as Mexico. In particular, the following unpasteurized dairy products have been previously associated with infections, including *M. bovis* infection:

- Cotija
- Crema Mexicana
- Queso fresco
- Queso blanco

Young children and immunosuppressed individuals are at higher risk for disease.

What are the symptoms of M. bovis tuberculosis?

M. bovis infection can cause respiratory and/or gastrointestinal illnesses. Symptoms include:

- Fever
- Night sweats
- Cough (may be productive)
- Weight loss
- Abdominal pain/diarrhea (gastrointestinal)
- Swelling in neck (lymph node disease)

How is M. bovis tuberculosis diagnosed?

M. bovis tuberculosis is diagnosed by isolating the bacteria from sites of infection in a patient, such as lymph nodes in the neck or abdomen, or from sputum produced by coughing. Samples should be sent to the Maryland State TB Laboratory at 201 W. Preston St., Baltimore, Maryland, 21201. Arrangements for specimen transport can be made through your local health department. The State TB Laboratory also has the rapid nucleic-acid amplification assay available for detection of *M. tuberculosis* complex, of which *M. bovis* is a member. If you have further questions regarding specimens call the State TB Laboratory at (410) 767-6130.

Maryland DHMH Advisory

What is the treatment for *M. bovis tuberculosis*?

M. bovis tuberculosis is usually treated with standard first-line anti-tuberculosis medications. Your local health department will work with you to ensure appropriate treatment of *M. bovis* cases, and in some cases, provision of medications.

If you suspect *M. bovis tuberculosis*...

Tuberculosis cause by *M. bovis* is a reportable disease. Contact your local health department (www.dhmh.state.md.us/html/org-lhd.htm) immediately if you have a patient you suspect has *M. bovis* infection. You may also call the Maryland TB Control program at (410) 767-6698. A patient information sheet on Bovine TB is also available on the web at www.edcp.org/tb.

What you should tell your patients

Some grocery stores and door-to-door vendors may sell unlabeled cheeses that are not pasteurized, including dairy products made in Mexico, Nicaragua and Honduras. Make sure that dairy products - which may be transported to Maryland via courier services or "paqueterias" - have labels that read, "pasteurized."

Counsel your patients that some dairy products made with raw (unpasteurized) milk are often contaminated with bacteria. These raw (unpasteurized) dairy products represent a serious health risk, especially to high risk groups such as children, pregnant women, older adults, and immunosuppressed persons. Dairy products that are pasteurized should have labels as "pasteurized." Other infections that can be transmitted through unpasteurized dairy products include:

- *Brucella*;
- *Listeria*;
- *E. coli*;
- *Salmonella*; and
- *Staphylococcus*.