

June 13, 2016

Bat season and rabies exposure assessments

Actions Requested

- **Be aware that summer is when bats and other wildlife are most active and thus people are more likely to encounter these animals.** Any direct contact with a bat constitutes a potential rabies exposure. Finding a bat in a room with a sleeping, intoxicated, or mentally impaired person or an unattended child presents the potential for unrecognized bat bite, thus warrants careful assessment of the situation (*see below*). Bats are the only known rabies reservoir in Washington State, but all animal bites should be carefully evaluated for the risk of rabies.
- **Familiarize yourself with the exposure assessment guidance** (*attached*), which helps you determine the risk of rabies based on the type of animal, geographic location of exposure (which influences risk by species), and other factors. It also provides general recommendations for the need for rabies post-exposure prophylaxis (PEP) for each scenario.
- **Continue to report any human exposures to potentially rabid animals** by calling our Communicable Disease staff. Rabies exposures are immediately notifiable to local health per WAC 246-101.
- **Consult our staff as needed for case-by-case guidance on exposure assessment as well as animal quarantine and testing.** We can approve animal testing at the Washington Public Health Laboratories if deemed necessary.

For questions or to report a rabies exposure, please contact our Communicable Disease staff at 360-337-5235.

Background

Just last week, a bat from Kitsap County tested positive for rabies – the first for our county during 2016. During the warmer months of the year, we see annual increases in the number of reports regarding potential rabies exposures, particularly with bats. The Kitsap Public Health District (KPHD) wants to remind you about the risk for rabies both locally and as your patients travel within the U.S. and abroad. Geographic location and animal species both play significant roles in the risk of rabies for any animal encounter. These and other factors, such as animal disposition, circumstances of the bite or other non-bite exposure (e.g., scratch or mucous membrane exposure), animal vaccination status, etc., must be carefully evaluated to ensure proper advice and treatment are provided to patients.

Overall, the risk of rabies in Washington State is relatively low compared to other parts of our country and the world, but rabies does exist in our bat populations statewide. Each year 5-10% of all bats submitted for testing following human and pet exposures in Washington test positive for rabies. Any direct contact with a bat should be carefully evaluated; any bites, scratches and most other direct contact meet the criteria for a potential rabies exposure, though simply touching a bat's fur, feces, or urine are not exposures. Situations when a person awakens to find a bat in their bedroom or when a bat is found in a room with someone who can't reliably say a bite did not occur (e.g., a child or an intoxicated or mentally handicapped person), are generally considered to be potential exposures warranting rabies PEP.

Occasionally, pets and other non-reservoir animals in Washington (and elsewhere) can be infected and thus become potential sources of rabies exposure for humans. The most recent example in Washington was a rabid cat in Jefferson County in 2015.

Resources

Attachments: (1) WA DOH "Human Rabies Prevention" algorithm for rabies exposure assessments. (Also available at: www.doh.wa.gov/Portals/1/Documents/5100/RabiesPEPGuidance.pdf)

Resources: (1) Our new KPHD website on rabies: www.kitsappublichealth.org/healthcare/rabies.php
(2) WA DOH "EpiTrends" newsletter featuring Rabies Prevention (May 2016 issue): www.doh.wa.gov/Portals/1/Documents/5100/420-002-epitrends2016-05.pdf

Washington State Guidelines for Human Rabies Prevention

- **All suspected rabies exposures (to people) must be immediately reported** to the local health jurisdiction (LHJ) per WAC 246-101. This includes reporting of all persons to whom rabies post-exposure prophylaxis (PEP) is administered.
- **Consultations and animal testing** are available from the LHJ. Healthcare providers are encouraged to consult LHJs prior to initiating PEP.
- **Rabies exposures include** bites, scratches, and fresh wounds or mucous membranes contaminated with a mammal's saliva or neural tissue. Touching animal fur, blood, urine, or feces is not a rabies exposure. Non-mammals, e.g., birds and reptiles, do not get rabies. **Bat exposures**[†] deserve special consideration.

Risk	Animal type	Geographic location of exposure	Notify LHJ	Animal testing recommendation	PEP recommendation
HIGH	Any rabid-acting* mammal	Anywhere	Yes	Test if available.	<ul style="list-style-type: none"> - If animal tests positive, OR if unable to test, OR a <u>bite</u> from any animal highly suspected to be rabid, give PEP immediately. - If bite to head/neck from any animal or severe bite from non-bat animal, consider giving PEP immediately. - If non-severe bite to other area (e.g., extremities) from any animal, PEP can be delayed 24-48 hours while animal is tested.
	Bat [†]				
	Wild carnivore (e.g., raccoon, skunk, fox, coyote, wolf, or hybrid)	In area with endemic rabies in wild carnivores (<u>not</u> WA)			
MEDIUM	Dog, cat, or ferret with normal appearance & behavior. (Does <u>not</u> apply to hybrids, e.g. wolf-dogs.)	In or imported in past 6 months from rabies endemic area including Asia, Africa, Middle East, South/Central America, or Mexico	Yes	Confine and observe for 10 days. [§] If signs of rabies* develop during observation, call LHJ for immediate testing (<i>see rabid-acting* mammal above</i>).	<ul style="list-style-type: none"> - If tests positive or <u>if</u> unable to observe or test, give PEP. - If observing, consider starting PEP immediately given elevated risk; can discontinue if animal survives 10-day observation.
MEDIUM-LOW	Wild animal hybrids (e.g., wolf-dogs)	In Washington	Yes	Generally test if available. <i>See special considerations for hybrids.</i>	<ul style="list-style-type: none"> - If tests positive, give PEP. - <i>See special considerations for hybrids (wild carnivores section).</i>
	Raccoons	In Washington	Yes	Test if available.	<ul style="list-style-type: none"> - If tests positive, give PEP. - If unable to test: if provoked^a and normal appearing/behaving then PEP not routinely recommended; if unprovoked or behavior suspicious for rabies, recommend PEP.
	Other wild carnivores	In Washington	Yes	Test if available.	<ul style="list-style-type: none"> - If tests positive or if unable to test, give PEP
LOW	Dog, cat, or ferret (D/C/F) with normal appearance & behavior. (Does <u>not</u> apply to hybrids, e.g., wolf-dogs.)	In the U.S. (or a country not known to be endemic for canine rabies)	No [^]	<ul style="list-style-type: none"> • Confine and observe for 10 days.[§] <ul style="list-style-type: none"> ○ If signs of rabies develop during observation, call LHJ for immediate testing (<i>see rabid-acting* mammal</i>). • Animal euthanized due to chronic illness or injuries, or unwanted D/C/F: <ul style="list-style-type: none"> ○ If feral/stray then test. ○ If owned, test if unprovoked or D/C/F had known exposure to bat/rabid animal; otherwise victim can waive testing if provoked. 	<ul style="list-style-type: none"> - If observing, PEP not necessary if animal healthy for 10 days. - If tests positive, give PEP. - If unable to observe or test then consider exposure location: <ul style="list-style-type: none"> • Outside WA State: Consult LHJ; consider D/C/F vaccination status and contact with rabies reservoir species in that locale. • In WA State: If D/C/F had exposure to an untested bat or rabid animal in last 6 months give PEP. Otherwise: <ul style="list-style-type: none"> ○ If provoked^a, PEP <u>not</u> recommended. ○ If <u>unprovoked cat exposure</u>, recommend PEP ○ If <u>unprovoked dog/ferret exposure</u>, consult LHJ, generally recommend PEP.
VERY LOW	Rodent, lagomorph/ rabbit, or opossum	Anywhere	No [^]	No need to test unless <i>rabid-acting*</i> . Consult with LHJ if thought to be rabid; livestock should be evaluated by a veterinarian.	PEP not recommended unless animal tests positive or unable to test a <i>rabid-acting*</i> animal; consult LHJ in such cases.
Livestock (e.g., cattle, llama, horse, pig)					

NOTE: See definitions and explanations on next page.

Washington State Guidelines for Human Rabies Prevention

* **Rabid-acting:** Rabies virus causes an acute, rapidly progressive encephalitis. Observing unusual behavior or unhealthy appearance is a proxy to identify potentially rabid animals. Behavior changes and neurologic signs exhibited are variable based on species and stage of disease progression. In terrestrial mammals, suggestive signs include being unusually withdrawn, stuporous or agitated; acting inappropriately aggressive or attempting to bite; approaching people (wild animals only); attacking inanimate objects; making abnormal vocalizations; stumbling or appearing weak; displaying muscle tremors, seizures, or difficulty swallowing; appearing afraid of water; salivating profusely (foaming at the mouth); and staring blankly or appearing to be blind. Livestock may also display head-pressing, circling, depression, drooping head or ears, or constant bellowing, or may isolate themselves from herd mates.

[†] **Bats:** May assume exposure when a bat is found in a room with a person who cannot say that exposure did not occur (e.g., unattended infant or child, intoxicated adult, sleeping person). Bat bites may not leave visible marks. See detailed bat exposure assessment document for additional information on exposure assessments related to bats.

[§] **Observations:** Local county policy may differ as to whether dog/cat/ferret (D/C/F) observation should be done in home or with animal control. If D/C/F becomes ill or dies during observation, a veterinarian should be consulted to evaluate for rabies and the LHJ should be notified immediately.

[^] **Notifying LHJ:** In general, low risk bites/exposures from dogs, cats, and ferrets in Washington and rodents, rabbits, opossum, and livestock are not reportable to the LHJ. However if PEP is given or animal shows signs of rabies, then exposure must be reported to the LHJ.

^α **Provoked exposures:** May include invasion of an animal's territory (potentially even running by a dog), assisting an injured animal, startling or trying to capture an animal, coming between an animal and its young, taking food away from an animal, acting aggressively toward an animal, breaking up a fight between animals, or trying to touch, pet, or feed an unfamiliar animal. Provocation must be considered from the animal's perspective. An exposure is considered "unprovoked" if these behaviors are absent; for example, an animal suddenly appears or charges and bites a person who was not in any way interacting with the animal or its young.

Legal reporting requirements in Washington State regulation (WAC 246-101-101 and -301)

- All healthcare providers, healthcare facilities, and veterinarians are required to *immediately* notify the local health jurisdiction (LHJ) regarding suspected rabies exposures, including: (1) "Animal bites (when human exposure to rabies is suspected)," and (2) "Rabies, suspected human exposure (suspected human rabies exposure due to a bite from or other exposure to an animal that is suspected to be rabid)"
- The algorithm is intended to be a guide in determining whether an exposure to rabies should be suspected and whether reporting to the LHJ is necessary.

Washington State rabies facts

- Bats are currently the only known reservoir for rabies in Washington State.
 - Rabies is not known to be endemic in raccoons, skunks, foxes, or other wild carnivores in this state; however surveillance for rabies in wild carnivores is minimal in Washington.
 - Rarely, other animals are bitten by bats and may become rabid in Washington State; examples since 1988 include horse, llama, and cat.
 - Historical animal testing for rabies in Washington State: <http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Rabies/RabiesActivity.aspx>.
- Animals incubating or infected with rabies could be accidentally imported into Washington State.
 - Risk differs elsewhere in the world (e.g., raccoon rabies in the east coast, skunk rabies in central states, dog rabies in Asia and Africa, etc.).

Criteria for assessing risk of rabies exposure

- Consider the following: **(1)** animal type and health/behavior (see *rabid-acting**); **(2)** geographic location of exposure; **(3)** animal vaccination status; **(4)** circumstances of exposure (provoked^α vs. unprovoked); **(5)** likelihood the animal could have been exposed to another rabid animal (outdoor vs. indoor animal; travel/import history of animal; feral/stray vs. pet).
- If you are unsure, consultations are available from your LHJ. If unable to reach LHJ, call DOH Communicable Disease Epidemiology (see below).

Wound care

- Wound cleansing is important in rabies prevention. In animal studies, thorough wound cleansing alone has been shown to reduce the likelihood of rabies.

References and additional resources

- WASHINGTON STATE:
 - Local health jurisdiction contact information: <http://www.doh.wa.gov/AboutUs/PublicHealthSystem/LocalHealthJurisdictions.aspx> (24/7 on-call service)
 - Washington State Department of Health (only contact if unable to reach LHJ):
 - **Humans potentially exposed:** Office of Communicable Disease Epidemiology, 877-539-4344 or 206-418-5500 (24/7 on-call service)
 - **Animals potentially exposed:** Environmental Health Zoonotic Disease Program, 360-236-3385 (M-F, 8 am – 4 pm); if unavailable call Epidemiology
- UNITED STATES: Centers for Disease Control and Prevention: <http://www.cdc.gov/rabies/>
- INTERNATIONAL: World Health Organization recommendations: <http://www.who.int/rabies/en/>