



UNIVERSITY OF TASMANIA

ZOONOSES AND ANIMAL-BASED HAZARDS POLICY

OVERVIEW

As stated in the University's OH&S Policy, the University is committed to continuously improving the management and standards of Occupational Health and Safety. This extends to minimising risks associated with an infection or illness which may be acquired directly or indirectly from animals. This Policy outlines the variety of zoonoses and other animal-based hazards, which may be encountered by University of Tasmania employees and the measures which should be implemented to prevent infection and illness.

DEFINITIONS

Accountable Person:

An individual, who assumes responsibility for the health or welfare of any other person in a workplace by providing instruction, direction, assistance, advice or service, is deemed an Accountable Person in accordance with the *Workplace Health and Safety Regulations 1998*. All management and supervisory staff (which includes those with responsibility for students) are therefore considered "accountable persons".

Employee:

For the purposes of this Policy, employee refers to any staff member, student or visitor.

Responsible Officer:

Deans, Heads of Division, Heads of School and Administrative Sections have been designated as Responsible Officers under the *Workplace Health and Safety Act 1995*.

Zoonoses:

Is defined as any disease or infection which is naturally transmitted between all types of animals or their products and humans.

RESPONSIBILITIES

Accountable Persons:

Ensure that employees who are undertaking activities involving animals receive, or are instructed in the contents of, this Policy. In addition, all incidents involving animals must be reported promptly.

Employees:

Ensure that they undertake activities involving animals in a manner which does not adversely affect their own health and safety, or that of others by following this Policy.

Responsible Officers:

Ensure that where employees are in contact with animals as part of their work or study/research activities that this Policy is implemented within their area.

PROCEDURES

For the purposes of this Policy, zoonoses and animal-based hazards have been divided into two categories; General Zoonoses and Animal-Based Hazards which may affect employees in

laboratory or field environments, and Animal Specific Zoonoses/Hazards which are relevant to certain animals.

It is important for employees who handle animals to realise they are particularly at risk regarding many zoonoses, as they may handle infected material. For those working in an enclosed environment, association with zoonotic pathogens in aerosols is inevitable.

Some zoonotic diseases are life threatening, particularly in immunologically compromised individuals (e.g. people who have contracted AIDS or those undergoing steroid therapy or chemotherapy etc). In addition, pregnant women can be particularly at risk due to certain infections such as toxoplasmosis which can affect the developing foetus. Accountable Persons must advise all employees, prior to them undertaking activities involving animals, of these particular risks.

In addition, employees are advised to make their medical practitioner aware of their exposure to animals and possibly zoonotic diseases/illnesses, as many symptoms of zoonotic infections are flu-like, skin diseases or intestinal upsets which are indistinguishable from human diseases.

Recommended safety precautions must be taken and good standards of hygiene must be maintained.

Medical or veterinary advice should be made available to all persons handling animals, particularly simians. All those in contact with animals should be immunised against tetanus and tuberculosis. All employees should wear adequate protective clothing, by which is meant at a minimum: cotton-lined gloves (preferably Nitrile) and gown or overalls. Masks must be available at all times. Safety boots should be worn when dealing with large animals. All protective clothing should be removed after exposure to animal activities and laundered or disposed of in a manner suited to the type of contamination and clothing.

Precautions should be taken in handling blood, tissues, and dead animals. Animal carcasses, dressings and organs that accrue from research work involving human pathogens should be securely packed and then incinerated. Employees with cuts or broken skin which could permit entry of foreign material, must ensure that they are adequately covered and protected.

Standard operating procedure for the treatment of wounds inflicted by bites or scratches, is to scrub the wound with copious soap and water, and if possible induce bleeding. An antiseptic is to be applied and the wound covered by a sterile dressing. Medical advice may need to be sought in the case of a severe wound after first aid has been administered. The person bitten may need to be observed for three weeks by their medical practitioner if the animal is thought to be contaminated.

Employees collecting blood samples from animals should observe basic safety precautions:

- Use a new sterile needle (and syringe) for each animal.
- Keep the needle capped until ready for use.
- Avoid climbing fences etc whilst carrying needles, scalpels or other sharp objects.
- Retrieve all used needles for disposal. Maintain a count of needles used, to avoid leaving any behind.
- Dispose of all needles, scalpel blades etc in suitable "sharps" containers. Where a "sharps" container is unavailable, used needles, scalpel blades etc should be safely stored until they can be disposed of. Do not bend them by hand.
- Incidents must be reported using the University's Accident/Incident Report Form.

Section 1 – General Zoonoses/Animal-based Hazards

Allergies

Employees in contact with laboratory animals may have frequent exposures to allergens in the form of dusts, fibres and animal products (hair, fur, dander, urinary proteins, faeces, and parasites). In susceptible individuals this can lead to various degrees of laboratory animal allergy (LAA). Signs of allergy include red, sore, watery or itchy eyes, running nose, sneezing, coughing, shortness of breath and skin rash.

LAA may lead to Occupational Asthma (OA) if the primary symptoms are ignored. This type of asthma is 'work-caused'. Once established, it will continue to be exacerbated by exposure to the 'trigger' allergens.

The development of OA is related primarily to the length of exposure. However, it has been observed that those who have intermittent exposure for short periods of time can develop severe symptoms quite rapidly. An asthma attack will not necessarily occur at work. Frequently, shortness of breath will develop several hours after the exposure, e.g. at night.

In addition to those who develop "work-related" asthma, existing asthmatics who begin employment in animal related work have a high risk of developing "work-aggravated" asthma. Aggravation may also apply to other forms of respiratory illness.

Employees with OA who continue to work in an allergenic or aggravating environment without adequate protection are at risk of their condition deteriorating over time. In such cases, they may continue to suffer with asthma even after their exposure is terminated.

Animal Bites and Scratches

Any animal bite or scratch, which breaks the skin, will quickly become an infected wound if not cleansed immediately. The microbial flora of the mouth of animals, contains a mixed population of potential pathogens. The basic principles of flushing, cleaning and disinfection apply. A first-aid kit suitable for this purpose should be present in every workplace and work vehicle and be in close proximity to the activities undertaken.

Erysipeloid

Those in contact with slaughtered animals may be exposed to erysipeloid (See under Fisheries). *E. rhusiopathiae* infection occurs in pigs (where it is known as erysipelas - not to be confused with human erysipelas), sheep, turkeys, ducks and geese.

It is usually associated with wound infections. Unprotected hands, especially any with cuts or scratches, may become infected, producing an unpleasant, dry, purple sore accompanied by tingling and itchiness. Serious complications (arthritis and septicaemia) are rare.

Prevention is by cleanliness whilst undertaking activities and in the general work area, and sensible first-aid attention to cuts and abrasions.

Gastroenteritis

A wide range of animal pathogens has the ability to cause debilitating bouts of human gastroenteritis. *Salmonella*, *Campylobacter*, *E coli*, *Giardia*, *Cryptosporidia* and *Yersinia* are the principal ones in Tasmania. Reservoir hosts can be any livestock, wildlife or companion pet species, and particularly younger animals.

Infection is via the faecal-oral route, emphasising the importance of hygiene. Wash hands thoroughly after touching animals or animal faeces and don't eat or smoke on the job. Open water supplies, including rivers and streams, are also common sources of gastro-enteric organisms.

Hydatids

Although Tasmania has been declared provisionally free from hydatids, and dogs entering the State are being treated, there is still a chance that carrier dogs could exist, especially in rural areas. It is wise to wash your hands thoroughly after touching any dog.

Insects and Spiders

The exaggerated hazards attributed to Tasmanian snakes are considerably outweighed by the risk of bites from several common invertebrates. University of Tasmania employees working outdoors need to be mindful in particular of jackjumper ants, european wasps, white-tailed and red back spiders. Red backs are very common in “farmyard” situations, preferring dry, sheltered places such as outhouses, woodheaps, rubbish dumps, empty tins etc.

Large Animal Hazards

The potential for damage from large animals is obvious. Don't take risks. Apply appropriate methods of restraint before handling procedures commence.

If you are not confident in the ability of either the animal handler or the equipment to safely restrain the animal and minimise the risk of injury, do not proceed.

- Respect animals for their speed and power to cause injury.
- Diseased, injured or stressed animals may be more likely to attack.
- Try to avoid handling large animals when you are tired.
- Concentrate on the job at hand.
- Remember that poor design of yards and facilities can lead to accidents.
- Head butts from charging cattle; goats or sheep (especially rams) can cause serious injury. Never turn your back on animals in races or yards.
- Exercise care when climbing on stockyards or on livestock transport vehicles.
- Open wounds should be protected before handling livestock, then cleaned and disinfected afterwards.

Liver Fluke

Chewing on a blade of grass, plucked from beside a rural watercourse, can be risky due to the possibility of swallowing larvae of the sheep and cattle liver fluke (*Fasciola hepatica*). These microscopic flatworm larvae can complete their development inside human grass chewers too, who three months later could end up with 3cm long adult fluke in their livers.

Needle-stick Injuries and “Sharps”

Employees collecting blood samples from animals should observe basic safety precautions:

- Use a new sterile needle (and syringe) for each animal.
- Keep the needle capped until ready for use.
- Avoid climbing fences etc whilst carrying needles, scalpels or other sharp objects.
- Retrieve all used needles for disposal. Maintain a count of needles used, to avoid leaving any behind.
- Dispose of all needles, scalpel blades etc in suitable “sharps” containers. Where a “sharps” container is unavailable, used needles, scalpel blades etc should be safely stored until they can be disposed of. Used needles may be carefully recapped (contrary to recommended practice for needles used on humans). Do not bend them by hand.

Rickettsial Spotted Fever

Some zoonoses are spread by biting insects, ticks etc. These are referred to as arthropod-borne zoonoses.

One such disease is rickettsial spotted fever, also known as tick bite fever, or Flinders Island spotted fever. This disease tends to occur in summer and autumn, when ticks are active. Symptoms include fever, headache, fatigue, skin rashes and joint pains. Antibiotic treatment is usually successful.

Avoid exposure to “scrub ticks”. Don't sit or lie on forest floors, especially during the warmer months. If working in a tick-prone environment check yourself nightly for ticks, both adult and larval. Native fauna is a reservoir host for this rickettsia. See Ticks and Leeches.

Ringworm

Ringworm is the generic name for mammalian skin infections caused by several fungi.

Ringworm is quite contagious and spreads by fungal spores from animals to humans and between humans.

Though usually fairly mild, it can become a serious problem with severe itching, and may require prolonged treatment. Ringworm can occur on the scalp, body and groin. Typical lesions are well defined (but not necessarily circular) and spread outwards, with red borders and scaly centres. As the centre heals, the lesions may take on a ring appearance.

All livestock, wildlife and companion species can be potential carriers, but most human cases come from cats and calves. Infected animals usually have bald patches, but not always. Many cats are symptomless carriers. Remember too, that fungal spores can remain infective off an animal, on yard-railings and harness, for weeks or months.

Sensible personal hygiene, such as a hot shower after exposure to animals, will minimise the risk of acquiring ringworm.

Ross River Virus Disease

Ross River Virus is another arthropod-borne zoonosis, which is spread by mosquitos. Animal hosts of Ross River Virus are marsupials, particularly wallabies. In Tasmania it is basically a summer and autumn infection, likely to be acquired anywhere around the State's coastal plain when adequate seasonal rainfall promotes mosquito multiplication.

Ross River Virus can cause fever, headache, fatigue, skin rashes and joint pains. There is no treatment and recovery can take up to two years.

While not all mosquitoes transmit the infection those which do are abundant in coastal areas. Employees whose activities involve exposure to mosquitoes in coastal areas should adopt preventative measures, especially between dusk and dawn.

Long trousers and long sleeves should be worn. Light coloured clothing is said to be less attractive to mosquitoes. The correct insect repellent is one containing DEET - diethyl toluamide.

Roundworm Larvae

Larvae of the common roundworm of dogs can, if ingested by humans, wander throughout their bodies ending up in such places as the retina of the eye, resulting in blindness.

This worm is very common in dogs, especially pups, which are often born infected. It pays to wash your hands after handling dogs.

Scabies

Dogs, pigs, horses, and wildlife can be sources of scabies or zoonotic mange. Signs include pimply rashes and a characteristic nocturnal itch. Zoonotic mange is usually localised and fairly mild in humans, compared with the human-to-human variety, which can be more serious.

Mange is common in pigs. After contact with pigs in particular, it is wise to shower thoroughly and have a complete change of clothing.

Tetanus

Animal environments, especially in concentrated areas such as yards, stables and shearing sheds, may be heavily contaminated. Cuts or abrasions, especially deep penetrating wounds, can easily become dangerously infected with dust-borne tetanus spores. Open wounds must be protected in such situations.

It is important to maintain adequate tetanus protection. It is recommended that field and laboratory based employees should have a booster injection (ADT, or Adsorbed Diphtheria Tetanus) every ten years. Employees who receive a tetanus-prone injury should have a booster injection if five or more years have elapsed since the last booster.

Ticks and Leeches

Ticks attach very firmly, embedding their mouthparts in the skin. Their saliva may be toxic. In addition, ticks are known to spread Rickettsial Spotted Fever - (see above).

To remove a tick:

- Grasp it in front of its abdomen, as close as possible to the skin with a pair of fine tweezers and pull gently and persistently, whilst applying a gentle twisting. The tick will give up and let go after a while, OR
- If tweezers are not available, an alternative is to wrap a fine strong thread twice around the tick, hard against the skin, and jerk it out, OR
- Apply a heat source to the tick's abdomen.

The trick to tick removal is to avoid brute force. It is important to remove the tick intact, without leaving its head or mouthparts behind. Also, avoid squeezing the tick - this could result in the injection of potentially toxic saliva.

If parts of the tick are left behind, remove them as you would a troublesome splinter - dig them out with a sharp needle or seek first aid\medical assistance.

After removing a tick, disinfect the bite wound to prevent infection.

Leeches are unpleasant rather than dangerous. They tend to be very active, and are able to creep in, even under tight fitting clothing. Their bite is usually painless, but they inject an anticoagulant into the wound, causing it to continue to bleed long after the leech has gone.

Leeches attach very firmly, but can usually be induced to let go if heat is applied. A heat source is often effective. A liberal sprinkling of salt on the leech is also said to be effective.

The wound should be rinsed and bandaged to minimise blood loss.

Toxic Chemicals

Many veterinary chemicals have the potential to be accidentally swallowed, absorbed through human skin, or inhaled, producing toxic reactions.

The worst of these are the organophosphate (OP) insecticides, such as Diazinon and Malathion. Signs of mild OP poisoning (headache, muscle tremor) are not uncommon following careless exposure to sheep dip spray. Sensitivity to OPs is cumulative after each exposure, thus exacerbating the hazard.

Synthetic pyrethroid (SP) insecticides such as cypermethrin and deltamethrin are also poisonous if inhaled, swallowed or absorbed through skin.

Employees using, or exposed to such chemicals, must observe the product safety recommendations, and must take all recommended safety precautions. Product safety information includes first aid treatment in the event of poisoning. Prior to use of any product, employees must read the product material safety data sheet.

Before handling animals in yards, employees should check if any external medication has been applied to them recently. If so, or if you don't know, wear suitable protective clothing, and wash it and yourself at the first opportunity afterwards.

Accidental administration of injectible antihelminthics or vaccines may have serious consequences. Animals must be suitably restrained prior to using injectible substances.

Formaldehyde is used in the University for preserving various animals and is a potential carcinogen and may cause illness in later life if excessive uncontrolled exposure occurs. Employees should avoid unnecessary exposure to formalin. Good ventilation is vital.

Employees should avoid working near formalin footbaths unless they are sited in the open air. An effective facemask should always be worn when working alongside formalin footbaths.

Section 2 – Animal Specific Zoonoses/Hazards

Australian Bat Lyssavirus

Rabies is an almost invariably fatal viral encephalitis affecting all warm-blooded animals and man. Rabies does not currently occur in Australia; however, a rabies like infection has been evident in bats in other Australian States.

Given that there is insufficient evidence that Tasmania's bats are not infected with this disease, precaution must be taken.

Rabies and other Lyssaviruses are usually transmitted to humans via bites or scratches, which provide direct access of the virus in saliva to exposed tissue and nerve endings. The virus spreads along nerves to the brain.

Rabies vaccine and immunoglobulin will protect against Australian Bat Lyssavirus.

This document outlines the procedures to be followed by field and laboratory employees. The following procedure must be implemented when handling bats to avoid the possible transfer of Lyssavirus infection from bats to humans.

Employees handling any bats, dead or alive should take great care to:

- avoid being bitten or scratched
- avoid contact with saliva
- avoid contact with existing abrasions or cuts

Sick bats present the greatest risk - bats infected with Lyssavirus may show aggression.

Live bats should only be handled by employees who have had pre-exposure vaccination, and then only after seven days following the second pre-exposure vaccination. Vaccination is not necessary for employees handling dead bats.

Employees catching and restraining live bats should wear:

- A full facemask OR goggles and a sturdy hat, to minimise the risk of being scratched or bitten if the bat lands on the head. Face and head protection is vital - the viral trip to the brain from these areas is a short one.
- Suitable protective gloves - elbow length leather welders gloves with impervious elbow length gloves underneath are recommended in Queensland (large fruit bats) but may not be necessary in Tasmania (insectivorous micro bats).
- Full overalls or equivalent

Suitable protective equipment should be worn.

Abrasions and cuts on any exposed part of the body should be covered.

If bitten or scratched, employees must immediately wash the wound with soap and water for five minutes and must seek medical attention. If saliva is suspected of having entered the eye, the eye must be washed at least five times and medical attention must be obtained.

Employees must report a bite or scratch from a bat on the University's Incident/Accident Report Form as it is considered a "dangerous occurrence" according to the provisions of the Workplace Health and Safety Act 1995.

Bats should be identified to species level if possible.

It is important to place the laboratory advice note on the outside of the container and to indicate whether the bat is dead or alive.

The Lyssavirus Expert Group has released recommendations and information for medical practitioners and for Public Health Authorities, including

- Who should receive pre-exposure vaccine
- Post exposure treatment and vaccination
- Considerations as to the level of risk of exposure

The Director of Public Health advises that the following should receive pre-exposure vaccination:

- Laboratory workers processing bats
- Field staff, where there is a risk of being bitten or scratched.

Bees

- Care must be taken when handling bees due to the risk of allergic reaction.
- Employees who suffer an allergic reaction to bee stings should not undertake apiary inspections.
- Employees handling bees or inspecting hives must wear appropriate protective clothing - full-length overalls, veil and gloves - and use a properly functioning smoker.
- Bee stings should be removed by flicking them out with the flat side of a knife blade. Grasping them with fingers or tweezers will result in more venom being injected.

Birds

Psittacosis

Another zoonotic is the avian disease psittacosis. In this regard it must be remembered that almost any bird species can be a carrier of *Chlamydia psittaci*. Masks and gloves should always be worn when handling avian carcasses, and work on them should only be done in a biohazard cabinet.

Cattle

Calf Diarrhoea

Hygienic precautions must be observed when handling sick calves, to avoid ingestion of, or wound contamination by, organisms.

Brucellosis

Until the 1990s, brucellosis was a significant occupational disease. Most cases were caused by inhalation of aerosols containing the bacterium *Brucella abortus*, from cattle. It also affected dairy farmers and their families, and veterinarians. Australia is now free of bovine brucellosis, following a successful national eradication campaign.

Ovine brucellosis (*Brucella ovis*) is still relatively common, but does not cause human disease.

Brucella suis can cause severe illness in pigs. Infection in domestic pigs is rare in Australia, and appears to be confined to Queensland. Most human cases are seen in people with occupational exposure to feral pigs.

Significant numbers of pigs from the mainland are slaughtered in Tasmanian abattoirs. Although the risk is very low, those in contact with slaughtered animals could become infected by inhalation of infected aerosols. Signs are intermittent fever, sweating, chills, and general aches and pains. The course of illness is variable, ranging from a few days to years. Prompt antibiotic treatment should shorten the duration of illness.

Leptospirosis

Anybody working in a modern milking shed is vulnerable to leptospirosis. These bacteria are found in the urine from infected and carrier cows. They may also be present in large numbers in foetal tissues, uterine fluids and placental membranes. Humans can become infected through skin abrasions, through the mouth, nose or even the eye.

Leptospirosis can be quite debilitating, causing severe headaches, fever, aches and pains. Severe cases are potentially fatal and employees who may have been exposed should contact their medical practitioner without delay.

The risk of contracting leptospirosis from properly vaccinated herds is greatly reduced. Calves vaccinated at an early age, before they are exposed to the organism, are unlikely to become infected. However calves must be given a course of two doses of vaccine to maximise immunity, and even fully vaccinated animals can be carriers if they were exposed to the organism before vaccination.

No human vaccine is available. Waterproof, protective clothing should always be worn in an operating milking shed, ideally, with goggles as well. Gloves should be worn when handling foetal tissues, uterine fluids and placental membranes.

Orf and CLA

Those in contact with slaughtered animals sometimes become infected with Orf and CLA, through infection of skin wounds and abrasions. Good hygiene is essential. Wounds should be thoroughly flushed and disinfected. Existing wounds should be covered.

Pseudocowpox

Another infection peculiar to dairy work is pseudocowpox, also called Milker's Nodule. This is caused by a virus and is acquired through contact with the teats of cows, or the mouth or muzzle of calves.

It produces brownish-red papules on the fingers or hands, which take up to six weeks to heal. There is no specific treatment. Wash hands well after working in milking sheds.

Q fever

An occupational disease in the meat and pastoral industries, Q fever is caused by the rickettsia *Coxiella burnetii*. This is a nasty flu-like infection, sudden in onset. Signs include chills, fever, sweating, headache, cough, muscle and perhaps joint pains. The liver may become affected. Serious complications such as heart valve infection may occur. A relapsing debility syndrome may occur.

Because of the similarity to the early signs of severe influenza, it is important that the medical practitioner is aware of the possibility of occupational exposure. Blood tests are available. Specific antibiotic treatment is effective against Q fever, but not against influenza.

It is relatively common in ruminants on the mainland, but causes no illness in these animals. The disease is transmitted between animals by ticks. Ruminants serve as reservoir hosts, and their fetuses and placentas can be a potent source of human infection. Such material should be handled with care, never permitting fluids to splash the face. Human infection is usually via inhalation of infected aerosols.

Although Q fever has not yet been shown to occur in Tasmanian animals, livestock from the mainland are sometimes slaughtered in Tasmania, and those working with such products may be exposed. There is an excellent vaccine available to prevent Q Fever infection and relevant staff should ensure they are inoculated.

Feline

Toxoplasmosis

Toxoplasmosis is caused by a parasite carried by cats. Oocysts ("eggs") pass out in cat faeces. When eaten by a wide range of mammals and birds, they develop into tiny cysts in muscles and

internal organs, including the meat of domestic animals. Mature cats are less likely to pass infective oocysts.

The infection pathway from animals to humans is not completely understood.

Humans are known to become infected through:

- contact with the faeces of cats
- eating raw vegetables contaminated by cat faeces
- Eating improperly cooked meat. (Mutton and pork have been identified sources. Game meats are potential sources)

Toxoplasmosis can cause serious illness in:

- unborn babies whose mothers do not have toxoplasmosis antibodies
- immunocompromised people (eg AIDS sufferers, organ transplant recipients, cancer patients).

If women without toxoplasmosis antibodies become infected during pregnancy, (whether or not they become ill), infection may pass across the placenta to the foetus. Depending on the stage of pregnancy, the result may be abortion, stillbirth, birth defects such as blindness or intellectual disabilities, or a very sick baby.

Unless they have previously been tested seropositive to *Toxoplasma gondii*, employees who are or may be pregnant, should not handle suspect material, including:

- aborted ruminant foetuses, placentas and foetal fluids
- live premature offspring in sheep and goat flocks experiencing outbreaks of toxoplasmosis.
- the faeces of cats

In addition, all employees handling such material should observe basic hygienic precautions to avoid exposing pregnant women to the risk of toxoplasmosis. For example, protective clothing, which has been soiled by this material, should not be handled by anyone who is or who may be pregnant.

Fish

Erysipeloid

The skin infection erysipeloid is essentially an occupational disease affecting people who handle animal and fish products. This is the zoonosis most likely to affect fisheries employees.

The organisms abound in and around fish tanks and cages, notably in the bottom sediment. They may be present on the skin of commercially caught fish. Unprotected hands, especially any with cuts or scratches, may become infected, producing an unpleasant, dry, purple sore accompanied by tingling and itchiness. Serious complications (arthritis and septicaemia) may occur, but are rare.

Prevention is by cleanliness in the work area, and sensible first-aid attention to cuts and abrasions. Where possible gloves should be worn, particularly when cleaning out fish tanks. Antiseptic lotions and barrier creams are of value. Penicillin treatment is usually an effective treatment.

NB: Erysipeloid should not be confused with human erysipelas, the name given to a specific streptococcal infection.

Marine

When working with marine life, needlestick injuries or penetration injuries by parts of the marine life e.g. fish bone, need to be reported to the Accountable Person and the OH&S Unit.

Sheep and Goat

CLA (caseous lymphadenitis)

An unpleasant zoonosis of sheep and goats, CLA (caseous lymphadenitis) or “Cheesy Gland”, is caused by the bacterium *Corynebacterium pseudotuberculosis*. It is common in sheep, the national prevalence in adult animals being about 50%.

Sheep and goats usually become infected through skin wounds. Large pus filled abscesses develop in local and regional lymph nodes. These abscesses sometimes rupture, releasing infection. CLA is more of a hazard during shearing, when abscesses are often sliced open spreading pus everywhere and contaminating the woolshed and yards.

The route of infection in humans is through skin wounds and abrasions. People working in and around sheep yards and woolsheds are at risk.

It causes similar lesions in humans as it does in animals, is difficult to treat and may recur. Good personal and woolshed hygiene is essential. Staff working with sheep should thoroughly clean and disinfect wounds. Existing wounds should be covered.

Orf (Scabby Mouth)

The appropriately named “scabby mouth” is a very common and highly contagious viral infection of sheep and goats. The virus is extremely long lived in the environment. Most properties are infected and are likely to permanently remain so.

The human skin condition is given the peculiar name orf.

The virus is found wherever sheep and goats live, and spreads to people, usually via broken skin. This happens when contact is made with a scabby muzzle, or through exposure to scabby mouth vaccine, which is a live virus vaccine.

Orf consists of blisters or vesicles, usually on the hands or arms. These develop into nasty ulcers with covering scabs. The sores can be quite painful.

There is no treatment, apart from taking precautions against secondary bacterial infection. Healing can take up to six weeks. Fortunately, like many of the “pox” type viruses, orf is normally contracted only once in a lifetime.

Sensible hygiene reduces the risk of getting orf. Wounds and abrasions should be protected from infection.

Anthrax

Tasmania is believed to be free of anthrax. However the outbreak in Victoria in the summer of 1997 occurred in an area also believed to be free of the disease. The fact is that spores of *Bacillus anthracis* can survive for at least 60 years in dry soil.

Employees performing autopsies on cattle and sheep should be aware of the possibility of anthrax, particularly during a spell of hot weather. Anthrax should be considered where:

- The animal has died suddenly,
- the carcass has dark, unclotted blood exuding from the natural orifices and
- there are signs of early putrefaction,

An appropriate investigation should be undertaken without opening the carcass for autopsy.

Transmission is usually by contamination of wounds and abrasions. The result is a “malignant pustule” - a nasty looking, relatively painless sore, with infection spreading to lymph nodes.

Inhalation of spores can lead to pulmonary anthrax, which is usually fatal.

References

The following legislative provisions have guided the development of this Policy:

- *Workplace Health and Safety Act 1995*
- *Workplace Health and Safety Regulations 1998*
- *Synopsis of Zoonoses in Australia* - W.J. Stevenson and K.L. Hughes; Australian Government Publishing Service, DPIF Library.
- *"Is it a Zoonosis Doctor?"* - A 30 minute video produced by the DPIF Public Health & Animal Welfare Section for the Department of Employment Education and Training. DPIF Library. Available to use at the Animal House, Sandy Bay Campus.
- *Common Venomous Animals in Tasmania* - Louise McGowan and Dr Paul Pielage; Queen Victoria Museum and Art Gallery.

<http://clueless.ucdavis.edu/risk/>

Approved by OH&S Committee : 21st September, 1999

Disclaimer

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