



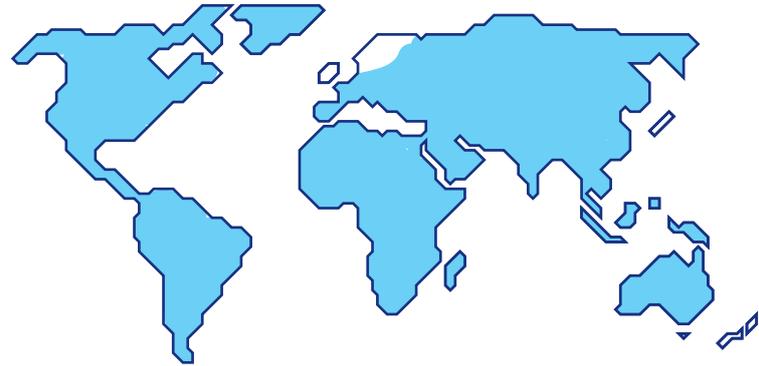
Who

Rabies has a worldwide distribution with few exceptions, including Antarctica, New Zealand, Japan, Sweden, Norway, Spain and some Caribbean Islands. Approximately 60,000 people worldwide die of rabies each year, mainly in the Indian subcontinent. Most deaths occur in developing countries because of inadequate control of rabies in domesticated animals.



What

The viruses that cause rabies all belong to the genus Lyssavirus. Rabies is one of the most feared human infections with the highest mortality rate of any infectious disease. Most rabies is acquired through exposure to saliva from an animal bite. After infection, these viruses spread via peripheral nerves to the central nervous system.

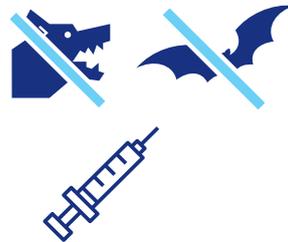


Where and when

In developing countries, rabid dogs account for more than 90% of rabies cases transmitted to humans; bats, cats, and various wild carnivores act as reservoir species as well. In any case, if a person is bitten by a mammal outside of the Netherlands, a thorough rabies exposure risk evaluation should be made.

Prevention

Travelers to areas where the risk of exposure may be high should strongly consider pre-exposure vaccination. In addition, all travelers should avoid exposure to stray and wild animals. Children should be closely supervised when traveling, since they are more likely to inadvertently provoke animals.



Treatment

There is no effective treatment. Palliative therapy includes administration of sedatives, tranquilizers, and analgesics. An aggressive approach consisting of supportive care, experimental immunotherapy, antiviral therapy, and neuroprotective therapy has disappointing results.

Symptoms

The average incubation period of rabies is one to three months, but may vary considerably. After a period with non-specific symptoms, the main symptoms include fever, hydrophobia (fear of water), muscle spasms of the throat, and hyperactivity subsiding to paralysis, coma and death. In less than 20%, patients present with a progressive paralysis. Rabies almost invariably leads to death.



In case of infection

Clinical infection will almost invariably lead to death. After proper wound care, a risk incident in previously unvaccinated persons should immediately be followed by a full post-exposure rabies vaccination scheme including treatment with anti-rabies immunoglobulins to prevent infection. For most previously vaccinated individuals, two booster vaccinations suffice.