



LEPTOSPIROSIS: Working with pigs



This fact sheet provides information about the risk of leptospirosis infection to people working with pigs.

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.

WHAT ARE THE SYMPTOMS IN PEOPLE?

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

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 running their farm. The disease can keep coming back.

Pregnant women can miscarry. Death from infection is rare.

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WHO IS AT RISK OF INFECTION?

Unvaccinated pigs are commonly infected, and a significant risk to humans and other animals.

Anyone working near enough to unvaccinated pigs to be splashed or sprayed with urine or urine-contaminated water (such as farm workers, vets, and other casual or contract workers) is at risk.

People doing the following tasks are at high risk:

- > assisting with birthing
- > cleaning the piggeries
- > mixing and moving grower pigs
- > disposing of effluent
- > transporting stock
- > maintenance (particularly when it involves water).

COMMERCIAL PIGGERIES WITH A QUALITY ASSURANCE (QA) PROGRAMME

The commercial pig industry has worked with vets to develop a practical leptospirosis QA control programme which keeps most commercial piggeries leptospirosis-free.

Producers must complete an Animal Status Declaration (ASD) form whenever pigs are moved from commercial properties. An ASD form must be supplied when pigs arrive and leave a property.

As a result, commercial pig farms are mainly free of leptospirosis – more so than any other livestock industry. However, this isn't the case for non-commercial pig farmers or hobby farmers (backyard piggeries).

NON-COMMERCIAL/BACKYARD PIGGERIES

Infection status of pigs owned by non-commercial pig farmers or hobby farmers is unknown, as well as the risk of human exposure. Leptospirosis may be widespread.

Pig owners (even small-scale ones) have a responsibility to meet the standards the commercial pig industry works hard to keep.



Lifestyle farmers and their families are at risk if their pigs aren't vaccinated. Children are at risk if they go barefoot or paddle in contaminated water.

HOME-KILL

Home-kill is slaughtering and butchering farmed animals for eating or use. Because home-kill isn't subject to the same regulatory controls as meat purchased from a supermarket or butcher, it is eaten at your own risk. It is illegal to trade or sell home-kill meat.

If you eat or use home-kill, or provide slaughter or processing services for home-kill, you must comply with the Animal Products Act (APA) 1999.

HOW ARE PIGS INFECTED?

Unvaccinated pigs are infected through exposure to urine-contaminated water. Poor floor surfaces allow urine to pool. Pigs in neighbouring pens can bring infection, as infectious urine can be carried from one pen to another by people working in the piggery.

Infected livestock can infect other livestock (not just pig-to-pig) by sniffing urine or through urine contamination of cuts or grazes on the skin. Non-infected pigs can also become infected through feed and water contaminated by infected rodent urine.

Pigs that run outdoors even when vaccinated can be re-infected from heavily infected wet ground. Introduction of infected gilts and boars can bring infection.

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WHAT ARE THE SYMPTOMS IN PIGS

Infected pigs rarely develop typical signs of infection. Reproductive failure (eg infertility, sporadic abortion) or stillbirth and weak newborns are the most common clinical signs.

Pigs are prone to two serovars (strains) – Pomana and Tarassovi. Both serovars can cause abortion in unvaccinated sows and gilts, and piglets may be stillborn or die within a few days. There is little effect on growers and baconers.

HOW DO YOU MANAGE THE RISK AND PROTECT AGAINST INFECTION?

Minimisation is the best option for managing risk, as leptospirosis is difficult to eliminate. This is done through antibiotic treatment, vaccination programmes, awareness, PPE, hygiene and other procedures.

ANTIBIOTICS

Treat introduced pigs of unknown vaccination status with antibiotics.

VACCINATION

All pigs in contact with other livestock or livestock workers must be vaccinated. Farmers and households with 'backyard' pigs should vaccinate all pigs every six months.

Vaccination is a long-term strategy – it will take time to reduce or eliminate the risk for an infected herd first starting on a vaccination programme. Stopping vaccination will result in herds that are MORE prone to infection and outbreaks.

- > Vaccinate with two doses, 4-6 weeks apart (first vaccination at the time of antibiotic treatment), and isolate for four weeks.
- > Follow up with six-monthly boosters.
- > Vaccinate sow herds, and keep up vaccinations to provide a disease-free source of young animals.
- > Vaccinate grower herds at or soon after weaning, and follow-up with annual testing (not vaccination).

- > Vaccinate breeding herds at least every six months to protect sows from abortion and ensure maternal antibodies are passed on to piglets when they suckle.
- > Vaccinate boars as breeding stock.
- > Vaccines used must be specially licensed for pigs.

Only vaccinate when leptospirosis is confirmed. The main goal is to remove carriers from the sow herd, by reducing shedding and separating clean stock from infected stock.

Infection may continue in the grower-finisher herd despite ongoing vaccination of the parent sows.

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.
- > Make sure visitors haven't had contact with pigs for at least 24 hours.
- > Make sure anyone with the flu doesn't come in contact with pigs.
- > Watch for warning signs of infection, eg a high number of abortions or stillbirths. Consult a vet.

PPE

- > Wear suitable, clean PPE, particularly when working in wet conditions, eg water-proof clothing; overalls; sturdy, closed-toe, waterproof footwear; face protection, gloves.
- > Change gloves or boots immediately if they split or leak.

HYGIENE

Personal hygiene is good additional protection.

- > Wash your hands regularly, using water, soap, and disinfectant, especially after using the toilet or handling animals, and before eating, drinking, smoking, or taking a break. Wash your face if you have facial hair.

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- > 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.
- > Make sure deeper wounds are fully healed before working closely with livestock.
- > Don't smoke, drink or eat when handling livestock, as this can introduce bacteria into the mouth. Keep coffee mugs away from the work area.
- > Wash your clothes after handling stock.
- > Keep toilets and hand-washing facilities clean.

FURTHER CONTROLS

- > Take extra care when using high-pressure wash-down, ie don't breath in water spray, wear a mask, and direct spray away from people.
- > Because most pigs are housed, it is possible to break the cycle of leptospirosis infection by:
 - directing drainage flow away from housing (to prevent contamination between pens)
 - containing disposed effluent
 - vaccinating and continuing to vaccinate sow herds
 - taking hygiene measures in grower herds, like disinfecting pens and separating infected and uninfected growers and their effluent.
- > Control rodents and possums, keeping them away from stored food and other crops – make sure no excess feed is lying around.
- > Know where new pigs have come from. Where possible, buy pigs from a veterinary-certified, leptospirosis-free piggery.

- > Make sure pigs displayed at shows are vaccinated.

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
- > wash your hands and face well, taking particular care with facial hair
- > use soap and water, and dry thoroughly
- > 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, to 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.

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FINDING OUT MORE

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

A guide to small scale pig farming: www.nzpork.co.nz/pork-production/small-scale-farming

Home-kill: www.foodsafety.govt.nz/industry/sectors/meat-ostrich-emu-game/homekill-game-wild-foods/homekill-recreational-catch.htm

The Animal Products Act (APA) 1999:
www.legislation.govt.nz/act/public/1999/0093/latest/DLM33502.html

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