

# Rabies and Australian Bat Lyssavirus

Lyssaviruses are a group of viruses that include Australian bat lyssavirus and rabies virus.

Rabies is an infection of mammals that occurs in many parts of the world, but not in Australia. Infection with rabies can sicken and kill the affected mammal and when people are infected, usually through a bite or scratch from an infected animal, they almost always die.

Australian bat lyssavirus is a virus that is related to but different from rabies. The virus is carried by bats and as far as is known, has not spread to other native or domesticated animals. It rarely infects humans. Only two cases of human infection with Australian bat lyssavirus have been recorded in Australia, both in Queensland in the mid-1990s. Both people died.

Rabies and Australian bat lyssavirus infection are thought to cause similar symptoms.

These include:

- > headache
- > fever
- > malaise
- > sensory changes around the site of the bite or scratch
- > excitability
- > an aversion to fresh air and water
- > weakness
- > delirium, convulsions and coma.

Death usually follows several days after the onset of symptoms.

Both rabies and bat lyssavirus are spread from infected mammals to people or other mammals through bites or scratches. Biting or scratching can inject the viruses – which are contained in the animal's saliva – into the exposed person's body. An infected animal may not show any symptoms of illness.

Overseas, mammals that transmit rabies include bats, dogs, cats, raccoons, skunks, monkeys and other mammals that can bite and scratch. Rabies kills many local people overseas and has infected some Australians travelling or living overseas. Rabies is a risk to travellers in the United States, Canada, South and Central America, much of Europe, Asia, Africa and the Middle East, as well as many other places.

In Australia, people who handle bats are at risk of Australian bat lyssavirus infection. In Australia, only bats – both the larger flying foxes (or fruit bats) and the smaller insectivorous (or micro) bats – have been found to carry bat lyssavirus. Scientists believe the virus is present in bat populations throughout the entire range of flying foxes in Australia. Other Australian mammals have not been shown to carry rabies or Australian bat lyssavirus.

Diagnosis can be difficult and confirmation requires laboratory tests for the presence of the virus in skin, blood, spinal fluid and nervous tissue or other tissue. *There is no cure once the disease begins.*

## Incubation period

*(time between becoming infected and developing symptoms)*

For rabies, usually 3 – 8 weeks, but periods from 9 days to 7 years have been documented. There is little information available on Australian bat lyssavirus.

## Infectious period

*(time during which an infected person can infect others)*

Person-to-person spread is rare, but is possible while the person with rabies remains alive. Animals infected with rabies may be infectious for several weeks before symptoms appear until after they have died. This period varies depending on the species.

## Treatment

If given soon enough after exposure, rabies immunoglobulin and vaccine may prevent development of infection. However, once symptoms develop, these infections are almost invariably fatal.

## Rabies and Australian Bat Lyssavirus (cont.)

### Control of spread

- > Unless it is part of your job and you have been trained in and use the proper protective equipment, do not attempt to handle wild mammals. Australian bat lyssavirus and rabies are only two of the many infections that animals can transmit to people.
- > Rabies vaccine helps prevent both rabies and Australian bat lyssavirus infection. People who handle or come into contact with bats in Australia – for example, bat carers, wildlife officers and veterinarians – should receive a course of vaccine from their local doctor. People who are travelling to countries overseas where rabies occurs should discuss the need for vaccination prior to travel with a travel medicine expert. There will be a charge for the vaccine.
- > Even if you have not been vaccinated beforehand, a post-exposure course of rabies vaccine, along with another injection called rabies immunoglobulin, can prevent infection if given soon after the bite or scratch.
- > If you are bitten or scratched by a bat in Australia, or by a wild mammal (or any unvaccinated animal) overseas:
  - thoroughly wash the wound immediately with soap and water. Proper cleansing of the wound is regarded as the single most effective measure for reducing transmission
  - apply an antiseptic solution such as povidone-iodine
  - seek immediate medical attention.



**Rabies and Australian Bat Lyssavirus Infections are notifiable diseases**

- > Immunoglobulin
- > Overseas Travel
- > Immunisation
- > Animal Bites and Scratches