

NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES
GUIDE TO PROPER HANDLING OF BAT EXPOSURES
March 2011

Introduction

Rabies in humans is rare in the USA, with usually 1-2 human cases per year. The most common source of human rabies in the USA is bats. Bats have increasingly been implicated as wildlife reservoirs in the transmission of rabies to humans. Among the 19 naturally occurring cases of rabies in humans from 1997-2006, 17 (90%) were associated with bats. Three of the 17 cases were bitten by a bat, 11 either handled or had direct contact with bats but had no known bites and 3 reported no encounters with bats. These findings suggest that limited or seemingly insignificant physical contact with rabid bats may result in transmission of rabies virus to humans, even without a definite history of a bite. In 2009, 1188 bats were submitted for rabies testing at New Jersey's Public Health and Environmental Laboratory with only 32 (2.7%) confirmed positive for rabies.

New Jersey History

A Warren County, New Jersey man died of rabies on October 23, 1997, apparently from contact with bats in his home in July. There was no known history of the patient being bitten or scratched, but he did remove several bats from his residence using "rags" over his hands to protect himself. This was the first human case of rabies in New Jersey since 1971, when a person who was bitten by a rabid bat refused to complete rabies treatment (post exposure prophylaxis) and eventually developed the disease and died.

Management of Known or Possible Rabies Exposures from Bats

Rabies post exposure prophylaxis (PEP) is recommended for all persons with a known or suspect bite, scratch, or mucus membrane exposure to a bat unless prompt laboratory testing of the bat has ruled out rabies infection. PEP may be appropriate even in the absence of a demonstrable bite, scratch or mucus membrane exposure in situations where there is a reasonable probability that such an exposure occurred.

Because bat bites may be less severe, heal rapidly, and therefore be more difficult to find or recognize than bites inflicted by larger mammals, PEP may also be considered for:

1. Direct (bare skin) contact between a human and a bat, unless the person can be certain that an exposure did not occur, and
2. Persons in the same room as a bat and who might be unaware that a bite occurred, such as:
 - a. An unsupervised infant,
 - b. A sleeping adult, or
 - c. An intoxicated or mentally disabled person.

The absence of an identifiable bite wound should not negate the decision to treat, as bat bite wounds are extremely small and may be virtually undetectable within hours. **An awake person merely being in close proximity to a rabid or suspect rabid bat does not constitute an exposure, however.** In general, PEP is not recommended for other household members who do not meet the exposure criteria described above.

Physicians should consider initiating immediate rabies post exposure prophylaxis for bat bites, prior to completion of the rabies testing in the following high-risk cases:

1. Where there are bites to the face or neck,
2. The bat was aggressive or ill, or
3. When testing is delayed.

Specimen Collection and Submission for Laboratory Testing

In all instances of potential human exposure involving bats, the bat in question should be collected and submitted to the New Jersey Department of Health and Senior Services (NJDHSS) Rabies Laboratory for testing, if possible. Residents reporting a bat in the home should be instructed to leave the bat alone until the ACO or other responder arrives on the scene to capture the bat. **Residents should not be told to open a window or otherwise release the bat from the home.** ACOs, police officers and other officials responding to “bat in the house” situations should safely capture the bat, if possible.

The head of the bat should not be crushed or destroyed during capture, as this may render the brain tissue unsatisfactory for rabies testing. Bats can be **safely captured** utilizing leather work gloves, a small box or coffee can, a piece of cardboard, and tape by following these steps:

1. Put on the leather work gloves,
2. Place the box or can over the bat,
3. Slide the cardboard under the box or can to trap the bat inside,
4. Tape the cardboard to the box or can securely, and
5. Punch small holes in the top.

The captured bat should be held it until a determination is made by local health officials as to whether testing is necessary. If the bat is submitted for testing, a veterinarian or ACO can euthanize the bat, or alternatively, bats can be shipped to the Rabies Laboratory alive, with a clearly visible label on the container indicating that it contains a “**LIVE BAT**”. If the bat is dead, it should be kept at cool temperatures during storage and transportation to prevent decomposition, which will render the bat unsatisfactory for testing. **Bats that bite people should be delivered directly to the Rabies Laboratory and tested on a priority basis; the use of couriers and delivery services which delay specimen transport by more than 24 hours should not be used in this situation.** However, in situations where a bat is found in the house and there are no known bites or scratches, immediate human treatment or emergency (e.g., weekend) testing of bats is not usually indicated.

Public Education

Public education efforts should stress that **contact with downed bats and other ill-appearing wildlife should be avoided** and all physical contact with bats should be carefully evaluated by a physician for possible rabies PEP. It should be emphasized that PEP may be indicated even in the absence of puncture wounds or specific a history of a bite.

Because reduction of bat populations is not a feasible or desirable strategy for rabies control in bats, **human and domestic animal contact with bats should be minimized by physical exclusion of bats from houses and surrounding structures by sealing entrances used by bats.** Bats should not be routinely captured or handled and should never be kept as pets.

In addition, all dogs and cats should be currently vaccinated against rabies to provide a barrier to human exposures to wildlife rabies through pets.

Additional information

For additional information on bats and rabies, contact the NJDHSS, Infectious and Zoonotic Diseases Program, at 609-826-4872 or go to the NJDHSS Website:

<http://www.state.nj.us/health/cd/documents/fag/rabies.pdf>

http://nj.gov/health/cd/rabies/documents/shouldknow_bats.pdf

Centers for Disease Control and Prevention website:

<http://www.cdc.gov/rabies/index.html>

<http://www.cdc.gov/rabies/bats/index.html>