FAQs About Bats

How do bats move around in the dark?

All bats can see, but some use a special sonar system called echolocation. They make high frequency calls out of their mouths or noses then listen for echoes to bounce from the objects in front of them. In this way, bats are able to avoid predators, maneuver around obstacles, and capture insects in total darkness.

How and why do bats hang upside down?

Unlike bodies of other animals, a bat's body is best adapted for hanging upside down. Its hind limbs are rotated 180 degrees so its knees face backwards. Bats have specialized tendons that hold their toes in place so they are able to cling to their roosts without expending any energy. Hanging upside down allows bats to use unique places in caves and buildings where they are safe from predators.

Why is there a concern about bats and rabies?

Rabies in humans is rare in the United States. There are usually 1-2 human cases per year. The most common source of human rabies in the United States is from bats. When people are bitten by other animals, the bites are usually large enough that they consult their health care provider, and are evaluated for

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BATS

SAFETY AND RISK MANAGEMENT AT CAMP

The United States is home to more than 40 varieties of bats. They eat insects harmful to agriculture, including night flying beetles and moths. However, some bats may be infected by and transmit the rabies virus.

Most of the recent human rabies cases in the United States have been caused by rabies viruses associated with bats. Potential exposures to bats do occur, sometimes requiring individuals to undergo rabies post-exposure prophylaxis, i.e., rabies vaccinations.

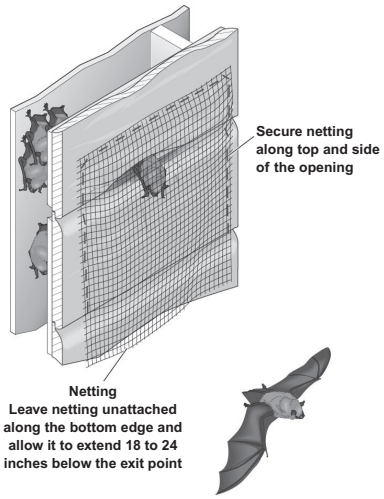
Keep in mind, however, that more than 11 million children and adults engage in camp experiences each year in the United States. Few individuals will ever be exposed to a rabies-suspect animal or need medical intervention due to a potential exposure while camping. In the United States, there have been no human rabies deaths occurring as a result of a bat exposure in a camp setting.

Awareness of the facts about bats and rabies can help protect yourself and your campers. This information may also promote a better understanding of bats, their contributions to the environment, and what you can do to safeguard against bat-transmitted disease.

REDUCING EXPOSURE TO BATS

Bats are beneficial to our environment and often present in summer camp settings. To reduce bat exposure in the camp environment:

1. Bat-proof when possible
2. Use mosquito netting



Bat-Proofing Buildings

Bats may use buildings as shelter or for protection from other animals. Bats can enter buildings through very small (½ - ¼ inch) spaces. If the camping environment has cabins or shelters that can be bat-proofed, follow these recommendations:

- Bat-proof between September and April, as most bats leave in the fall and winter to hibernate. This will also prevent young bats, unable to fly, from being trapped inside the structure.
- In the spring and summer, exclude bats by observing where from the building bats exit at dusk and hanging clear plastic sheeting or bird netting over these areas. Bats can leave, but cannot re-enter (see figure).
- After the bats have been excluded, seal openings. Fill openings with caulk, steel wool, or mesh hardware cloth.
- Inspect for any other potential cracks, crevices, and holes even if not currently being used by bats exiting the structure.
- Replace severely warped or damaged boards.
- Use proper attic ventilation and screen all vents.
- Keep window screens in good repair and don't leave unscreened doors and windows open.

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Why is there a concern about bats and rabies?

possible rabies exposure. However, bat bites are small and people may not consult their health care providers after exposure.

How common is rabies in bats?

Most bats are not rabid. Rabid bats may appear weak, unable to fly, and may make unusual noises. However, because rabies can only be determined by laboratory testing, you cannot tell if a bat is rabid just by observing its behavior. If you are exposed to a bat, wash the exposed area with soap and water, capture the bat for testing, and seek medical attention. Your local or state health department can provide assistance as needed.

Are bats beneficial?

Yes. Worldwide, bats are a major predator of night-flying insects, including pests that cost farmers billions of dollars annually. Small insectivorous bats can eat up to 2,000 insects in one night. Throughout the tropics, seed dispersal and plant pollination by bats are vital to rainforest survival. In addition, studies of bats have contributed to medical advances including the development of navigational aids for the blind. Unfortunately, many local populations of bats have been destroyed and many species are now endangered.

Photo of mosquito netting over bed. Mosquito netting can be used when cabins or tents are not already screened. *Photo courtesy of the Girl Scout Council of the Nations Capital.*

Using Mosquito Netting

When used properly, mosquito netting over beds will prevent exposure to mosquitoes and bats while sleeping. Netting is recommended when screening is not an option. To use netting,

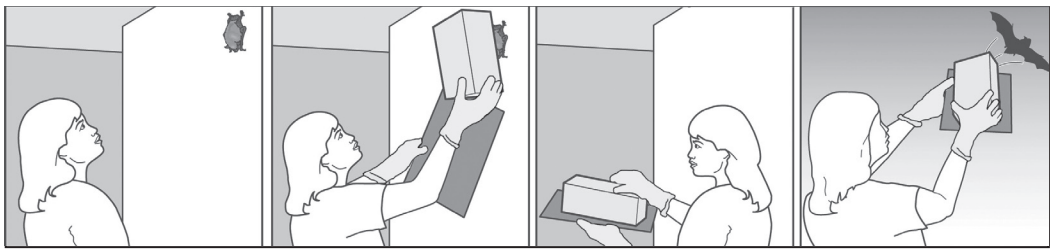
- **Elevate netting above the camper's bed. Cover the length of the mattress. Attach poles to the ends of the bed (see picture for example).**
- **Tuck netting under the camper's mattress.**
- **At the end of the season, store netting in rodent-proof containers.**
- **Inspect mosquito netting regularly to ensure it is free of holes.**

CAPTURING AND REMOVING BATS

Assemble and store a bat-capture kit. Store it in a location where it can be quickly gathered if a bat is found in a camp facility. The kit should contain:

- **Leather or suitable work gloves**
- **Box, coffee can, or plastic container with a lid**
- **Piece of flat cardboard**
- **Net on a long pole**

Any bat that may have exposed someone to rabies, should be captured for testing (see below). If you are certain there was no possible rabies exposure, then the bat should be returned to the wild.



Graphics courtesy of Bat Conservation International

To Capture a Bat:

1. **Put on leather or other suitable work gloves.**
2. **Take the box, coffee can, or plastic container and the flat piece of cardboard.**
3. **Wait for the bat to roost on a wall or floor.**
4. **Slowly approach the bat and cover it with the container.**
5. **Keeping the container flat against the wall, slide the lid or cardboard between the wall and bat.**

FAQs About Bats

Where can I learn more about bats?

Contact state or local wildlife conservation agency or Bat Conservation International by visiting www.batcon.org. To learn more about endangered bats and the Endangered Species Act, contact the U.S. Fish and Wildlife Service: www.fws.gov.

Where can I learn more about rabies?

Contact state or local health departments or the Centers for Disease Control and Prevention by visiting www.cdc.gov/rabies <http://www.cdc.gov/rabies>

6. Once the cardboard is covering all sides of the container, lift the container and cardboard away from the wall.
7. If no one was exposed to the bat, take the covered container outside and set it on a table or railing.
8. Remove the container covering and turn the container on its side. Return inside, the bat will fly away on its own.
9. If a person is exposed to the bat, capture the bat for testing by securing the lid or cardboard to the container so the bat cannot escape. Follow directions below for seeking medical attention.
10. Capture a bat in hard-to-reach areas with a net on a long pole. Then bring net down to a container, and drop/push (wearing gloves) the bat into the container.

Handling Human Exposure to a Bat

If you or a camper are bitten by or possibly exposed to a bat -- including from saliva that gets into your eyes, nose, mouth, or wounds, wash the affected area thoroughly and get medical attention immediately.

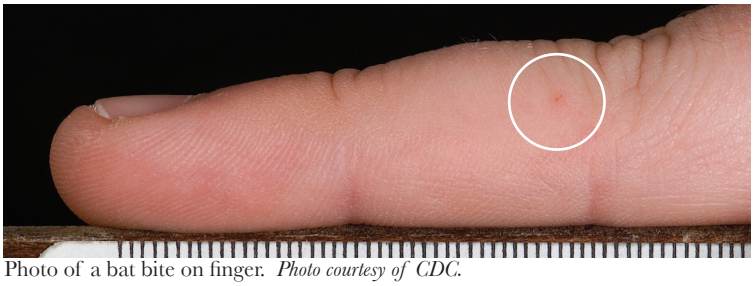


Photo of a bat bite on finger. *Photo courtesy of CDC.*

Bats have small teeth that may leave marks not easily seen (see picture). Although many people know if they have been bitten by a bat, there are certain circumstances when a person might not be aware or able to tell if she has been bitten. For example:

- If a person awakes to find a bat in the room
- If you find a bat in a room with an unattended child
- If you see a bat near a person with a disability

In these circumstances, a person should seek medical attention and have the bat tested for rabies.
In all circumstances, contact local or state health departments for assistance with medical advice and testing bats for rabies. If a bat cannot be confirmed as negative, rabies post-exposure treatment may need to be considered. To capture the bat for testing, follow the procedures above for trapping the bat, but secure the lid or cardboard to the container so the bat cannot escape.

People cannot get rabies just from seeing a bat outside or at a distance. In addition, people cannot get rabies from having contact with bat guano (feces), blood, or urine, or from touching a bat on its fur. Remember, just to be safe, bats should never be handled.

CDC
Centers for Disease Control and Prevention