Bats & rabies: frequently asked questions for bat handlers

Do British bats carry rabies?
A small number of bats in the UK have been found to carry rabies viruses called European Bat Lyssaviruses. There are two known types: EBLV1 and EBLV2. EBLVs 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 25 infections with EBLVs have been confirmed in UK bats. Of these cases, 24 were confirmed through the passive surveillance programme run by the Animal and Plant Health Agency (APHA). Since 1986 over 15,000 bats have been tested via this programme. Additionally one case was confirmed through active surveillance which involved taking blood and saliva samples from wild bats.

The two EBLV1 cases were confirmed in October 2018 in Dorset and both were male serotines. The EBLV2 cases (all Daubenton’s bat) were as follows:

- 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
- 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

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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 EBLVs being passed from a bat to a human or other mammal is low because the infection is present at very 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 EBLV2 in Scotland). None of these individuals received rabies vaccinations either before or after being bitten 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.

Because the Rabipur vaccine is produced in cells from chick embryos, 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.

Am I obliged to be immunised?
Currently, you are strongly advised to ensure that you are vaccinated if you 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 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.

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. If unsure about whether and when a booster is required, please discuss with your GP. In England and Wales further advice can be obtained from the Public Health England on 020 8200 4400.

Alternatively bat workers can ask for their titre to be checked (this involves drawing a sample of the patients blood and testing the individual’s antibody level). There may be a cost for this procedure; individuals should discuss with their GP whether a titre test is required.

In Scotland titre testing now informs subsequent boosters. 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?
England and Wales
Public Health England (PHE) will only provide rabies vaccinations free of charge for people in England and Wales who regularly handle bats only in a voluntary capacity (so for example, Natural England Volunteer Bat Roost Visitors and volunteer bat carers). Where the requirement for vaccinations relates to paid work then the employer should pay for the vaccinations (even if the individual also regularly handle bats in a voluntary capacity). The vaccine can be obtained through your GP and they should contact PHE on 020 8200 4400 to obtain the vaccine. Guidance for GPs is available in the Green Book chapter online at: https://www.gov.uk/government/publications/rabies-the-green-book-chapter-27. You will
need to provide information about the capacity in which you regularly handle bats. Further information about completing the request form for pre-exposure vaccinations (that you GP will have to completed) is available at: 


Scotland
Where an employer can be identified (e.g. if the handling of bats is as part of an individual’s paid work) the employer is deemed responsible for the payment of the vaccine. Where an employer cannot be identified or if the individual’s involvement with bats is in a voluntary capacity (e.g. a bat carer) the pre-exposure rabies vaccine should be available, free of charge from the NHS. Individuals should approach their GP practice for vaccination, which should provide the vaccine free of charge.

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/

Northern Ireland
In Northern Ireland, the vaccine is available for licensed non-occupational bat handlers (e.g. bat work undertaken in a voluntary capacity) via their GP using an HS21 prescription.

Further information is available in chapter 27 of the Green Book at: 

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: 
I have been bitten (or scratched) by a bat. What do I do?
The Bat Conservation Trust believes the chances of catching rabies from any wild animal are increased if no action is taken when a bite incident occurs. We therefore advise people to always follow this advice:

**Human side:** 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 (e.g. iodine solution) is also recommended. Seek immediate medical advice from your GP and discuss post exposure treatment even if you have been vaccinated against rabies.

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

The GP can also obtain further information and advice from the following:

In England and Wales:
- GPs in England and Wales can seek advice directly from Public Health England on 020 8200 4400.

In Scotland:

In Northern Ireland, Channel Islands and Isle of Man:
- Although EBLVs have not yet been confirmed from the island of Ireland, Channel Islands or Isle of Man we would strongly recommend anyone bitten by a bat still seeks medical advice from their GP and the information at: [https://www.gov.uk/government/publications/rabies-risks-from-bat-bites/information-for-individuals-who-have-been-bitten-by-a-bat](https://www.gov.uk/government/publications/rabies-risks-from-bat-bites/information-for-individuals-who-have-been-bitten-by-a-bat) will be helpful.

The Bat Conservation Trust is unable to provide medical advice in these situations but our helpline is happy to be contacted for information where relevant (0345 1300 228).

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You **must** also report the bite to APHA **within 24 hours**. The contact details are as follows:

**England**
Call Defra Rural Services Helpline on 03000 200 301 and follow the phone menu options to be put through to APHA.

**Scotland**
In Scotland, find contact details for the relevant local APHA Field Office at: [https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/access-and-opening#scotland-field-service-offices](https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/access-and-opening#scotland-field-service-offices)

**Wales**
Contact APHA in Wales on 0300 303 8268 and follow the phone menu options.

**Northern Ireland**
Pauline Campbell at the Ulster Museum 028 9039 5264.
Declan Looney
Department of Environment (Northern Ireland)
028 905 69602 / [Declan.Looney@doeni.gov.uk](mailto:Declan.Looney@doeni.gov.uk)
Please contact Pauline first of all.

**The bat side:** There are some situations when it is appropriate to release a bat - but only if the bat has been seen 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: [http://www.bats.org.uk/pages/containingabat.html](http://www.bats.org.uk/pages/containingabat.html).

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 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. Whether the bat is available or not, in all cases where you have been bitten or scratched by a bat,
or come into such close contact that saliva may have got on to your mucous membranes or into a cut you must also report the bite to APHA within 24 hours (see above).

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 but none in the UK. There have been no recorded cases in domestic pets such as dogs or cats 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


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