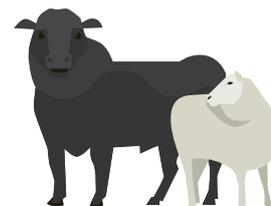




# LEPTOSPIROSIS: Information for meat processing workers



This fact sheet provides information about the risk of leptospirosis infection in meat processing workers and others working around a meat plant.

## KEY POINTS

- > Leptospirosis is easy to catch from an infected animal and its environment.
- > Infection can occur through breaks in the skin or through mucous membranes of the eyes, nose or mouth.
- > Protect yourself, your family and staff by vaccinating your animals, controlling rodents, practicing good personal hygiene, using protective equipment, and seeking help early if you feel unwell.

## WHAT IS LEPTOSPIROSIS?

Leptospirosis is an infectious disease transmitted from animals to humans (a zoonosis), and from animal to animal, through cuts or cracks in the skin or through the mucous membranes of the eyes, nose or mouth. It is present in almost all warm-blooded mammals, including farm, domestic and feral animals.

Leptospirosis spreads easily, and is caused by bacteria known as leptospires that multiply in the kidneys of animals and are shed in the urine. The bacteria thrive in moist or wet conditions and can survive for months.

## HOW ARE PEOPLE INFECTED?

People can catch leptospirosis from infected animal urine. Even a splash or fine spray of urine or indirect contact with urine-contaminated water can spread large numbers of leptospires.

Cuts, sores and skin grazes increase the risk of infection, as does licking your lips and eating or smoking before washing and drying your hands.

All animals processed for meat in New Zealand (abattoir and home-kill) can pass on the disease.

## WHAT ARE THE SYMPTOMS IN PEOPLE?

People affected by leptospirosis, either mildly or severely, may not show symptoms.

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Infection may just feel like a bad case of the flu, with headaches and fever. Severe cases can result in permanent complications, usually kidney or liver damage. Some people may be unable to work for months and in severe cases, be unable to return to work at all. The disease can keep coming back.

Pregnant women can miscarry. Death from infection is rare.

### WHO IS AT RISK OF INFECTION?

Anyone working in and around the meat plant or slaughtering animals at home is at risk, including:

- > slaughter-floor workers
- > meat inspectors
- > offal workers and butchers
- > vets
- > stock truck drivers
- > maintenance workers and other visitors
- > moving stock into stunning boxes
- > stunning and pelting
- > hosing down yards or other areas
- > tumbling pig carcasses
- > working at the beginning of the chain (eg when the fleece is still on)

- > gutting and taking out the bladder
- > working with kidneys
- > handling wool, hides or pelts.

Factors that increase the risk of exposure to infected urine include:

- > high-speed, high-volume work
- > skin cuts (common for people working with knives)
- > animals with full bladders<sup>1</sup>
- > working below the carcass on the beef slaughter floor.

### AWARENESS

- > Clearly display information that leptospirosis may be a risk in the work area. Make sure new workers and anyone else who will be in close contact with animals, are aware of the risks and what to do before entering the work area.
- > Meat workers may also work with animals outside their workplace, or do their own home-kill, without the level of controls processing plants have. Make sure workers are aware of the risks.

### PPE

- > Treat all animals as if they are infected – wear full protection in high-risk areas.
- > Wear clean, appropriate PPE.
- > Suitable PPE includes overalls; aprons; sturdy, waterproof footwear; eye or face protection; hats; gloves (the rate of leptospirosis in the meat industry has fallen since double-gloving was introduced)<sup>2</sup>.
- > Change gloves or boots immediately if they split or leak.
- > PPE effectiveness can depend on:
  - the size of animal being processed

<sup>1</sup> S22(1)(b)(ii) of the Animal Welfare Act 1999 requires that water is made available to animals being transported – some plants use pizzelle clips to control this hazard.

<sup>2</sup> Meat Industry Association (consultation feedback, Month 2014) believes that the rate of leptospirosis has fallen since double-gloving was introduced).

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- the plant temperature, eg a meat processing plant may cause face protection gear to fog up; therefore, goggles should be used rather than a full-face mask
  - the type of work the processor does, eg a beef slaughterman carries out a range of tasks that present various risks, requiring different PPE.
- > Offal room workers should wear face protection, as the risk of infection is higher when handling organs. Double-gloving is recommended.

## HYGIENE

Personal hygiene is good additional protection.

- > Wash your hands regularly, using water, soap, and disinfectant – especially after using the toilet, and before eating, drinking, smoking, or taking a break. Wash your face if you have facial hair.
- > Wash other areas regularly, eg door handles.
- > Use disposable towels only.
- > Don't scrub your hands harshly as it may cause breaks in the skin.
- > Don't touch your eyes, nose or mouth before washing your hands.
- > Cover cuts, grazes, blisters and skin breaks with waterproof coverings, and change coverings regularly.
- > Don't smoke, drink or eat when handling animals, as this can introduce bacteria into the mouth. Keep coffee mugs away from the work area.
- > Wash your clothes after handling animals.
- > Keep toilets and hand-washing facilities clean.

## FURTHER CONTROLS

- > Keep knives sharp so they cut better.
- > Take care when using high pressure wash-

- down – don't breath in water spray, wear a mask, and direct spray away from people.
- > Take extra precautions if there is a greater risk of urine splash, such:
- pizzle closers
  - chutes to avoid splashing
  - perspex shields/protective screens to cover gut contents being worked on.
- > Use tags or dyes to identify carcasses that have been splashed with urine, so that workers further down the chain can easily identify them.
- > Monitor the slaughter floor temperature ie outside temperature, ventilation, air flow, proximity to chillers etc.

## ANIMAL STATUS DECLARATION (ASD) FORM

The Animal Status Declaration (ASD) form is a standardised form used to transfer key information about animals to the next person in charge of them. All groups taking charge of stock, including meat processing companies, must receive an ASD form from the previous person in charge.

The form provides key information, including:

- > TB questions
- > food safety questions
- > market access questions<sup>3</sup>.

## WATCHING YOUR HEALTH

The sooner treatment starts, the better.

## FIRST AID

A readily available supply of clean water is important.

Look after your health. As soon as there is exposure to urine or infection is suspected:

- > dry off urine splash immediately (leptospire dry out easily), then wash the area

<sup>3</sup> Ministry of Primary Industries. (2005). *New animal Status Declaration system progressing well*. Retrieved March 2015 from: [www.foodsafety.govt.nz/elibrary/industry/Animal\\_Status-Introduced\\_October.htm](http://www.foodsafety.govt.nz/elibrary/industry/Animal_Status-Introduced_October.htm)

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- > wash your hands and face well, taking particular care with facial hair
- > use soap and water, and dry well
- > flush out your mouth and eyes, and any exposed skin with lots of running water
- > wash out fresh or old cuts and grazes with water and disinfectant, and dry well
- > tell a supervisor.

### **PRIMARY CARE TREATMENT**

- > See a doctor within 24 hours of suspected exposure or if flu-like symptoms develop. Get antibiotic treatment and have a blood sample taken.
- > Tell the doctor that leptospirosis may be the cause of your illness – some doctors may not be familiar with the symptoms.
- > The blood sample **MUST** be taken before medication is taken, and a subsequent sample may be needed 3-4 weeks later.
- > Treatment options will depend on the severity and duration of the symptoms. Antibiotic treatment should be given if leptospirosis infection is strongly suspected.
- > All patients with severe infection or signs of meningitis should be sent to hospital immediately.

### **FINDING OUT MORE**

[Good Practice Guide: Prevention and Control of Leptospirosis](#)

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**PUBLISHED: JUNE 2016. CURRENT UNTIL REVIEW IN 2018.**

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