

Bovine tuberculosis: reducing the risk of human infection



Public Health
Agency

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This leaflet provides general advice on bovine tuberculosis (TB) for people at higher risk of exposure, mainly farmers and those involved with farms and livestock.

Bovine TB

Bovine TB is a notifiable disease in all species and primarily caused by a bacterium called *Mycobacterium bovis* (*M. bovis*). It is mostly found in cattle but can also occasionally infect and cause disease in many other mammals, including humans, deer, goats, pigs, cats, dogs and badgers.

Humans and *M. bovis*

In the United Kingdom, the majority of human TB disease is caused by the bacteria called *Mycobacterium tuberculosis* (*M. tuberculosis*). Less than 1% of people with human TB disease are diagnosed with bovine TB.

In Northern Ireland, while the number of people diagnosed with bovine TB every year is generally less than five, they account for a higher percentage (on average 3% every year) than elsewhere in the UK.



Those working closely with livestock and/or regularly drinking unpasteurised (raw) milk have greatest risk of exposure.

The majority of cases are still in older individuals (who drank unpasteurised, infected milk in the past) and those who picked up infection abroad.

Transmission of bovine TB

Transmission of *M. bovis* can occur between animals, from animals to humans and, more rarely, from humans to animals and between humans.

Drinking or eating products made from unpasteurised milk poses the highest risk. However *M. bovis* infection can also be acquired by inhaling the bacteria shed by infectious animals in respiratory and other secretions, or through contamination of unprotected cuts or abrasions in the skin while handling infected animals or their carcasses — although this is rare.

Eating meat is highly unlikely to be a source of infection in the UK, as the mandatory routine TB testing programme means that cattle with TB are generally identified at an early stage of infection prior to the development of advanced lesions. Furthermore, the meat inspection process in the abattoir provides further assurance of food safety.

M. bovis is destroyed by heat treatment, including pasteurisation of milk and normal cooking procedures.

People at risk

The general public are at very low risk for being infected with *M. bovis* because of long-standing bovine TB disease control programmes in cattle and because of pasteurisation. Of those exposed to *M. bovis*, younger people and immunosuppressed



individuals are more at risk of developing disease. People at higher risk include:

- people working on farms or regularly handling cattle;
- people working in abattoirs or with animal by-products;
- veterinarians;
- people in close contact with other bovine TB susceptible animal species;
- people who regularly drink unpasteurised (raw) milk.

TB has also been reported in domestic pets, especially in cats where the presenting signs may include respiratory signs, unhealing skin lesions or tumour like lesions. Cat owners and veterinary practice staff may be at increased risk of exposure to disease.

Symptoms of TB in humans

It is not possible to differentiate the symptoms of human TB disease caused by *M. bovis* from those caused by *M. tuberculosis*.

The course and extent of the disease is the same, as is the treatment in most cases.

Symptoms of respiratory TB include:

- weight loss;
- night sweats;
- fever;
- persistent cough which may contain blood or pus.

Treatment of human TB caused by *M. bovis*

The vast majority of drugs used to treat people infected with the human TB disease are also effective against *M. bovis*. However, the treatment of TB in people is long and involves a combination of several drugs. *M. bovis* like other mycobacteria has the capacity to become resistant to anti-TB drugs and, therefore, it is essential that patients take the full course of prescribed drugs.

Reducing the risk of human *M. bovis* infection

General

- Do not consume 'raw' milk or other unpasteurised dairy products.
- Check the label and ingredients of dairy products to make sure the word "pasteurised" is listed.
- Use caution when purchasing homemade dairy products such as cheeses or products that are sold without complete labelling of the ingredients.
- Seek medical attention if you think you have been exposed to *M. bovis*, especially if you have symptoms of TB disease. This is particularly important for children or those that are immunosuppressed.
- Seek veterinary attention for cats with unhealing lesions, tumour like growths or signs of respiratory disease.

On farms

Working with livestock may involve close contact with undetected infected animals or animals with active tuberculosis. As with all occupational risks, legislation requires employers to adopt appropriate measures to minimise exposure to infections that can be transmitted to humans from animals. These include awareness of possible risks from contaminated aerosols in areas frequented by farm workers.

In order to reduce the risk of exposure to bovine TB bacteria on livestock farms you should:

- wash hands thoroughly several times a day and always before eating, smoking and after finishing work for the day;
- wash skin wounds immediately with soap and running water and cover with a waterproof dressing;
- avoid drinking milk that has not been pasteurised or boiled, or eating dairy products made with raw milk — if, despite the risks to human health involved, you or someone in your family still wish to consume unpasteurised milk and its products, make sure that the milk comes from an Officially TB Free (OTF) herd;
- do not drink, eat or smoke in animal areas;
- where possible, minimise handling of reactor cattle (animals that test positive for bovine TB) or other suspect animals, particularly around their head area — follow isolation requirements for animals positive to a TB test in your herd.

If reactors or other infected animals have been found in a herd

- The Department of Agriculture, Environment and Rural Affairs (DAERA) notify reports of infected animals to the Public Health Agency (PHA) Acute Response Duty Room when there is potential public health significance.

- General disease control, biosecurity advice and public health advice is routinely issued to herd keepers by DAERA. If further information is required, please contact the DAERA helpline 0300 200 7840.
- The PHA will assess the need for follow up of people who may have been exposed to infected animals. Screening is usually limited to specific groups. This includes children aged under 16 who have not had a BCG vaccination. It also applies to those with certain underlying health conditions. These people must have had significant exposure to a highly infectious animal. Alternatively, they must have regularly drunk unpasteurised milk from a milk herd where TB in the udder was found.
- If you suspect you and/or any member of your family or workforce have been exposed to bovine TB you should contact your GP for advice.





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