



FlyingFoxes

and Public Health



Photo: Theo Allfops



Summary

Several apparently new viruses capable of causing diseases in animals and humans have been linked to bats in recent years. The most notable of these viruses are Australian Bat Lyssavirus and Hendra virus (Equine Morbillivirus). Research by the Queensland Department of Primary Industries (DPI) and others has shown that some species of bats act as a natural reservoir of infection for these viruses, and so **members of the public are strongly advised against handling any bat**. Only trained individuals who are protected by vaccination and suitable equipment should care for bats.

in bats is uncommon (perhaps less than 1% are infected at any time), it has been found in bats across much of Australia. It is probable that the virus has been present in Australian bat populations for a very long time. Further research is being conducted into the distribution and transmissibility of the virus.

ABL is not known to be spread by ingestion, however, as a general hygiene measure, fruit that has been damaged by any animal should not be eaten, and fruit which has been soiled should be washed and peeled before being eaten.



Australian Bat Lyssavirus (ABL)

A newly identified virus capable of causing a rabies-like disease in bats and humans was first identified in a black flying fox in northern New South Wales in 1996. Research to date has shown the virus to be present in four species of flying-fox in Australia, and in two species of insectivorous bat. Given the invariably fatal consequences of human infection with lyssaviruses, we need to assume that any and all Australian bats have the potential to carry Australian Bat Lyssavirus.

ABL infection in humans is extremely rare; only two deaths have ever been recorded in Australia. Infection is thought to occur by a penetrating scratch or bite, whereby virus in an affected bat's saliva comes into direct contact with exposed tissue. There is no evidence to suggest that contact with bat urine or faeces poses a risk of infection, nor that bats flying, feeding or roosting in trees pose any risk to humans.

Bats are regarded as the natural reservoir of ABL. Research findings to date suggest that while infection

Minimising the risk of exposure

The known risk of lyssavirus infection relates to being bitten or scratched by an infected bat. **The best approach is to leave bats alone**. If you find a sick or injured bat or encounter a bat caught on a barbed-wire fence, do not touch the bat. Call your local Queensland Parks and Wildlife Service office as soon as possible.

If you are bitten or scratched

If you are bitten or scratched, wash the wound carefully with soap and water for at least five minutes. Do not scrub the wound, but do wash it thoroughly. Proper cleansing of the wound is the single most effective measure for reducing transmission of lyssavirus. **Contact your doctor** (even if you are already vaccinated) who will contact the local Public Health Unit to arrange appropriate treatment that may include vaccination. If you get bat blood or saliva in your eyes, nose or mouth, you should flush the area thoroughly with water and seek immediate medical advice. In addition, as with any animal bite or cut, you should check your tetanus vaccination status to see if you need a booster.



Hendra Virus

Hendra virus (Equine Morbillivirus) was first identified in 1994 when it caused the death of 13 of 20 infected horses in Brisbane. Subsequent research has shown that a virus isolated from flying foxes is indistinguishable from the virus found in the affected horses, and it is now widely believed that flying foxes (fruit bats) are a natural host of this virus. It is probable that the virus has existed in Australia for a very long time.

There is no evidence that Hendra virus can spread directly from bats to humans. There have been three known human cases of Hendra virus disease in humans, two of which were fatal. On each occasion, sick horses appear to have been the source of infection to humans. However the chances of bats infecting horses are extremely small.



Bat Droppings

Some types of bacteria (eg. *Salmonella*) that can impact human health are found in bat faeces from time to time, and members of the public occasionally express concern about potential contamination of swimming pools or rainwater tanks.

Rainwater tanks

If the droppings of any animals collect on your roof, and you collect that rainwater for drinking purposes, contaminants could wash into your rainwater tank. In these instances, it is advisable to have a device that allows the first flush of rainwater to be diverted from your tank. It is good hygiene practice to keep your rainwater tank covered, and at regular intervals chlorinate and drain the tank and clean both the tank and the roof area used for rainwater collection.

Swimming pools

Normal pool maintenance practices (cleaning, filtration and chlorination) should remove any contamination associated with flying fox droppings.



Photo: Theo Allots

The search for food often brings flying foxes in close proximity to urban areas.



Encounters with injured bats

Occasionally, juvenile or injured bats may be found on the ground or caught in barbed-wire fencing. **Do not handle these animals.** Immediately contact Queensland Parks and Wildlife Service who will direct your call to a qualified wildlife carer.

Flying foxes and other bats play a vital part in assisting the seeding of forests and the regeneration of rainforests. They are protected native Australian species and have inhabited Australia for many thousands of years. These animals pose little risk to humans providing you leave them alone so there is **NO** need for concern even when colonies reside in close proximity to residences.

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