

# OPERATIONAL CIRCULAR

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**Subject: AUSTRALIAN BAT LYSSAVIRUS GUIDELINES 2004**

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*This Operational Circular is designed to advise Department of Health staff on Department of Health policies and procedures.*

## PURPOSE

The purpose of this document is to describe the Department of Health's (DoH) recommended procedures for the public health management of cases of potential human exposure to Australian Bat Lyssavirus (ABL). It should be used in conjunction with the documents *CDNA Australian Bat Lyssavirus Guidelines*<sup>1</sup> and *The Australian Immunisation Handbook*.<sup>2</sup>

## BACKGROUND

ABL is a new species of lyssavirus identified in 1996 that is closely related to classical rabies virus and is widely distributed in the flying fox population and some insectivorous bat species in Australia.

There have been two ABL fatalities reported in Australia— one in a bat-handler in 1996 and another in a 27 year old Queensland woman in 1998 who had been bitten by a flying fox two years previously.

Any bat that bites or scratches a person in Australia should be presumed to be infected with ABL until proven otherwise.

Rabies post exposure treatment (PET), which is considered to be protective against ABL infection, is recommended for any parenteral (e.g. bite, scratch) or mucous membrane (e.g. kiss, lick) exposure to bat saliva or neural tissue. Bat blood, bat urine, or bat faeces are not considered infectious.

## PRINCIPLES

The primary objectives of the public health management of cases of potential human exposure to ABL are to:

- prevent disease in the potentially exposed case by the use of rabies immunoglobulin and/or vaccine (according to the case's immunisation status),
- determine the risk of exposure to ABL by testing the bat/s associated with the potential exposure,
- provide information and advice (including pre-exposure immunisation) about ABL to Health Care Workers , people at high risk of ABL exposure, and the general public.

## ABL exposures

Persons exposed to the saliva or neural tissue of any bat (e.g. from biting or scratching or kissing or licking) may be exposed to ABL and should immediately be offered thorough wound cleansing and post-exposure treatment (PET) with rabies immunoglobulin and/or rabies vaccine.

## Rabies immunoglobulin and vaccine supply

Human rabies immunoglobulin (HRIG) and/or human rabies vaccines (HRV) for PET for ABL potential exposures are available from the Central Immunisation Clinic (metropolitan area) or Regional Population Health Unit (regional areas). **Table 1** lists the current contact telephone and fax numbers for the Central Immunisation Clinic and Regional Public Health Units.

**Table 1 Telephone and fax numbers for reporting possible ABL exposures**

Central Immunisation Clinic	9321 1312 9322 5955 (fax) 9328 0553 (after hours)
Coastal and Wheatbelt Population Health Unit	9622 4320 9622 5752 (fax)
Gascoyne Population Health Unit	9941 0560 9941 0563 (fax)
Goldfields Population Health Unit	9080 5700 9080 5711 (fax)
Great Southern Population Health Unit	9842 7500 9842 2643 (fax)
Kimberley Population Health Unit	9192 5333 9192 5400 (fax)
Midwest Population Health Unit	9956 1950 9956 1991 (fax)
Pilbara Population Health Unit	9140 2377 9172 1335 (fax)
South West Population Health Unit	9792 2500 9792 2503 (fax)

## Public health management

The Central Immunisation Clinic (CIC) or the regional Population Health Unit (PHU) should interview the attending doctor and:

- determine if the patient had a significant ABL exposure,
- provide advice on ABL wound management and post exposure treatment,
- determine the patient's rabies immunisation status,

- arrange the supply of HRIG and/or HRV to the attending doctor or other health care provider by telephoning the **CSL Duty Officer (Phone: 9328 7322 Business Hours or Pager: 9483 6085 After Hours)** and faxing the completed Human Rabies Immunoglobulin and Vaccine Order Form (attached) to **CSL (Fax: 9227 6196)** and to **The Administration Officer, Communicable Disease Control Directorate (Fax: 9388 4888)**,
- arrange the collection and delivery of the implicated bat/s to the State Animal Health Laboratory for ABL testing (see **Bat ABL Testing** below),
- complete and fax the Australian Bat Lyssavirus Exposure Form (attached) to **The Senior Medical Officer, Central Immunisation Clinic (Fax: 9322 5955)**. A copy of the completed Form must be included with each bat that is transported to the State Animal Health Laboratories for ABL testing,
- inform local health care providers and the general public about the incident and how to minimise the risk of exposure to and infection from ABL.

### **ABL wound management**

Wounds (e.g. bites, scratches) should immediately be cleansed thoroughly (e.g. for 5 minutes) with soap and water before being rinsed with a viral antiseptic (e.g. povidone-iodine, iodine tincture, aqueous iodine, ethanol). Exposed mucous membranes (e.g. mouth, eyes, nostrils) should be flushed well with water. If appropriate, tetanus and/or antibiotic prophylaxis should also be given.

### **ABL Pre-Exposure Vaccination**

Pre-exposure vaccination should be recommended to those people whose occupation or recreational activities place them at increased risk of being bitten or scratched by a bat. For example:

- bat carers, bat handlers, researchers and students;
- veterinarians and veterinary assistants;
- veterinary laboratory staff;
- fruit pickers;
- wildlife officers (including local government officers);
- managers of display or research colonies of bats; and
- power line workers who frequently remove bats from power lines.

Pre-exposure vaccination consists of three deep subcutaneous or intramuscular doses of 1.0mL rabies vaccine given on days 0, 7 and 28. Doses should be given in the deltoid area, as rabies neutralising antibody titres may be reduced after administration in other sites. In children under 12 months of age, administration into the anterolateral aspect of the thigh is also acceptable. Vaccine should not be administered by the intradermal route.

For more information about pre-exposure vaccination, consult the Australian Bat Lyssavirus Guidelines<sup>1</sup> and The Australian Immunisation Handbook. 8th Ed, 2003.<sup>2</sup>

## ABL Post Exposure Treatment

Post exposure treatment for ABL should only be delayed if the bat can be tested for ABL within 48 hours of exposure. Currently, the time taken to transport and test bats from Western Australia to the Australian Animal Health Laboratories (AAHL) in Victoria is at least 48 hours. Consequently, until further notice, post exposure treatment should commence as soon as possible for all potential lyssavirus exposures in Western Australia.

- If HRV is available, the post exposure vaccination schedule should be commenced as soon as possible, while waiting for delivery of the HRIG.
- If it has been more than 7 days since the first dose of HRV was administered, then HRIG treatment should be omitted (passive immunisation is then unnecessary).
- The dosage of HRIG is 20 IU / kg body weight. As much of the dose of HRIG should be infiltrated in and around every wound (including fingers) and the remainder injected intramuscularly into the proximal deltoid or lateral thigh regions.
- HRIG should be administered at a different site as HRV (e.g. opposite limb) and it should not be injected into adipose tissue (e.g. buttock).
- If the patient has not previously been vaccinated against rabies, the HRV schedule is 0, 3, 7, 14, and 28 days.
- If the patient has previously been vaccinated against rabies, the HRV schedule is 0 and 3 days, irrespective of the patient's current or previous rabies antibody levels.
- The patient should be advised not to handle bats at all or at least not to handle bats without adequate protection against biting or scratching.

## Bat ABL Testing

Wherever possible, the implicated bat/s should, without putting any person at risk of further lyssavirus exposure, be captured and sent to the State Animal Health Laboratory, which will then send specimens to the Australian Animal Health Laboratories in Victoria for ABL testing.

- The Regional Public Health Unit will arrange and bear the costs of euthanasia and transport of the implicated bat/s to the State Animal Health Laboratory.
- Phone the **State Animal Health Laboratory** on **Phone: 9368 3483 or 9368 3631 or 9368 3497**, business hours (**fax: 9368 3497 or 9474 1881**) for instructions on how to capture and deliver the implicated bat. After hours, phone the **On-Call Veterinarian** on **mobile: 0417 910 082**.
- If the bat is alive it should be secured appropriately for transport. If it is dead, or if it is more convenient to kill the bat for transport, it should be kept at 4°C (not frozen). Live bats will be euthanised for testing when they reach the laboratory.
- The bat container should be labelled "**URGENT - Bat (Human Exposure)**" and couriered to: **The Veterinary Virologist, Agriculture WA, Animal Health Laboratories Receivals (C Block), 3 Baron-Hay Court, SOUTH PERTH WA 6151**.

## REFERENCES

1. Australian bat lyssavirus guidelines, 2001. Communicable Diseases Network Australia. [www.cda.gov.au/pubs/other/bat\\_lyssa.htm](http://www.cda.gov.au/pubs/other/bat_lyssa.htm)
2. The Australian Immunisation Handbook. 8th Ed, 2003. National Health and Medical Research Council. <http://immunise.health.gov.au/handbook.htm>

Dr Shirley Bowen

**DIRECTOR**

**COMMUNICABLE DISEASE CONTROL DIRECTORATE**



**TO:** Vaccine Officer, CSL

**FAX:** 9227 6196     **PHONE:** 9328 7322 or 9483 6085

**NAME (Authorising Doctor):** .....

**SUBJECT: Human Rabies Immunoglobulin and Vaccine Order**

I hereby authorise the supply of the following quantities of Human Rabies Immunoglobulin and / or Human Rabies Vaccine to the Attending Doctor named below.

(HRIG dosage = 20 IU / kg, HRIG concentration = 150 IU / mL)

- ..... 10 ml ampoules of Human Rabies Immunoglobulin,
- ..... 2 ml ampoules of Human Rabies Immunoglobulin, and
- ..... ampoules of Human Rabies Vaccine.

**Attending Doctor:** .....

**Phone:** .....

**Delivery Address:** .....

.....

**Delivery required by:**     **Date** .... / .... / .....     **Time** .....

**Patient's Name:** .....

**Patient's Date of Birth:**     .... / .... / .....

**Signature (Authorising Doctor)** .....

**Date** .... / .... / .....     **Time** .....



# Australian Bat Lyssavirus Exposure Form

Central Immunisation Clinic  
Phone: 9321 1312  
Fax: 9322 5955

## Attending Doctor's Details

Date: .... / .... / .....

Name: .....

Phone: ..... Fax: .....

Hospital/Surgery: .....

## Patient's Details

Name: ..... Sex: [ ] Female [ ] Male

Date of birth: .... / .... / .....

Weight: ..... kilograms Ethnicity: [ ] Aboriginal [ ] Other

Rabies vaccination history: .....

Phone: .....

Address: .....

Occupation: .....

## Possible ABL Exposure Details

Animal: [ ] Flying fox [ ] Bat [ ] Other animal

Description of animal: .....

Was the attack unprovoked? [ ] No [ ] Yes

Was the animal behaving unwell (e.g. paralysed)? [ ] No [ ] Yes

Date of exposure: .... / .... / ..... Time of exposure: .....

Anatomical site/s of exposure: .....

Type of exposure/s: [ ] Bite/s [ ] Scratch/es [ ] Mucous membrane (e.g. kiss)

Did the wound bleed? [ ] No [ ] Yes

Description of exposure: .....

Geographic location where exposure occurred: .....

Was the animal sent to Agriculture WA for lyssavirus testing? [ ] No [ ] Yes