

Bat Conservation Trust



Bats & rabies: frequently asked questions for bat handlers

This document provides answers to questions that BCT gets asked by bat groups, bat rehabilitators and other people who handle bats. It is written for a bat worker audience. More information is available on the BCT website at: <https://www.bats.org.uk/about-bats/bats-and-disease/bats-and-disease-in-the-uk/overview> and further documents about bats and rabies for bat groups and bat rehabilitators, including Good Practice Guidelines, are available at: <https://www.bats.org.uk/resources/resources-for-bat-groups/useful-links-documents>

Do British bats carry rabies?

A small number of bats in the UK have been found to carry rabies viruses called European Bat Lyssaviruses (EBLV). There are two known types: EBLV-1 and EBLV-2. EBLV are not the classical rabies virus which is usually associated with dogs; classical rabies has never been recorded in a native European bat species.

To date only 30 infections with lyssaviruses have been confirmed in UK bats. Of these cases, 29 were confirmed through the passive surveillance programme run by the Animal and Plant Health Agency (APHA). Since 1986 APHA has tested over 13,000 UK bats sent in by members of the public and bat workers (over 19,000 bats have been submitted but not all bats are able to be tested). Additionally one case was confirmed through active surveillance which involved taking blood and saliva samples from wild bats.

The cases in the UK to date include: a single soprano pipistrelle pup, which tested positive in 2020 for a lyssavirus (the specific type could not be confirmed) but there is no evidence to support this case being anything other than a spill-over from a reservoir species, most probably from a co-roosting serotine; five EBLV-1 cases (all serotines, all males, mixture of adult and juveniles and all in Dorset); 24 EBLV-2 cases (all Daubenton's bat), as set out below:

- October 2019, Cambridgeshire, adult female
- October 2018, West Lothian, age and sex undetermined
- August 2018, Northumberland, adult male
- July 2018, Sussex, five individuals
- June 2018, Cambridgeshire/Lincolnshire border, adult female
- September 2017, Derbyshire, juvenile male
- August 2016, Northumberland, adult male
- August 2016, North Yorkshire, juvenile female
- July 2015, Powys, juvenile male
- July 2014, Shropshire, age and sex undetermined

Last updated: August 2020

Bat Conservation Trust



- August 2009, West Lothians, adult female
- July 2008*, Perthshire, adult male (active surveillance result)
- September 2008, Shropshire, juvenile male
- May 2008**, Surrey, adult female
- August 2007, Shropshire, adult female
- September 2006, Oxfordshire, juvenile female
- September 2004, Surrey, juvenile female
- September 2003***, Lancashire, adult male
- July 2002, Lancashire, juvenile female
- May 1996, Sussex, adult female

* EBLV-2 RNA detected in an oral swab taken as part of surveillance for lyssaviruses in Scotland

** In captivity since August 2007

*** Carcase frozen and submitted for testing October 2004

What risk of rabies infection is there if I handle bats?

Rabies viruses are transmitted via a bite or scratch from an infected animal, or from its saliva coming into contact with your mucous membranes (your eyes, mouth or nose). This means that there is no risk if someone does not handle bats.

Where someone does handle a bat, the risk of infection with EBLV being passed from a bat to a human or other mammal is low because the infection is present at low levels in Great Britain (EBLV have yet to be confirmed in Ireland, Channel Isles or Isle of Man) and most people do not have any contact with bats. However, as a precaution anyone who regularly handles bats in the British Islands (even those areas where EBLV has yet to be confirmed) should be routinely vaccinated against rabies, anyone needing to handle a bat should wear gloves (even if they are also vaccinated) and if bitten should seek medical advice (again, even if they are already vaccinated).

Although the risk of infection is low the consequences are extremely high. EBLV infection in humans seems to be similar to classical rabies and the outcome in all recorded cases has been fatal, so it is very important to protect yourself from infection by following best practice guidance. Five human cases of EBLV infection have been recorded (three confirmed, two possible), the last of these was in November 2002 (when a bat worker became infected with EBLV-2 in Scotland). None of these individuals received rabies vaccinations either before or after being bitten/scratched by bats.

Is the vaccine safe?

There are currently two rabies vaccines licensed for use in the UK – human diploid cell vaccine (HDCV) (Rabies Vaccine BP Pasteur Merieux) and purified chick embryo cell rabies vaccine (PCEC) (Rabipur®). Other cellculture-derived vaccines are available in other countries and include rabies vaccine viruses grown in Vero cells. These vaccines may be used interchangeably to provide protection pre- or post-exposure.

Last updated: August 2020

Bat Conservation Trust



The Rabipur vaccine is produced in cells from chick embryos, so it should not be used for people who may be sensitive or allergic to chicken protein.

Over the years there have been no UK reports of adverse systemic (whole body) reactions to the vaccine. The only adverse reaction that has been seen is a localised skin rash around the injection site in a small number of people who have had many booster vaccinations. If you have any concerns about the rabies vaccines please speak to your GP.

Am I obliged to be immunised?

Currently, you are strongly advised to ensure that you are vaccinated if you have completed your training and handle bats regularly. If you are a licensed bat worker, being vaccinated may be a requirement of your Statutory Nature Conservation Organisation (SNCO) licence and is mandatory for SNCO volunteers, SNCO employed bat workers and bat carers registered on the BCT Bat Care Network.

How soon after being vaccinated can I work with bats?

The currently recommended schedule is three doses of vaccine on days 0, 7 and 28, with a booster after one year. This schedule is intended to stimulate a rapid immune reaction. The immune response will begin after day 0 and will contribute to protecting against rabies; however protective levels of antibody will not be reached until the full three dose course is completed. Bat workers may resume bat work as soon as they have received the first injection; provided they then go on to complete the course.

Further information about rabies vaccinations in general is available in chapter 27 of the Green Book: <https://www.gov.uk/government/publications/rabies-the-green-book-chapter-27>

How long does the vaccination last?

The current advice in England and Wales is that an initial booster injection is needed one year after the original course with subsequent booster vaccinations at 3-5 year intervals or as informed by rabies antibody testing). If unsure about whether and when a booster is required, please discuss with your GP.

Antibody testing is not available on the NHS in England and Wales, but individuals may pay for such tests to guide pre-exposure booster vaccinations. Public Health England have updated guidance on the timing of rabies boosters based on antibody levels. The guidance is aimed at health professionals in England and Wales but is very useful for bat workers to be aware of. The document can be found on the GOV.UK website at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/861395/PHE_guidelines_on_management_and_timing_of_rabies_booster_doses_based_on_antibody_levels.pdf. The test is offered by APHA and can be organised through a GP or occupational health scheme.

Last updated: August 2020

Bat Conservation Trust



In Scotland titre testing informs subsequent boosters and is available on the NHS for volunteers. Further information is available in the document “**Rabies: Guidance on prophylaxis and management in humans in Scotland**” which can be downloaded from the Health Protection Scotland website <http://www.hps.scot.nhs.uk/>.

I am up to date with vaccination, with a full course of three vaccines and boosters in the past 3-5 years. I get bitten regularly by bats. Do I need to have a booster every time I am bitten?

You should avoid being bitten by wearing bite-proof gloves. Even if you are up to date with your immunisations you should still seek medical attention if you are bitten. Further doses of vaccine may be advised, depending on how many doses of vaccine you have had in your lifetime.

Will I have to pay for pre-exposure vaccinations?

Rabies vaccines are **only** free of charge for people who handle bats solely in a voluntary capacity. Vaccinations can usually be obtained through GPs but not all GPs will offer this service and some may charge a fee for the service, even if the vaccine itself is obtained for free. There is a ‘free vaccinations for bat workers advice letter’ that can be downloaded from the BCT website at: <https://www.bats.org.uk/about-bats/bats-and-disease/bats-and-disease-in-the-uk/bats-and-rabies-faqs>. It may be useful for you to take a copy along when requesting pre-exposure vaccinations.

Please note: where the requirement for vaccinations relates to paid work then the employer will have to pay for the vaccinations (even if the person also regularly handle bats in a voluntary capacity), and the vaccine will need to be sourced privately.

There are some differences across the different parts of the UK that it’s very important volunteers are aware of:

- **England** – Public Health England (PHE) provide rabies vaccinations free of charge only for people who **regularly** handle bats in a voluntary capacity (and have completed their training in bat handling).

There are guidelines available from PHE for GPs and other medical professionals about the process for requesting pre-exposure vaccinations. These can be found online at: <https://www.gov.uk/government/publications/rabies-pre-exposure-prophylaxis-guidelines> (this includes the form that GP has to complete with the help of the volunteer as it includes questions about why the person needs a free booster, how often bats are handled, etc. It is worth having a look at the form in advance to be clear about what information needs to be provided to the GP).

Bat Conservation Trust



- **Wales** – the management of the service is currently under review, but at this time requests for vaccine should be sent to PHE using the PHE request form referred to above.
- **Scotland** – pre-exposure rabies vaccine and rabies antibody tests should be available to volunteers free of charge from the NHS. Individuals should approach their GP practice for vaccinations (Please note: antibody tests are not free of charge for volunteers in other parts of the UK). If vaccinated by their GP practice volunteers may have to pay a prescription charge if they are required to do so normally.

Health Protection Scotland are working on updating their document 'Rabies: Guidance on prophylaxis and management in humans in Scotland'. When completed it will be available to download their website <http://www.hps.scot.nhs.uk/>, however until it is completed HPS are directing medical professionals to the Green Book Chapter 27 (see above).

- **Northern Ireland** – pre-exposure vaccinations are available free of charge for licensed non-occupational bat handlers via their GP using an HS21 prescription.

I have an impaired immune system, am I okay to still handle bats?

People who have severely impaired immune systems due to certain medications or illness may not respond fully to treatment with rabies vaccine following a bat bite and, as EBLV infections are fatal in humans, it may not be possible to treat them effectively. In these cases, careful counselling is essential to ensure the person is made aware of the potential risks of handling bats. Further details about who is considered to be immunosuppressed and what they should do next is available in guidance published by PHE. The guidance is aimed at medical professionals and is available from:

<https://www.gov.uk/government/publications/contraindications-and-special-considerations-the-green-book-chapter-6>. The PHE Vaccine Update had a special rabies special edition back in August 2018 (as with the previous publication it is targeted at health professionals) and has sections on bats and immunosuppressed individuals, see: <https://www.gov.uk/government/publications/vaccine-update-issue-282-august-2018-rabies-special-edition>

I have been bitten (or scratched) by a bat. What do I do?

BCT believes the chances of catching rabies from any wild animal are increased if no action is taken should you be bitten or scratched. We therefore advise people to always follow this advice:

- Wash the wound immediately with soap and water for at least five minutes. Additional cleansing of the wound site with an alcohol base or other disinfectant is also recommended.

Bat Conservation Trust



- Seek immediate medical advice from your GP, even if your rabies vaccinations are up to date; you can also call the NHS Direct Helpline on 111. Additional information is available from Public Health England at: <https://www.gov.uk/government/publications/rabies-risks-from-bat-bites/information-for-individuals-who-have-been-bitten-by-a-bat> and it may be useful to refer to this when you speak to your GP.
- If the bat is alive, retained and there is any suspicion of rabies you **must** also report the bite to APHA **immediately** (if in doubt about whether the bat is indeed showing signs of rabies please call APHA for advice). The contact details are as follows:
 - In **England** – call Defra Rural Services Helpline on 03000 200 301 and follow the phone menu options to be put through to APHA.
 - In **Scotland** – find contact details for the relevant local APHA Field Office on the GOV.UK website at: <https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/access-and-opening#scotland-field-service-offices>
 - In **Wales** – contact APHA in Wales on 0300 303 8268 and follow the phone menu options.
 - In **Northern Ireland** – contact Damian McFerran or Michael McCourt at the Ulster Museum 028 9039 5264; or Declan Looney Department of Environment (Northern Ireland) 028 905 69602 / Declan.Looney@doeni.gov.uk Please contact Damian or Michael first of all.
- There are some situations when it is appropriate to release a bat - but only if the bat has been seen strongly flying very recently and it is a warm evening (do not release a bat during the winter or outside temperatures are otherwise below 5°C).
- If a bat is flying indoors during the day, it is easiest to contain it once it has landed and release it at dusk. Always wear gloves to handle bats. For information on containing a bat see: <https://www.bats.org.uk/advice/help-with-injured-grounded-bat/how-to-contain-a-bat>.
- If the bat is flying during the evening, and the weather is good, open windows and switch off the lights and the bat should find its own way out. You may want to check the room after a couple of hours, or stand outside to be sure that the bat has safely found its way out.
- If the bat is injured then contain the bat so that further advice can be sought (see bullet below). Bats can squeeze through very small spaces, so keep it in a well-sealed container with adequate ventilation holes, a piece of cloth to hide in, and a shallow container of water for the bat to drink from. Make sure you avoid getting bitten again by wearing gloves or using a cloth to handle the bat.
- Contact the National Bat Helpline on 0345 1300 228 to arrange care for the bat. If the Helpline is unavailable please take the bat to a local vet for assistance.

Bat Conservation Trust



Are my family and pets at risk from bats in the house and should they be vaccinated?

The risk from EBLV seems to be confined to people who are bitten, scratched or have close contact between broken skin or mucosa and bat saliva or neural tissue. No one is at risk just from being in the same house as a bat in the UK.

There have been a small number of cases where EBLV has been found in animals other than bats, including cases in pet cats, but none in the UK. As a precaution however we would advise that pets should be kept away from bats. If a pet-owner is concerned about the potential risk to their pet we would suggest they discuss this with their vet.

What constitutes a bite or scratch?

A bite should be taken to mean bitten or scratched, or there has been a bat's saliva in contact with mucous membranes or existing cuts. It is very difficult to safely assess whether or not the skin is broken. The assumption should be made that if scratched/bitten then the skin was broken.

You should always wear bite proof gloves when handling bats. See The Bat Conservation Trust's *Why Wear Gloves* information sheet for more details.

How long does the virus survive?

EBLVs are very unstable outside of the body of the host animal and are not able to survive for very long. However, the virus might survive inside a dead bat's body for a few days, so dead bats should also be handled with care.

Where can I get further Information?

For further information about bats and rabies please see the Bat Conservation Trust website at: http://www.bats.org.uk/pages/bats_and_disease.html

Information is also available from the GOV.UK website at:

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

Public Health England leaflet 'Bat contact and rabies risk' can be downloaded from:

<https://www.gov.uk/government/publications/rabies-risks-from-bat-bites/information-for-individuals-who-have-been-bitten-by-a-bat>