

Key aspects briefly summarized

- Rabies is mainly transmitted by dogs (and bats), but any mammal can be infectious.
- The disease is invariably fatal at the time when symptoms occur.
- Rabies is best prevented by a **pre-travel** vaccination and appropriate behavior towards mammals (avoiding contacts).
- Pre-travel vaccination (see section prevention) is also recommended because vaccines and immunoglobulins are often not available in many travel countries.
- **Attention:** a bite or a scratch wound as well as a contact with mammal saliva on an open wound is always an emergency! Find out about the necessary actions below!

Disease

Rabies disease is invariably fatal, transmitted through the saliva or other body fluids of infected mammals.

Occurrence / Risk areas

Dogs are responsible for more than 95 % of human cases. Bats, cats, (rarely) monkeys, and any other mammals can transmit rabies! The highest risk areas are Asia, Africa and some Latin American countries (e.g. Bolivia). Rabies may occur anywhere in the world except in countries where successful eradication has been achieved.

Transmission

Saliva from infected animals enters the human body through injured skin, either via bites and scratches or by licking already wounded skin. Once it has entered the body through the skin lesion, the rabies virus migrates along nerve pathways towards the brain. In most cases, this migration takes several weeks to months and proceeds without accompanying symptoms.

Symptoms

Symptoms usually only appear when the virus has reached the brain. In most cases, this is the case after 2-12 weeks (range: 4 days - several years!) and manifests itself as encephalitis (inflammation of the brain), which in 99.99% of cases is fatal within a few weeks. As soon as symptoms of encephalitis appear, a fatal course can no longer be prevented.

Treatment

No treatment against rabies disease exists!

Post-exposure measures: clean the wound immediately with plenty of water and soap for 10-15 minutes, then disinfect the wound (e.g. Betadine®, Merfen®), and immediately (i.e. during the trip!) **get emergency post-exposure vaccination against rabies:** for those having received full **pre-exposure rabies vaccination** before travel, two additional vaccine shots (any available brand) at an interval of 3 days suffice and should be administered as soon as possible on site (i.e. also while travelling). If full pre-exposure vaccination has not been given, in addition to vaccination, passive immunization is required with immunoglobulins within the shortest delay on site. **Of note,** immunoglobins (and sometimes vaccines) are often unavailable in low-resource settings, causing stress and uncertainty. Tetanus booster vaccination may be also warranted.

Prevention

Petting any mammals while travelling is not a good idea, even if they are cute! Do not feed them! Refrain from touching wild or unfamiliar or dead animals.

Vaccination against rabies (**preexposure vaccination**) is highly recommended for:

- Repeated travels or long-term stay in endemic countries.
- Short journeys with high individual risk such as travellers on 'two wheels' or treks in remote areas, toddlers and children.
- Persons, working with animals, or cave explorers (bats!).

The shortened vaccination schedule can be proposed to most travellers: 2 doses given at least 7 days apart before departure. A single lifetime booster dose (3rd dose) is recommended after one year or later when further travelling to rabies endemic countries is undertaken. If you have an immune deficiency, please consult your doctor, as different vaccination intervals apply to you.

Of note

- In case of trips planned, schedule a visit at the travel clinic 4 weeks before departure at the latest. But if it's really urgent, an appointment 10 days before departure will suffice.
- After exposure (bite, scratch injury): seek medical attention immediately (meaning even during travel!) to get wound treatment and postexposure vaccinations against rabies! This is also necessary even for those with a completed series of basic vaccinations before travel!
- **This information leaflet should be printed and kept handy during the trip!**

Further Information: FOPH Switzerland (German): [LINK](#)

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