MANAGING BAT ENCOUNTERS AND RABIES RISK

Rabies is an infectious viral disease that can be transmitted through bats. It is almost always fatal following the onset of clinical symptoms, however, it is 100% preventable through prompt appropriate medical care. In recent years, most human deaths from rabies in the United States have been due to infection with bat variants of the virus. Most bats do not have rabies and the number of human deaths from rabies is small, one or two cases each year in the United States. Evidence indicates that many of these cases resulted from exposures to bats that were not recognized or reported.

Although very effective, rabies post-exposure prophylaxis (rPEP) is expensive and requires an exposed individual to receive a dose of immunoglobulin and several vaccines. Local health departments and healthcare providers must work together to consider the risk potential before recommending rPEP. The Ohio Department of Health, Zoonotic Disease Program staff are available for consultation regarding rabies exposures. Call (614) 752-1029 for assistance.

Determining the Rabies Status of the Bat

It is much easier to determine the rabies status of a bat than to determine the likelihood of exposure to a human or companion animal. Most bat-related post-exposure treatments can be avoided if the bat is captured and tested. In circumstances where there is any reasonable probability of a human or animal exposure, the bat should be safely captured, and the local health department contacted for proper euthanasia, shipping, and testing procedures. For instructions on how to capture a bat safely:

How to Safely Capture a Bat

- Close the doors and windows and turn on the lights in the room where the bat is located.
- Wait for the bat to land.
- Wear leather gloves and use a container such as a coffee can or small cardboard box. Do not use pillowcases, blankets or towels as bats may bite through fabric.
- Approach the bat slowly and place the container over the bat. Then slide a piece of cardboard underneath the bat and flip the container over, trapping the bat inside.
- If the bat is alive, make sure to punch small airholes in the lid. Secure the lid with tape.
- Be carefully not to shake or otherwise traumatize the bat as this can damage the brain, rendering it untestable for rabies.
- If the bat is dead, keep it cool but avoid freezing it.
- Contact your local health department to submit the bat for rabies testing. Keep the bat in a dark, cool place until it can be euthanized.
- If there is no reasonable probability that a person or pet was exposed to the bat, it can be released.
- For a video demonstrating the proper way to capture a bat, please see Public Health Seattle & King County

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Risk-Assessment for Exposure to a Bat

Most people who have been bitten by a bat report a stinging or needle prick sensation. However, bat bites may occur without being noticed such as when someone is sleeping or when a bat flies into a person. The impact with the bat may mask the sensation of being bitten. Bat bites are often quite small and may leave little or no evidence of a wound or puncture. See Table 1. for guidance on what constitutes a bat rabies exposure. All bats with a potential exposure to a human or domestic animal should be submitted for rabies testing, if available since it is much easier to determine the rabies status of a bat than to determine the likelihood of exposure to a human or companion animal. If the bat is available for testing, post-exposure prophylaxis can be delayed until results are received.

Bats in Homes

It is not unusual to find bats in Ohio homes, and the mere presence of bats does not indicate the need for rabies post-exposure prophylaxis. Most bats tested at the ODH Laboratory are negative for rabies. However, human cases of rabies have been known to occur after a bat bite in a home situation. Reasonable steps should be taken to keep bats out of the home environment, especially in sleeping quarters. See Figure 1. for common areas around the home where bats may enter.

Bat proof your home by following these steps

- Caulk any openings larger than a quarter-inch by a half-inch.
- Use window screens, chimney caps, and draft-guards beneath doors to attics.
- Fill electrical and plumbing holes with stainless steel wool or caulking.
- Ensure that all doors to the outside close tightly.
- Prevent bats from roosting in attics or buildings by covering outside entry points. Observe where the bats exit at dusk and keep them from coming back by loosely hanging clear plastic sheeting or bird netting over these areas. Bats can crawl out and leave but cannot re-enter. When all the bats are gone, the openings can be permanently sealed.
    - Avoid doing this from May through August. If there are young bats in your attic, many of them can't fly and keeping the adults out will trap the young who will die or try to make their way into your rooms.
- Most bats leave in the fall or winter to hibernate, so these are the best times to "bat-proof" your home.

To determine whether bats are already in a house

- Listen for squeaking noises coming from the attic, walls or elsewhere.
- Look for signs of roosting bats (e.g., evidence of bat guano and crystallized urine, or bare scratched areas on beams) in the attic space, rafters, porches and walls.
- Check outside the house at dusk to see if bats are flying out of the house to feed, or before dawn to see if bats are flying into the house to roost.

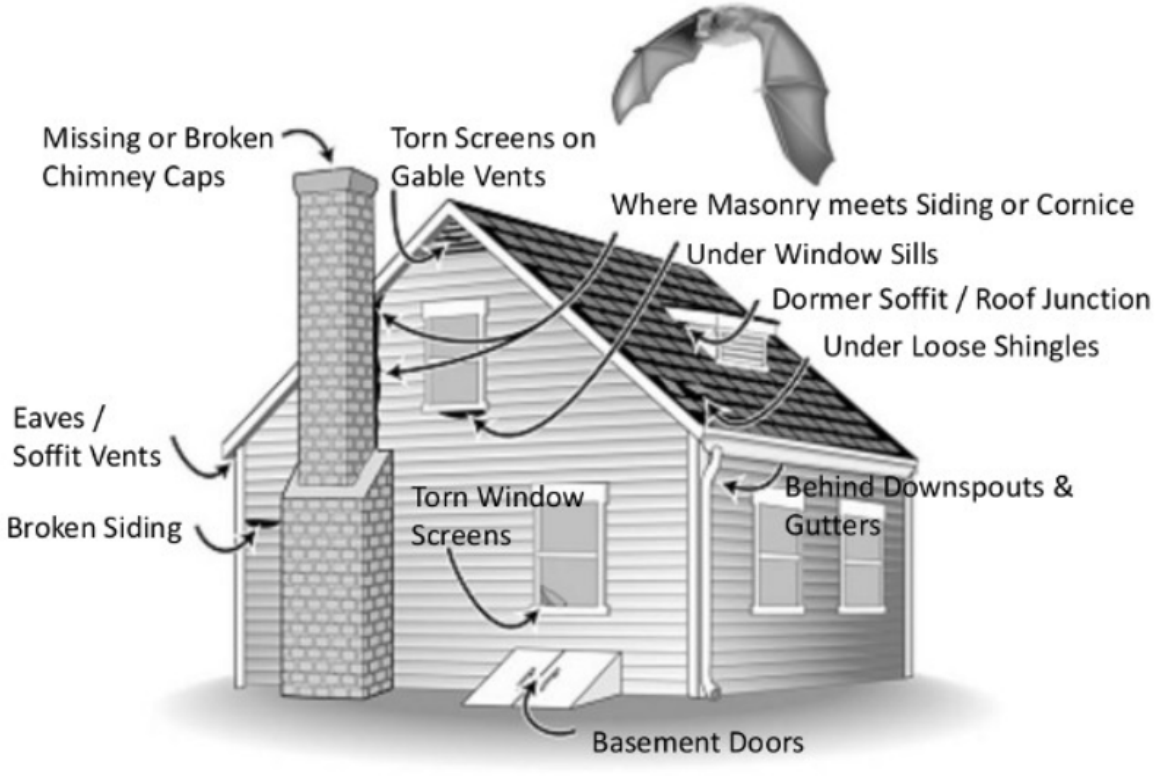
To get bats out of a house in which they are roosting or entering, consider

- Bat exclusion techniques. Killing or poisoning bats is seldom necessary or desirable.
- Sealing openings after bats have exited the space to avoid driving them into occupied areas or creating a sanitary problem when they die.
- Doing major home renovations and sealing openings in the winter when most bats have left buildings.
- Using special netting in a manner that allows bats to exit the house, but not to re-enter.
- Consulting with a licensed pest control expert specializing in bat control.

Table 1. Exposure Risk Based on Encounter with Bat

High Risk of Exposure: **Post-exposure prophylaxis <u>recommended</u>**	**Low or No Risk of Exposure:** **Post-exposure prophylaxis <u>not recommended</u>**
• Adult witnesses bat in room with previously unattended child or pet • Person touches bat without seeing the part of the bat they touched • Bat flies into someone and touches bare skin • Adult sees bat fly near a child and child reports "it hit me" • Someone, with bare feet, steps on a live or dead bat • Unidentified flying object hits someone and the time of day (dusk or dawn), presence of marks where it hit, and place that it was coming from (good for roosting bats) all support that it was a bat and not a bird or insect • Person awakens to find a bat in the room with them • Person slept in camp cabin which was small, closed-in, and bats were swooping past sleeping people • Bat found in room with a person with sensory or mental impairment • Bat found in room with an intoxicated person • Person puts hand in firewood or brush, feels pain, then sees a bat • Person touches teeth of bat	• Touching fur, wings, or legs of a live bat while looking at it • Bat brushes past thick long hair of teenager or adult and they are certain there was no skin contact • Person has contact with a completely dried-up carcass of a bat • Bat swoops past awake teenager or adult, but the person does not feel the bat touch them • Dead bat found in room of home with no evidence that child touched it • Bats are heard or seen in walls or attic of house • Bats are found in other parts of the house even if bedroom doors were open • Bats are heard or seen hanging from upper rafters of large A-frame cabin • Bat guano or other signs of bats are found in sleeping quarters • Bat found in sleeping quarters at a time when no one is there or there is an awake adult • The person is reasonably certain that a bite, scratch or mucous membrane did not occur • Touching something a bat touched

Figure 1. Areas around the house where bats may enter



References

Human Rabies Prevention—United States, 2008: Recommendations of the Advisory Committee on Immunization Practices (ACIP) (May 23, 2008/Vol. 57/No.RR-3) http://www.cdc.gov/mmwr/PDF/rr/rr5703.pdf

Zoonotic Disease Program, Ohio Department of Health (Rabies) website http://www.odh.ohio.gov/rabies

Centers for Disease Control and Prevention (Rabies) website
General information http://www.cdc.gov/rabies/
Image of bat and house http://www.batcon.org/resources/for-specific-issues/bats-in-buildings/prevention
Management of bats https://www.cdc.gov/rabies/bats/management/
Prevention of Rabies https://www.cdc.gov/rabies/prevention/index.html

Bat Conservation International website
Removing a Single Bat www.batcon.org
To find a local bat rehabilitator https://batworld.org/local-rescue/ or contact your state wildlife agency or Department of Natural Resources

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