

WHO STANDARDS FOR RABIES CONTROL (PREVENTION OF HUMAN INFECTION, PROFESSIONAL HAZARDS)

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Veterinary and medical practitioners, animal welfare personnel, zoologists and animal conservationists, laboratory scientists are some of the groups which must absolutely be aware of the nature of the risk and modes of transmission of rabies.

Clinical manifestations can vary in rabid human and animals. Rabies virus can be shed in saliva and other biological fluids even before first symptoms are noticeable. During the clinical phase rabies virus is found in virtually all tissues of an infected animal and human. It remains potentially viable for days at room temperature and longer if refrigerated or frozen. It may under certain conditions aerosolize and become a great hazard if inhaled or swallowed.

Rabies is usually transmitted by bites of rabid animals mainly domestic and wild carnivores as well as bats but handling rabies infected livestock species may occasionally transmit rabies. However more than 95% of the 55,000 human rabies deaths estimated to occur annually in the world follow a rabid dog bite and are originating from Africa and Asia. Human deaths from rabies associated with wildlife species including bats are very rare in comparison.

Risk in professionals may occur particularly when performing unprotected necropsies or autopsies. These can all be avoided by using basic protective measures generally available in a clinic or hospital. The use of mask, gloves and a gown as well as glasses when examining and handling a rabies suspected patient and conducting necropsies/autopsies is mandatory. This should protect staff from droplet infection to face and eyes, sites at greatest if not only risk.

Professionals, who are likely to be exposed to the live rabies virus through their work, should receive pre-exposure vaccination. This includes veterinarians, veterinary technicians working in rabies infected areas, particularly those directly involved in mass vaccination campaigns of dogs and wildlife and laboratory personnel handling suspect samples, animals and live rabies viruses. This, under current WHO guidelines, consists of one intramuscular full dose or intradermal of 0.1 mL dose of tissue cultured or embryonated egg vaccine on days 0, 7 and 21 (or 28). Boosters are justified only in individuals who are at continuing risk of exposure to live virus and shown to have rabies titre less than 0.5 IU/mL at 6 months periodic check. There is no need to have booster in any other groups unless there has been a possible exposure. In case of exposure a short post-exposure prophylaxis without immunoglobulin consisting in 2 doses of vaccines on day 0 and 3 should be administered either intramuscularly or intradermally. As an alternative 4 intradermal injections of 0.1 mL can be provided on day 0.

Intradermal application of rabies vaccines for pre-exposure prophylaxis in professional groups at continuing risk of contracting rabies particularly those involved in mass vaccination campaigns is strongly recommended by WHO in places where vaccine access may be limited as it is as safe and efficacious as the intramuscular route and much more economical as immunization sessions can be scheduled in advance.

