

## Rabies post-exposure treatment: management guidelines

### Introduction

Rabies is an acute viral infection that is almost always fatal once symptoms develop. It is the leading cause of death out of all diseases spread from animals to humans (zoonoses) and more than 59,000 people die each year from rabies worldwide, with 95% of these deaths occurring in Africa and Asia.

All warm-blooded animals, such as dogs, cats, monkeys, bats and other wildlife, can develop rabies. It is spread through the saliva of an infected animal, with dog bites being the cause of more than 99% of human rabies deaths globally.

Approximately 3000 people required post-exposure treatment in England in both 2018 and 2019. Of these, 12% were potentially exposed to bats in the UK and 88% exposed to an animal overseas.

Following a review by the Rabies Expert Group, the guidance for rabies post-exposure treatment (PET) and pre-exposure prophylaxis in the UK was updated and agreed by the Joint Committee on Vaccination and Immunisation (JCVI) in 2018. Although there is no cure for rabies once symptoms develop, post-exposure treatment (i.e. rabies vaccine with or without rabies immunoglobulin) is highly effective in preventing disease if given correctly and promptly after exposure.

### Risk assessment and management

If a patient presents with a bite, scratch or lick from an animal or bat abroad, a risk assessment is important to decide what PET should be offered to the patient. Public Health England's Rabies and Immunoglobulin Service (RIgS) can carry out this risk assessment with the health professional managing the patient. To simplify and speed up this process, health professionals are asked to gather as much of the following information as possible before contacting RIgS:

- patient name, date of birth, age, address, and NHS number
- date of exposure
- species of the animal and current health status of the animal involved
- country the exposure occurred in
- specific details of the bite or other exposure
- site (on body) of the exposure
- whether the patient is immunosuppressed
- whether the patient has any allergies
- any rabies vaccinations or rabies immunoglobulin treatment given following the bite or in the past
- weight of the patient (in case rabies immunoglobulin is being considered)

The risk assessment will consider the rabies risks associated with the country and type of animal involved, along with a categorisation of the exposure to calculate a Composite Rabies Risk (red/amber/green). The PET that patient needs will be based on this Composite Rabies Risk and whether the patient has had rabies vaccine in the past. Further information on the rabies risk assessment process can be found in the Rabies Green Book chapter at [weblink 1](#) and in PHE's rabies post-exposure treatment management guidelines at [weblink 2](#).

### **How to manage a patient with a bat bite**

In the UK, European Bat Lyssavirus types 1 and 2 (EBLV-1 and EBLV-2), viruses related to the 'classical' rabies virus, have been found in bats in the UK and infection with EBLV can lead to clinical rabies infection in humans. Anyone who is bitten or scratched by a bat in the UK is advised to contact a health professional promptly so that they can assess the exposure and arrange post-exposure treatment.

During the spring and summer months, UK bat activity increases, and particularly in hot dry weather, the bats may get exhausted or dehydrated, be found on the ground and then picked up by people. Bat bites can occur if someone picks up a bat without wearing appropriate protective gloves, so never pick up a bat with bare hands. Bat bites in the UK are felt rather than seen and rarely if ever draw blood.

If a patient presents following contact with a bat, it's important to carry out a prompt risk assessment and initiate rabies post-exposure treatment, typically a course of rabies vaccine over 21 days.

RIGS are available to provide specialist advice and support for the management of bat bites and can be contacted on 0330 128 1020. Before contacting RIGS, find out details of the exposure, whether the patient is immunosuppressed or has any allergies, and if they have had any previous rabies vaccination. Any vaccine administered by a GP surgery or hospital as part of a post-exposure treatment course will be replaced free of charge by RIGS if they are contacted on the next working day.

People who regularly handle bats in their job or voluntary work should have received pre-exposure vaccination against rabies, but they also require prompt post-exposure treatment following an exposure and therefore should be managed in the same way.

**Guidance on completing a risk assessment and post-exposure treatment can be found at the PHE rabies webpage [weblink 2](#).**

**Information on the risks from bat bites can be found in the PHE leaflet on the rabies webpage [weblink 3](#).** Copies of the leaflet can be ordered for health centres.

### **Rabies vaccine provision for post-exposure treatment**

Patients may present to A&E departments initially if they have received a bat bite in the UK or an animal bite whilst abroad. It is important that the start of treatment is not delayed because vaccine is not available locally.

Although PHE will arrange delivery of rabies vaccine during normal working hours (Mon-Fri), the first dose of vaccine should ideally be given within 24 hours. Vaccine had been available for pick-up from Colindale, but as Colindale no longer has a wholesale dealers licence from 01 September 2020 this will no longer be possible. Trusts have all been asked to hold a small number of rabies vaccine doses (up to 4 per site) or to ensure they can access rabies vaccine through their pharmaceutical emergency service process within 24 hours.

This vaccine may also need to be available to issue to local GPs and walk-in centres to commence treatment whilst procuring further stock from PHE. NHS sites will need to consider the most suitable route for making such supplies available should the need arise based on local circumstances.

Any NHS rabies vaccine that is used as per PHE guidance/advice for rabies post-exposure treatment will be replaced with stock from PHE free-of-charge, by contacting the Rabies and Immunoglobulin Service (0300-128 1020) with full details the next working day. On working days, PHE will continue to issue human rabies immunoglobulin and the remaining doses required to the appropriate health care provider using a next day delivery service via Immform.

A copy of the letter sent to A&E consultants and pharmacists regarding rabies post-exposure treatment can be found at the PHE rabies webpage [weblink 4](#)

**RIGS contact details (for healthcare professionals only):**

**Hours:** Monday-Friday 08:30-17:30

**Telephone:** 0330 128 1020

**Email:** rigs@phe.gov.uk (for NON-urgent enquiries only)

**Out of hours (OOH) Mon-Sunday outside of the core hours:**

Rabies post-exposure treatment (PET) is considered urgent but not a medical emergency. Outside RIGS working hours, clinical advice is available through the Colindale Duty Doctor service, from 9am to 5.30pm at weekends and bank holidays. Most issues can wait until the next day, so callers after 5.30pm are encouraged to call back the next morning to speak to RIGS or the Colindale Duty Doctor service.

PET will not usually be issued in the evenings or at night, however, exceptions are severe bites or lacerations to the head and neck in a previously untreated patient which is classified as a 'RED' exposure using the composite rabies risk. PHE cannot issue products to patients outside of England.

A PHE on-call consultant is available for emergencies and assistance with the risk assessment during the OOH period and can be contacted via the Colindale Duty Doctor service on **020 8200 4400**.

Further details about the Rabies and Immunoglobulin Service (RIGS) can be found on the GOV.UK webpages [weblink 5](#).



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## References

Rabies: the green book, Chapter 27, <https://www.gov.uk/government/publications/rabies-the-green-book-chapter-27>

Rabies post-exposure treatment: management guidelines, <https://www.gov.uk/government/publications/rabies-post-exposure-prophylaxis-management-guidelines>

Rabies: risks from bat bites, <https://www.gov.uk/government/publications/rabies-risks-from-bat-bites>

Letter to A&E consultants and pharmacists: important information regarding rabies post-exposure treatment, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/916120/Rabies\\_vaccine\\_letter\\_for\\_AE\\_consultants\\_and\\_pharmacists\\_Sep2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916120/Rabies_vaccine_letter_for_AE_consultants_and_pharmacists_Sep2020.pdf)

Rabies and Immunoglobulin Service (RIGS), <https://www.gov.uk/government/publications/immunoglobulin-when-to-use/rabies-and-immunoglobulin-service-rigs>

Vaccine update: issue 282, August 2018, rabies special edition, <https://www.gov.uk/government/publications/vaccine-update-issue-282-august-2018-rabies-special-edition> (update expected soon)