



Rabies

Rabies is a viral infection that can be transmitted to humans in the saliva of an infected animal by a bite or a scratch. Although rabies cases are rare in travelers, animal bites do occur. Therefore it is important to be aware of the risk and what actions to take.

Rabies is almost always fatal once symptoms appear. Pre-exposure rabies vaccines are available and recommended for some travelers. Post-exposure treatment, if available and provided quickly, can prevent the disease.

Symptoms

On entering the body, the virus replicates in the area of the bite, then spreads to the spinal cord and brain via nerves. Typically, symptoms begin between 3-12 weeks after exposure to the virus, although, rarely they may develop up to a year.

Early symptoms can include:

- numbness around the wound site,
- headache,
- fever and lethargy.

Once the virus reaches the brain, it rapidly spreads via the nervous system to many different tissues.

Later signs include:

- hallucinations,
- hydrophobia (fear of water),
- paralysis,
- coma.

Travelers should seek medical advice without delay if they have possible exposure to the rabies virus, through a bite or scratch from a mammal. This is the case even if they have had rabies vaccines prior to travel.

Diagnosis

There are no tests to diagnose rabies infection in humans before the onset of symptoms.

Prevention and control

Travelers should avoid contact with wild or domestic animals during travel by not approaching animals, attempting to pick them up or offering food. Running and cycling are activities that may attract dogs.

A pre-travel vaccine is available for those considered at risk of exposure to rabies including the following:

- Those visiting areas where rabies is present and access to post-exposure treatment and medical care is limited
- Those planning higher risk activities such as cycling and running, trekking, cave exploring and visiting rural areas. Children are especially vulnerable to scratches or bites
- Those planning to stay more than one month in an area where rabies is present
- Vets and health workers who may have direct contact with rabies infected patients

It is advisable to speak to a travel health clinician to discuss your level of risk. The course of pre-exposure immunization consists of three doses of rabies vaccine on days 0, 7, and 28.

There is an accelerated schedule available if there is insufficient time before travel for the usual course. Routine booster doses are not recommended for most travelers.

What to do if bitten or scratched

If a bite or scratch from an animal occurs, immediate action should be taken even if a rabies pre-exposure vaccine was received.

- 01 The wound should be immediately washed with soap under running water for about 15 minutes. Antiseptic should then be applied if possible with a simple dressing to the wound.
- 02 Immediate medical advice should then be sought regarding the need for rabies post-exposure treatment and possible antibiotics to prevent a wound infection. A tetanus vaccine should also be considered.

Post-exposure prophylaxis treatment required will depend on the risk of the exposure and whether the person has had previous rabies vaccines.

Most exposures will require a course of rabies vaccine given on the day of rabies exposure, then further doses on days 3, 7, and 14. If previously vaccinated, only two doses may be required, as the immune system is already primed against rabies.

Where vaccination against rabies has not been previously received, the combination of Human Rabies Immunoglobulin (HRIG) and rabies vaccine may be required.

HRIG is injected directly into and around the wound. It is in short supply worldwide and is often not available in rural and low-resource settings. This is most effective if given as soon as possible after an exposure.

In all cases, specific medical advice on rabies post-exposure treatment should be sought as there are a number of factors to consider when assessing individual risk.

Transmission

Rabies virus is transmitted by saliva through bites and scratches of infected mammals.

It is predominantly dogs that pass on the infection (dogs are responsible in up to 99% of human cases), but it can be transmitted by any infected warm-blooded animal including domestic and wild cats, monkeys, foxes, racoons, skunks, and bats.

General information

Worldwide, an estimated 59,000 people die of rabies each year. The World Health Organization (WHO) reports more than 95% of human cases occur in Africa and Asia. Rural communities where measures to prevent transmission have not been implemented are most affected.

Rabies in wild animals such as bats poses a risk across the world. However, regions such as Australia, the UK and parts of Western Europe are considered free of rabies in terrestrial animals. In the US, the principal rabies hosts include bats, skunks, and foxes. The number of rabies-related deaths in the US is now one or two per year, and fatalities typically occur in people who fail to seek medical assistance, usually because they were unaware of their exposure.

Rabies is not common in western travelers. However, it has been estimated that 0.4 percent of travelers experience an at-risk bite per month of stay in a rabies-endemic country. From 2013 to 2017 six cases were reported in travelers visiting endemic countries outside Europe.

Always call the Everbridge Assistance line if help is required with medications or any medical issues during travel.

References

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