RABIES

Rabies virus causes a severe inflammation of the brain. It can give rise in animals to a “raging” form, in which frenzy is obviously prominent (rabies, “dog madness”), but it can also give rise to dumb rabies, in which the affected animal appears to be feeble, paralysed and pathetic. Stroking of “tame” animals in the wild (including monkeys in temples, foxes) must therefore be absolutely discouraged. In developing countries the disease is usually transmitted to humans by stray dogs, but also by cats, apes / monkeys and bats. Transmission via many other mammalian species is however also possible. Rabies is a major problem in many developing countries. Once symptoms of the disease have appeared, there is a 100% certain fatal outcome. There is no treatment or cure.

You must therefore avoid stroking “tame” wild animals, stray domestic animals and even other domestic animals or household pets that cannot be trusted. You must also not touch dead animals. Children must be watched with extra vigilance.

The current **vaccine (prepared on human cells or Vero cells)** is very safe, and no longer has the dangerous side effects of earlier vaccines (prepared in sheep or goat brain). **Preventive or prophylactic vaccination** is therefore possible and is advisable for classical risk groups, such as veterinary surgeons, hunters, foresters, cattle dealers, etc., but also for individuals who are going to remain for long periods in high-risk areas (see further).

In view of the extremely small risk there is, however, no indication for preventive vaccination of ordinary tourists.

Individuals who are going to travel or live for long periods in remote rural developing areas, and cannot get access within 24 hours to a **vaccine** (prepared on human cells or Vero cells) and within 48 hours (or at the most up to 8 days, see further) to human or modern purified equine antirabies antibodies (**immunoglobulins**), must consider being vaccinated beforehand, especially if they belong to the high-risk groups such as agricultural experts, vets, etc. Archeologists, speleologists and tourists who are undertaking a cycling tour also form a risk group and should always be vaccinated. Parents of children who are going to live in a high-risk area should– depending on the local circumstances – seriously consider having their children preventively vaccinated. Vaccination should be extended to any pet or domestic animal with

which the children come into contact. A problem in developing countries is that locally produced vaccines and antibodies may produce serious side effects when used after a suspected bite. These complications can be avoided by prophylactic vaccination with modern vaccines.

The **preventive vaccination scheme** comprises 2 inoculations each of 1 ml, with an interval of one month between inoculations. The vaccine is preferably given in the upper arm.

The first repeat vaccination is given after 1 year, and then every 2-3 years. One dose currently costs 19.24 Euro, 14.43 Euro of which is reimbursed by the RIZIV (Belgian National Health Insurance).

Administration of chloroquine and mefloquine (see malaria) must be avoided, as the immunological response is diminished by this. A check on antibody production (Rabies Department of the Louis Pasteur Scientific Institute of Public Health) is desirable from 14 days after the 2nd injection, especially in individuals with diminished immunity or who are taking immunosuppressant medication. There are several alternative vaccination schemes.

Preventive vaccination, if given not more than 3 years previously, does not exclude a booster vaccination (2 injections, on days 0 and 7, no immunoglobulins) at the time of a suspect animal bite. This will limit the number of injections.

Vaccine and specific immunoglobulins are supplied in Belgium only by the Rabies Department of the Pasteur Institute of Brabant, Engelandstraat 642, 1180 Brussels (Louis Pasteur Scientific Institute of Public Health), upon request by telephone on number 02/373.31.56 or via fax 02/373.32.86. A medical prescription with medical insurance sticker / logo should be submitted. The vaccine will be sent to the patient's doctor.

In case of a bite by a possibly infected animal it is vitally important to wash out the wound (however small or superficial) with water and soap (as the virus is very sensitive to detergents), rinse it thoroughly, then let it dry and then thoroughly disinfect it (with iodine/isobetadine). You should consult a doctor as quickly as possible.

In spite of the fact that you are urgently advised to start vaccination within 24 hours, you can, when you have had a suspect bite while on a trip, start inoculations (vaccination and immunoglobulins) after returning home, following consultation with the doctors of the Rabies Department of the Louis Pasteur Scientific Institute of Public Health, as the incubation period is usually quite long. A curative vaccination includes

- administration of specific antirabies immunoglobulins (as much as can be administered into the wound itself, if it is possible to give the injection shortly after the bite, and the rest into the buttock (gluteal) muscle, PLUS
- 4 injections of rabies vaccine: two on day 1, one on day 7 and one on day 21, with confirmation of antibody production on day 30.

Administration of gamma-globulins is no longer of any use 8 days after the start of vaccination. If you have had a suspect bite you can also decide to come back home immediately, or you can try to get a vaccine or immunoglobulins via the travel insurance or through the embassy.