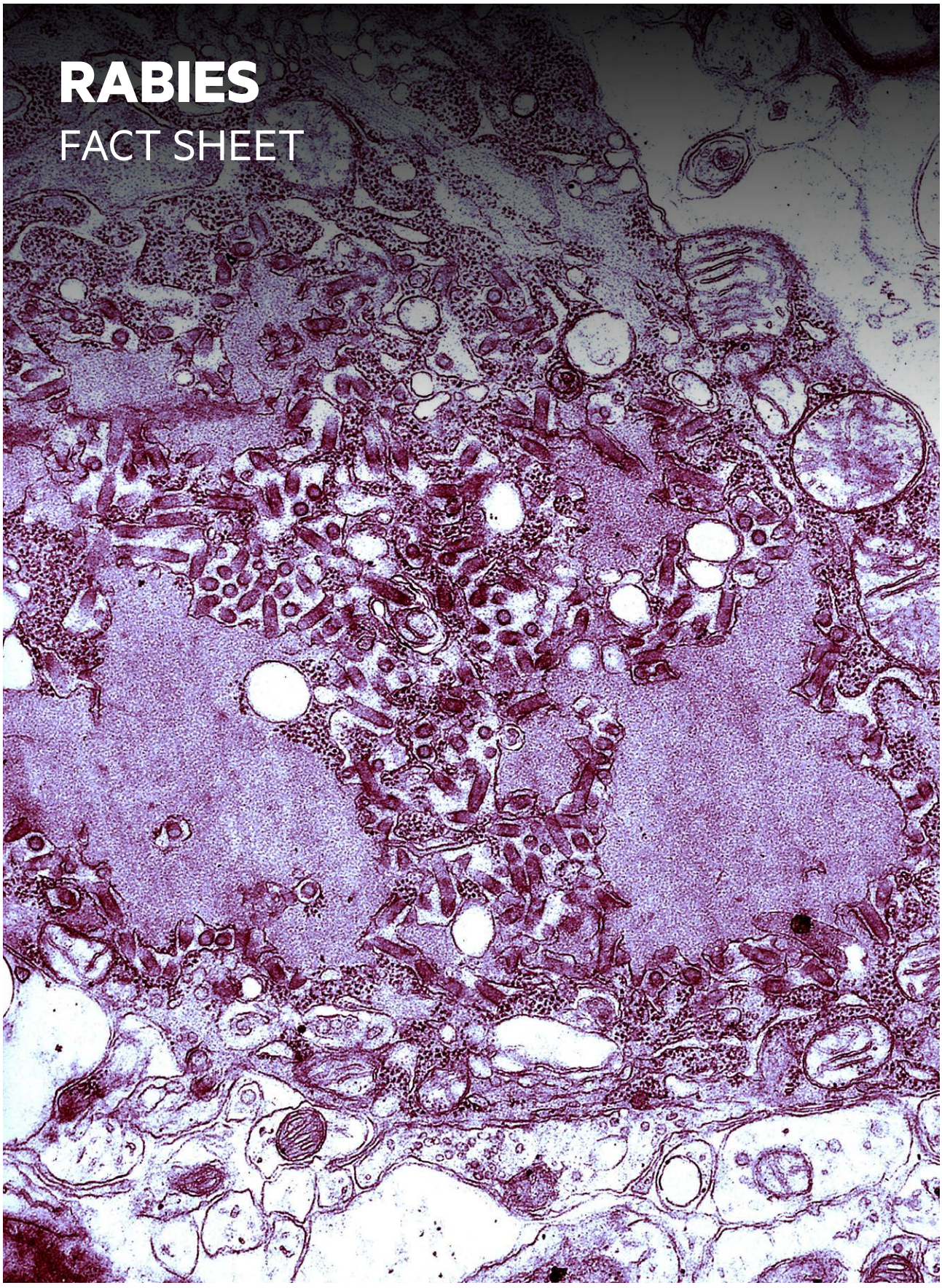
QUEENSLAND MUSEUM

RABIES

FACT SHEET



Q26-027

Queensland Government

WHAT IS RABIES?

Rabies is a zoonotic disease caused by a virus called *Lyssavirus rabies*.
It can be transmitted from non-human animals to humans through saliva.

Rabies exists worldwide except for a few countries, such as Australia and New Zealand. The rabies virus (RABV) is closely related to the Australian bat lyssavirus (ABLV).

Natural hosts

Domestic dogs are the main reservoir hosts, but wild carnivores and bats also play significant roles in the persistence of rabies worldwide.

How is it spread?

Infection is usually spread from animals (e.g. dogs, bats, monkeys, foxes, cats, racoons, skunks, jackals, coyote or mongooses) to humans through direct contact with the saliva of an infected animal. Typically, rabies is not transmitted from human to human, but there are rare exceptions.

Only mammals can be infected with rabies. An animal affected by rabies is said to be rabid.

Direct transmission from the saliva of an infected animal to humans or other animals can occur through:

- bites or scratches
- a pre-existing break in the skin (cut, scrape or open wound)
- a mucous membrane (e.g. eyes, nose or mouth).

Very rarely, indirect transmission to humans can occur through:

- ingestion of infected tissues (e.g. from a carcass)
- an organ transplant from an infected donor.

Domestic dogs are the main transmitter of rabies. Their bites and scratches account for 99% of human rabies cases.

Who is at risk?

- Vets and vet nurses, wildlife carers, wildlife rangers and volunteers, zoo workers, wildlife rescue facility workers, scientists who work with wildlife (particularly mammals) and laboratory staff who work with live lyssaviruses.
- People who come into contact with wild or domestic animals, especially dogs, cats or bats, in countries where rabies is present.

Touching your pet cat or dog is safe. We don't have rabies in Australia.



What are the symptoms?

In animals

Initial symptoms of rabies in dogs and most wild animals include:

- fever
- restlessness
- changes in behaviour.

The disease can then progress to more severe symptoms, including:

- aggression (biting or snapping at imaginary or real objects, people or other animals)
- paralysis
- seizures
- foaming at the mouth.

Infection with rabies follows a similar course to Australian bat lyssavirus, which also progresses to acute and fatal clinical disease manifesting as abnormal behaviour and paralysis.

In humans

Rabies infection has shown a wide variability in the time it takes for symptoms to appear following exposure to an infected animal – from several days to several years. Symptoms may begin as flu-like before progressing to severe neurological symptoms.

Symptoms may include:

- headache
- fever
- fatigue
- nausea
- vomiting
- agitation and anxiety
- excessive salivation and difficulty swallowing
- insomnia
- paralysis
- encephalitis (inflammation of the brain)
- delirium (confusion and changes in behaviour)
- seizures.

⚠ Rabies infection can be fatal.

How can I prevent infection?

Rabies vaccination provides protection against rabies in humans, before and after exposure. Vaccinating dogs, including puppies, is the most cost-effective strategy for preventing rabies in people because it stops the transmission at its source. This is not required for dogs living only in Australia. Other prevention measures are important when travelling outside Australia, such as avoiding contact with potentially infected dogs and wildlife in countries where there is rabies virus risk.

What treatments are available?

Rabies is a serious illness and people who develop symptoms usually die. Treatment is only successful if it occurs before the person becomes symptomatic. Even if previously vaccinated, if you are bitten or scratched by a land mammal overseas, especially a dog, you should:

1. Immediately wash the wound thoroughly with soap and water for at least 15 minutes.
2. Apply an antiseptic with anti-virus action, such as povidone–iodine (e.g. Betadine), iodine tincture, aqueous iodine solution, chlorhexidine or alcohol (containing at least 70% ethanol).
3. Seek medical attention as soon as possible to care for the wound and to assess whether you are at risk of rabies infection and require treatment.

Once a person has been infected, emergency post-exposure prophylaxis (PEP) may consist of:

- wound care
- rabies vaccine (the number of doses depends on the exposure category and immune status of the person affected)
- human rabies immunoglobulin (HRIG).

ⓘ The vaccine is safe. Adverse events are rare.

If you think you may have been exposed to rabies, please contact your doctor or public health agency for further advice.

Cover: An electon micrograph of the rabies virus. Courtesy: Alamy/BSIP
Page 2: A rabies prevention sign at Campbeltown Harbour on the island of Kintyre, Scotland. Courtesy: Alamy/Paul Marshall

Last updated: June 2026

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