



## SCOTTISH EXECUTIVE

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Health Department

Dear Colleague

### SUSPECTED CASE OF RABIES IN TAYSIDE

A suspected case of rabies is being treated at Ninewells Hospital, Dundee. The individual was admitted with mild neurological symptoms which have since developed into a progressive disorder consistent with rabies. The results of laboratory tests are awaited. The patient's condition is critical but stable.

Epidemiological information suggests that the patient may have been infected by European Bat Lyssavirus (EBL). He is known to have had prolonged close contact with bats over many years and to have been bitten by them at least once in the incubation period for the disease.

Since 1996 in the UK, two bats of the same species have been confirmed as carrying this strain of the rabies virus. EBL virus is less virulent than the most common strain of rabies virus but has been associated with 3 human deaths in Europe since 1977. In September 2002, a female Lancashire resident was bitten by a bat, later confirmed as carrying EBL, was treated with post-exposure prophylaxis and remains well.

All evidence points to the threat from these bats to the general public or to pets and domestic animals as being extremely low. Bats are naturally timid and at this time of year are hibernating. However those engaged in bat conservation activities who routinely handle bats are at risk. But this should be reduced by following advice on protective clothing and immunisation. If they have not already been immunised, they are being advised to come forward for pre-exposure (prophylactic) immunisation with rabies vaccine.

## From the Chief Medical Officer

**Dr E M Armstrong**  
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#### **For action**

GPs  
CPHMs (CD&EH)  
Chief Executives, NHS Trusts  
Chief Executives, NHS Boards  
Medical Directors, NHS Trusts

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#### **For information**

Directors of Public Health, NHS  
Boards  
Directors of Occupational Health  
Consultant Microbiologists  
Infectious Disease Physicians  
Specialists in Pharmaceutical Public  
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Director, SCIEH  
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#### **Further enquiries**

##### **Policy Issues**

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##### **Medical Issues**

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## **Pre-exposure immunisation**

Pre-exposure immunisation with human diploid cell rabies vaccine should be offered, and is available free from the NHS, to a number of groups of people listed in the Health Departments' *1996 Immunisation Against Infectious Disease*, section 27.3 and 27.4, including licensed bat handlers. In addition Health Departments now recommend that those regularly handling bats, not just licensed bat handlers, should be immunised against rabies.

### *Arrangements for obtaining vaccine for pre-exposure immunisation*

GPs should order rabies vaccine through the stock order scheme or write prescriptions for individuals in the usual way.

If there are any problems in obtaining stocks doctors should contact their Specialist in Pharmaceutical Public Health, who has received a letter from the Deputy Chief Pharmacist today.

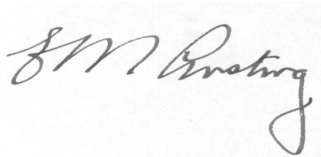
## **Post-exposure prophylaxis**

Some people especially bat handlers, in the light of publicity about the Tayside case, may report having been bitten or scratched by a bat. Such people should be referred to your local NHS Board Public Health Department where their risk will be assessed (see enclosed). The Public Health Department will liaise with specialist support services in this task. Should there be any risk, post-exposure immunisation will be offered and appropriate arrangements made.

## **Further information**

Enclosed is an outline of frequently asked questions on rabies prepared by the PHLS in England. Should one of your patients require information or advice about pets or having bats in their house they should be advised to contact the Helpline on 0800 783 5066. Should you require specific information about rabies or bats, please contact your local NHS Public Health Department or SCIEH. A contact point for enquiries specifically related to this circular is provided.

Yours sincerely



**DR E M ARMSTRONG**

## **Rabies: Frequently Asked Questions**

### **What is rabies?**

Rabies is an encephalitis caused by rabies virus, a member of the rhabdovirus family.

### **How common is rabies in humans?**

Human rabies is extremely rare in the UK. The last case acquired in this country was a century ago, in 1902. Cases occurring since then have all been acquired abroad, usually through dog bites. Worldwide, it is estimated that there are around 35-40 000 cases each year, almost entirely in developing countries. On rare occasions someone who is incubating rabies arrives in this country and then falls ill with the disease.

### **How many cases of rabies have there been in the UK?**

Since 1946, some 20 cases have been reported in England and Wales, all imported. The last was in October 1996 (CDR October 18<sup>th</sup> 1996 – Week 42 available at [www.phls.co.uk/publications/CDR96/cdr4296.pdf](http://www.phls.co.uk/publications/CDR96/cdr4296.pdf)) due to a bite from a stray dog in Nigeria where post exposure prophylaxis (vaccination) had not been given. There were no other notifications in the 1990s.

### **How do humans catch rabies?**

There have been around 20 human cases of rabies imported into England and Wales since 1946. Humans generally catch rabies through being bitten by an infected animal (usually a dog). In this country, rabies has long been eliminated in the animal population, so recent human cases in the UK have all been associated with exposure to infected animals elsewhere in the world. There are no documented cases of human-to-human spread, except by the artificial route of corneal transplant.

In a corneal transplant a part of the cornea is surgically removed after death and grafted into the eye of another person. Once the rabies risk from this was recognised, screening protocols were introduced and there have been no reports of rabies transmission by corneal transplant for over 15 years.

### **Is rabies spread from person to person?**

No. There is no risk to other humans or animals from a patient with rabies. Despite there being tens of thousands of cases each year worldwide, there has never been a documented case of human-to-human transmission, other than the few cases resulting from corneal transplant. Despite the lack of evidence for human-to-human transmission, people who have been exposed closely to the secretions of a patient with rabies will sometimes be offered immunisation purely as a precautionary measure.

### **How common is rabies in animals?**

In the UK, rabies has been eliminated from the animal population; however, in some parts of the world it continues to infect a variety of mammals. Dogs and cats, due to their high level of contact with the human population and propensity to bite, are the main risk to humans. People who are travelling should consult their GP or a travel clinic about whether they need rabies vaccination for their itinerary. When abroad in a country where rabies exists it is vital to seek advice immediately following any animal bites or scratches.

Rabies affects bats as well as terrestrial animals, and twice in the last few years rabies-like viruses have been found in bats in the UK. These viruses are known as European Bat Lissaviruses (EBLs). EBLs very rarely cross the species barrier from bats to humans, and are unlike the “classical” rabies virus found in dogs and other animals. EBLs are found more commonly in bats elsewhere in Europe than the UK. There have only been three documented cases of transmission of EBLs to humans from bats in the last 25 or more years. If there is EBL in British bats it is rare as, out of 2000 dead bats analysed by the Central Veterinary Laboratory, only two have been found positive

### **What are the symptoms and signs of rabies in humans?**

Rabies is a very serious infection which affects the central nervous system. Initial symptoms can include anxiety, headaches and fever; later the effects of the encephalitis intensify. There are spasms of the swallowing muscles making it difficult or impossible for patients to drink (hydrophobia), and respiratory failure sets in.

### **How dangerous is rabies?**

Rabies is a fatal condition but it is preventable by vaccination. It is important for people who are at risk through their work or through travelling to countries where rabies is circulating in animals to seek advice on vaccination.

Once clinical rabies develops, it is almost always fatal. Those few people who have survived the infection have suffered serious long-term disability.

### **Who should be protected by immunisation?**

- people at risk through their jobs or occupations eg. workers in laboratories, quarantine kennels, bat handlers and voluntary bat wardens
- some people going to developing countries where rabies is common who may be exposed through their work (e.g. working with animals) or traveling to particular areas where medical services are poor and the risk of being bitten is high
- Anyone bitten by a potentially rabid animal abroad.

### **How long is the incubation period?**

The incubation period is generally 2-8 weeks, but very variable. On some occasions incubation periods have been several months or more.

### **What can be done to treat rabies?**

Rabies must be prevented, not treated. This means that people should seek advice about vaccination before they travel if going to developing countries where rabies is present. When travelling they should steer clear of stray or unattended dogs.

Anyone who is bitten or scratched by a warm blooded animal such as a dog, cat or bat in a country where there is rabies should get advice immediately as rabies vaccine can be given to protect them. It works best if given as soon as possible (see “What should travellers do”).

Within the UK, if someone is bitten by a bat they should seek medical attention and expert advice for doctors is available through the PHLS. They can then be advised on whether they need any preventative treatment. Bat handlers and bat wardens should be vaccinated against rabies.

If a person has rabies there is no specific treatment.

### **What measures are taken to prevent animals with rabies from entering the country?**

The UK eliminated rabies from its animal population early in the 20<sup>th</sup> century. It maintains this by requiring immunisation in vulnerable animals coming into the country and applying quarantine laws to unimmunised animals. Further questions about this should be directed to the Department for Environment, Food and Rural Affairs (DEFRA), who regulate quarantine legislation [www.defra.gov.uk/animalh/quarantine](http://www.defra.gov.uk/animalh/quarantine)

### **What should travellers do?**

Travellers should:

- Seek advice before travel about whether they need rabies vaccine; while this is generally not recommended for travel in Western Europe, for example, it may be recommended for visits of more than a month to some countries, especially developing countries where rabies is common in animals.
- When travelling, stay away from stray or unattended animals.
- If bitten in a country where rabies is present clean the wound thoroughly with soap and plenty of water and seek medical advice immediately. If a person has not had treatment in that country they should still seek medical advice immediately on return, even if the bite was weeks before.

## CONTACT LIST FOR NHS BOARD DEPARTMENTS OF PUBLIC HEALTH

<p><b>Argyll and Clyde NHS Board</b>          Department of Public Health          Ross House          Hawkhead Road          PAISLEY PA2 7BN</p> <p>Tel: 0141-842 7212          Fax: 0141-840 4556          Out of hours: 0141-884 5122</p>	<p><b>Forth Valley NHS Board</b>          33 Spittal Street          STIRLING          FK8 1DX</p> <p>Tel: 01786 463031          Fax: 01786 446327          Out of hours: 01786 434000</p>
<p><b>Ayrshire and Arran NHS Board</b>          Boswell House          10 Arthur Street          AYR KA7 1QJ</p> <p>Tel: 01292 885882          Fax: 01292 885890          Out of hours: 01563 521133</p>	<p><b>Grampian NHS Board</b>          Summerfield House          Eday Road          ABERDEEN          AB9 1RE</p> <p>Tel: 01224 558520          Fax: 01224 558566          Out of hours: 01224 681818 (ask for Public Health)</p>
<p><b>Borders NHS Board</b>          Newstead          MELROSE          TD6 9DB</p> <p>Tel: 01896 825516          Fax: 01896 825580          Out of hours: 01896 826000</p>	<p><b>Greater Glasgow NHS Board</b>          Dalian House          PO Box 15327          350 St Vincent Street          GLASGOW G3 8YU</p> <p>Tel: 0141-201 4623          Fax: 0141-201 4601          Out of hours: 0141 211 3600</p>
<p><b>Dumfries and Galloway NHS Board</b>          Grierson House          The Crichton          Bankhead Road          DUMFRIES DG1 4ZG</p> <p>Tel: 01387 272727          Fax: 01387 272759          Out of hours: 01387 246 246</p>	<p><b>Highland NHS Board</b>          Beechwood Park          Inverness          IV2 3HG</p> <p>Tel: 01463 704926          Fax: 01463 717666          Out of hours: 01463 704000</p>
<p><b>Fife NHS Board</b>          Springfield House          Stratheden Hospital          CUPAR          Fife KY15 5UP</p> <p>Tel: 01334 421111          Fax: 01334 657579          Out of hours: 01592 643355</p>	<p><b>Lanarkshire NHS Board</b>          14 Beckford Street          HAMILTON          Lanarkshire          ML3 0TA</p> <p>Tel: 01698 206335          Fax: 01698 424316          Out of hours: 01236 748 748</p>

<p><b>Lothian NHS Board</b>  Deaconess House  148 Pleasance  EDINBURGH  EH8 9RS</p> <p>Tel: 0131- 536 9163  Fax: 0131-536 9055  Out of hours: 0131-536 9339</p>	<p><b>Tayside NHS Board</b>  Kings Cross  Cleppington Road  DUNDEE  DD3 8EA</p> <p>Tel: 01382 596977  Fax: 01382 596985  Out of hours: 01382 660111 ask for PH consultant  on call</p>
<p><b>Orkney NHS Board</b>  New Scapa Road  Kirkwall  ORKNEY  KW15 1BQ</p> <p>Tel: 01856 885470  Fax: 01856 876080  Out of hours: 01856 885400</p>	<p><b>Western Isles NHS Board</b>  37 South Beach Street  STORNOWAY  Isle of Lewis HS1 2BB</p> <p>Tel: 01851 708033  Fax: 01851 704405  Out of hours: 01851 704704</p>
<p><b>Shetland NHS Board</b>  Brevik House  LERWICK  Shetland  ZE1 0RB</p> <p>Tel No: 01595 743072  Tel No: 01595 695200  Out of hours: 01595 743000</p>	