

Rabies (Human or Animal)

- Organism:** Rabies virus, all mammals are variably susceptible to infection.
- Incubation period:** Average is 3-8 weeks (range 9 days–7 years); similar for dogs.
- Infectious period:** In domestic animals, viral shedding can occur 3-7 days before onset of clinical signs, which may include obvious neurological derangement or more subtle signs, such as mild drooling. Once animal is showing signs of rabies, death follows within 10 days (often within 2-3 days).
- Transmission route:** Virus introduced via animal bite; rarely transmission by non-salivary routes, e.g., corneal transplants.
- Treatment:** Rabies post-exposure prophylaxis (PEP)
- Consists of rabies immune globulin (HRIG) given on a per weight basis at the bite site, and a series of four doses of vaccine (any human rabies vaccine, either Imovax® or RabAvert®) given over the following 2 weeks on days 0, 3, 7, and 14.
 - If patient has an **immunosuppressive condition**, consult with CDC and decide on whether an additional dose should be given on day 28.
 - If patient was **previously vaccinated** against rabies, no HRIG is needed and vaccine doses are needed only on days 0 and 3 (see http://www.cdc.gov/rabies/resources/acip_recommendations.html)
 - If patient is immunosuppressed or has significant deviations from the PEP schedule, titers may be recommended 2-4 weeks after the final dose. RFFIT testing should be requested.

Information Needed for the Investigation

Verify the Exposure

- Assess likelihood that the animal was rabid:
 - ✓ *Was animal previously vaccinated?*

Full course is two vaccines 12 months apart, with the first one given after the age of 12 weeks. Once fully vaccinated, dog/cat/ferret is considered protected if 28 days have elapsed since vaccine was given. Most vaccine is labeled for 3 years of protection; although there is a feline vaccine labeled for 4 years and most ferret vaccines are labeled for a single year.
 - ✓ *Where in Alaska did the incident occur?*

Animals from certain geographic areas are more likely to be rabid. Rabies is enzootic and cyclically epizootic in northwestern AK among the fox populations. Also ascertain whether animal that bit *originated* from an enzootic area in the recent past.
 - ✓ *Was the bite provoked?*

Figure out what the human was doing when the bite or exposure occurred. In general, provoked animals are not rabid. Provocation may be overt, e.g., running

over a fox with a snowmobile, or subtle, e.g., walking too close to a fearful, chained dog.

✓ *What kind of animal is involved?*

Foxes and dogs are highly suspicious in rabies enzootic area; small rodents highly unlikely. Rabies is usually not seen in Alaska bats; only five bats have ever been detected with rabies, three in the Ketchikan area (1993, 2006, 2014) and one each in Wrangell (2014) and Haines Borough (2015). See April 2016 Bulletin: http://www.epi.alaska.gov/bulletins/docs/b2016_09.pdf.

✓ *Is animal available for testing or quarantine?*

If the animal is readily available to be tested, rabies PEP can be delayed until results are available **if** other circumstances suggest rabies is unlikely.

• Assess the likelihood that a human was exposed:

- ✓ Rabies is present in saliva and neural tissue. Did an animal bite the person? Handling blood, feces, urine, and/or furs of potentially infected animals are not considered exposures.
- ✓ Small children for whom reliable exposure histories cannot be obtained and who may have been licked in the eyes or mucous membranes by rabid animals are generally offered PEP. This is a potential, albeit not efficient, means of virus transmission.

Laboratory Specimens

Animals

- Submit intact animal head to Alaska State Virology Laboratory (ASVL) in Fairbanks. Freezing the head does not affect the test result; but is not advisable because it delays processing of the tissues. See ASVL shipping guidelines, forms, and packing label available on-line at <http://dhss.alaska.gov/dph/Labs/Pages/publications/default.aspx>; notify ASVL before sending. Note that for cats or small animals <~8-10 lbs, it is recommended that the ENTIRE animal be shipped.
- Involve animal control, Office of Environmental Health staff or Public Safety officials if needed, to obtain or ship the head. A list of animal control resources can be found at: <http://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/Rabies/AnimalControlContacts.pdf>

Humans

- For a highly suspicious case, consult with CDC's Rabies Branch (404-639-1050 or after-hours through the Emergency Operations Center 770-488-7100).
- Collect brain tissue, nerve tissue from skin at the base of the neck, CSF, saliva, and serum.
- Specific information about specimen collection and shipping is available on the CDC website: http://www.cdc.gov/rabies/specific_groups/doctors/ante_mortem.html.

Additional Treatment Considerations

- Emphasize vigorous and thorough cleansing of wound(s).
- Distribute (to provider, CHA, ER, etc.) a treatment schedule for exposed persons.

- PEP needs to be initiated ASAP; there is no official cut-off time beyond which treatment is not indicated. CDC recommends proceeding even if the bite occurred up to 30 days before treatment becomes available.
- HRIG is **not** indicated if patient received human rabies vaccine ≥ 7 days prior to being offered HRIG.
- SOE strongly recommends that the HRIG and at least the first dose of vaccine be given by a mid-level provider or physician. Community health aides can then be tasked with giving the remaining doses.
- SOE discontinued supplying rabies PEP in January 2014.

Contact and Control Measures

- All persons who might have handled the animal must be interviewed to determine the extent of their exposure and the need for PEP.
- Involve animal control/VPSO for assistance in determining if any other animals were bitten/came into contact with a rabid animal. (See “Dog Bite Scenarios” for guidance in managing an animal exposure.)

Important Contact Information

Alaska State Virology Laboratory.....907-371-1000
 ASVL, Manager.....direct 907-371-1005
 Toll free and after-hours.....855-371-1001 (option 6 for after hours)

Important Information

- **Bats.** Although CDC guidelines recommend PEP for most persons with exposure to bats, PEP is not usually recommended for a nonbite expected bat exposure in **Southcentral** Alaska. For example, someone who finds a bat in his/her eaves and chases it around the house in Anchorage. However, because of the positive bats in **Southeastern** Alaska, we will usually recommend PEP more broadly for bat exposures in that region of Alaska. Any bat found exhibiting neurologic signs should be evaluated for rabies. PEP is generally recommended for any person with a confirmed bat bite regardless of location.
 - If someone has found a bat, they can report that sighting to ADFG: <http://www.adfg.alaska.gov/index.cfm?adfg=citizenscience.bats>
 - There have been a total of five bats (1993, 2006, 2014 x 2, 2015) positive for rabies in Alaska. Information about rabies in bats can be found at:
 - i. Alaska Rabies Control Manual
<http://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/Rabies/RabiesControlManual.pdf>
 - ii. April 2016 Bat Rabies Update Bulletin:
http://www.epi.alaska.gov/bulletins/docs/b2016_09.pdf.
 - iii. ADFG, what to do if you find a dead or sick bat:
<http://www.adfg.alaska.gov/index.cfm?adfg=livingwithbats.deadbats>

Hospital Considerations

- Use Standard Precautions.
- Person-to-person transmission is rare; transmissions via corneal, tissue and organ transplants have been reported.
- If patient has bitten another or saliva has contaminated an open wound or mucous membrane, wash exposed area thoroughly and administer post exposure prophylaxis.

Reporting Requirements

- FTR: Write-up all outbreaks of animal rabies that resulted in significant human exposure(s).
- AK-STARS: Enter all laboratory-confirmed rabid animals and cases of human rabies. Follow instructions on “Entering Animal Rabies Data into AK-STARS”.
- CDC Case Definition is used to define confirmed cases of rabies; there is no official CDC definition of a “probable” human case.
- Rabies in animals is reportable to the State Veterinarian’s Office. Please send an email to Bob Gerlach for each positive case (bob.gerlach@alaska.gov); 907-375-8214 (direct).
- Cases of rabies in **wildlife** should also be reported to the wildlife veterinarian in the Alaska Department of Fish and Game (ADFG) located in Fairbanks (kimberlee.beckmen@alaska.gov and dfg.dwc.vet@alaska.gov 907-459-7257); or local area biologist if Dr. Beckmen is out of the office. A list of area biologists/office is available on-line: <http://www.adfg.alaska.gov/index.cfm?adfg=contacts.main>.

References and Resources

- Alaska Rabies Control Manual, available on the Rabies Webpage: <http://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/Rabies/RabiesControlManual.pdf> and <http://dhss.alaska.gov/dph/Epi/id/Pages/rabies/default.aspx>
- NASPHV Compendium of Animal Rabies Prevention and Control, 2016. Available at: <http://www.nasphv.org/Documents/NASPHVRabiesCompendium.pdf>
- Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Available at <http://www.cdc.gov/hicpac/pdf/isolation/isolation2007.pdf>

Rabies, Animal

1997 Case Definition

Laboratory criteria for diagnosis

A positive direct fluorescent antibody test (preferably performed on central nervous system tissue)
Isolation of rabies virus (in cell culture or in a laboratory animal)

Case classification

Confirmed: a case that is laboratory confirmed

Rabies, Human

2011 Case Definition

CSTE Position Statement Number: 10-ID-16

Clinical evidence

Rabies is an acute encephalomyelitis that almost always progresses to coma or death within 10 days after the first symptom.

Laboratory evidence

- detection of Lyssavirus antigens in a clinical specimen (preferably the brain or the nerves surrounding hair follicles in the nape of the neck) by direct fluorescent antibody test, or
- isolation (in cell culture or in a laboratory animal) of a Lyssavirus from saliva or central nervous system tissue, or
- identification of Lyssavirus specific antibody (i.e. by indirect fluorescent antibody (IFA) test or complete rabies virus neutralization at 1:5 dilution) in the CSF, or
- identification of Lyssavirus specific antibody (i.e. by indirect fluorescent antibody (IFA) test or complete rabies virus neutralization at 1:5 dilution) in the serum of an unvaccinated person, or
- detection of Lyssavirus viral RNA (using reverse transcriptase-polymerase chain reaction [RT-PCR]) in saliva, CSF, or tissue.

Case classification

Confirmed: a clinically compatible case that is laboratory confirmed by testing at a state or federal public health laboratory.

Comment

Laboratory confirmation by all of the above methods is strongly recommended.

See Also:

- [2010 Rabies, human case definition](#)
- [1997 Rabies, human case definition](#)

ANIMAL BITE INVESTIGATION FORM

Patient	Person Exposed: _____	Age: _____	DOB: ____/____/____
	Parent or Guardian of Child:	Phone: () _____	
	City:	Phone: () _____	

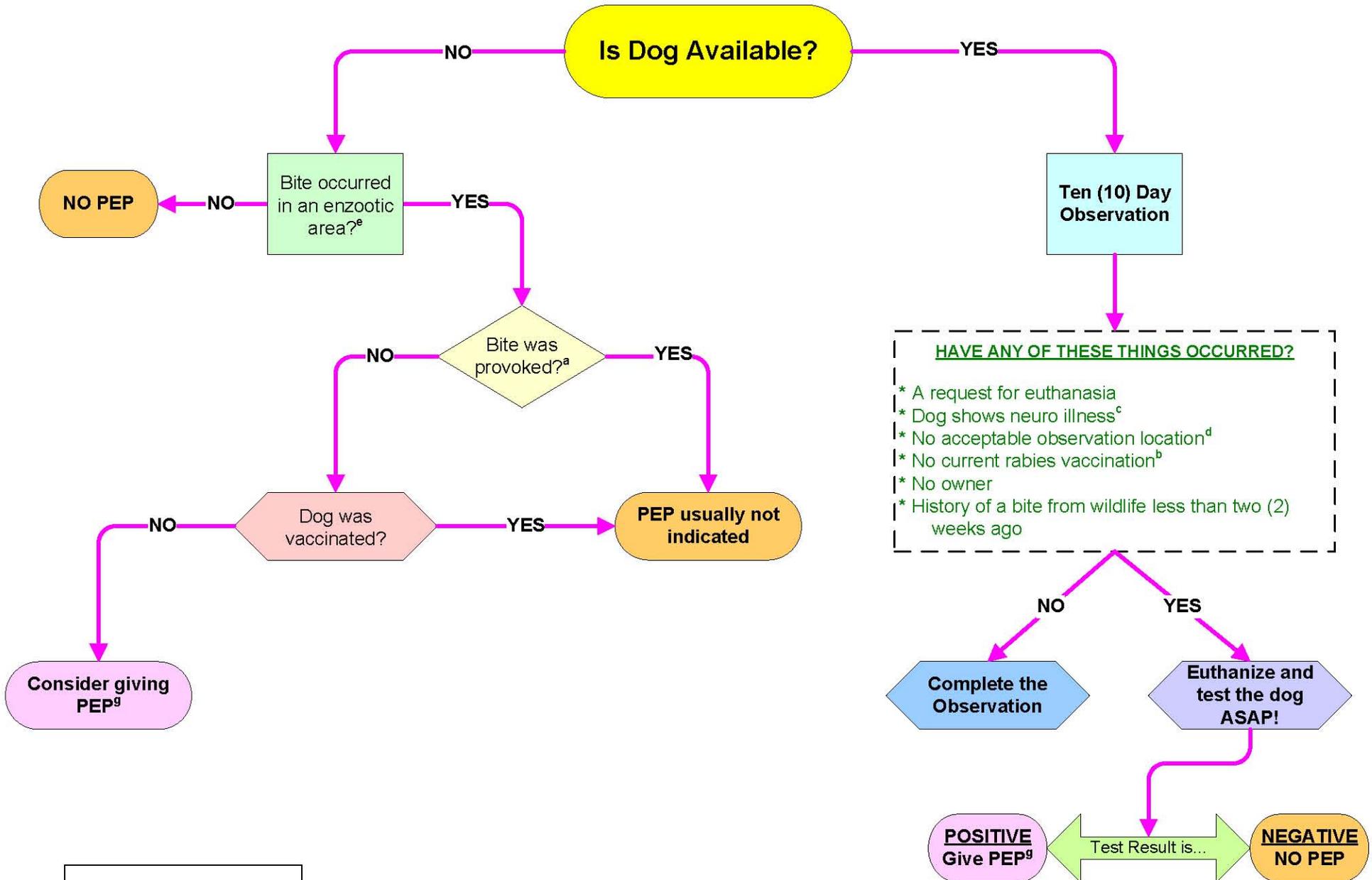
Exposure	Date of Exposure: ____ / ____ / _____		Time: ____:____	<input type="checkbox"/> AM	<input type="checkbox"/> PM
	Address/Location of exposure:				
	Explain the situation:				
	<input type="checkbox"/> Bite; area on body:	Did bite break skin? <input type="checkbox"/> Yes <input type="checkbox"/> No		Provoked? <input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Non-bite exposure; explain:				
	Were others exposed? <input type="checkbox"/> Yes <input type="checkbox"/> No			Who?	

Animal	Species: _____	<input type="checkbox"/> Wild	<input type="checkbox"/> Stray	<input type="checkbox"/> Owned	Breed: _____	
	Age: _____	<input type="checkbox"/> Male	<input type="checkbox"/> Female	Neutered? <input type="checkbox"/> Yes <input type="checkbox"/> No		
	Owner: _____	Veterinarian: _____				
	Address: _____	Clinic: _____				
	Phone: () _____	Phone: () _____				
	Vaccination status: <input type="checkbox"/> Current		Date of last rabies vax: ____ / ____ / _____			
	<input type="checkbox"/> Not current / Not vaccinated		<input type="checkbox"/> Unknown			
Animal is available for: <input type="checkbox"/> 10 days observation <input type="checkbox"/> Testing <input type="checkbox"/> Animal not available						
Where is the animal now?						

Treatment	Treatment to date: <input type="checkbox"/> Cleaned wound <input type="checkbox"/> Tetanus toxoid <input type="checkbox"/> Rabies immune globulin	
	<input type="checkbox"/> Rabies vaccine <input type="checkbox"/> Other: _____	
	Name of Patient's Physician: _____	Phone: () _____
	Clinic/Hospital: _____	
Other Info: _____		Hospitalized? <input type="checkbox"/> Yes <input type="checkbox"/> No

Action	Plan (check all that apply)	<input type="checkbox"/> No further action advised
	<input type="checkbox"/> Recommend animal be tested for rabies <input type="checkbox"/> Initiate PEP; discontinue when/if test is negative <input type="checkbox"/> Defer PEP until outcome of testing/observation <input type="checkbox"/> 10 day confinement and observation (dogs, cats, ferrets) <input type="checkbox"/> 14 day confinement and observation (livestock)	<input type="checkbox"/> Continue looking for animal; if not found within _____ days, begin PEP <input type="checkbox"/> Advised HRIG (Day 0) and 4 doses rabies vaccine on days 0, 3, 7, and 14 (5 th dose if imm-suppressed) <input type="checkbox"/> Advised 2 doses rabies vaccine on days 0 and 3 (pre-vaccinated individuals) <input type="checkbox"/> Wound care+/- tetanus toxoid booster <input type="checkbox"/> Other: _____

Risk Assessment for Dog Bites in Alaska



Notes on Next Page

Notes for Animal Bite Risk Assessment (Jun 2016)

- a. Rabies enzootic areas are the northern and western parts of the State for foxes. See P drive for database of all animals tested at ASVL since 1971. There have only ever been five bats positive for rabies; three in the Ketchikan/POW Island area and one each in Wrangell and Haines Borough. For the purposes of bat exposures, southeastern Alaska would be considered a higher risk area than the rest of Alaska, although still not technically “enzootic.” Per CDC, if a bat is found indoors and there is no history of bat-human contact, rabies post-exposure prophylaxis (PEP) can be considered for persons who were in the *same room* as the bat and who might be unaware that a bite or direct contact had occurred (e.g., a sleeping person awakens to find a bat in the room or an adult witnesses a bat in the room with a previously unattended child, mentally disabled person, or intoxicated person); and rabies cannot be ruled out by testing the bat.

When determining “enzootic” status, it is also important to ask about the travel history of the animal. For example, dogs diagnosed with rabies in Anchorage in 1992 and 2009 were brought had recently been brought in from enzootic areas. Dogs that travel internationally and interstate via airplane must have proof of a valid rabies vaccine.

- b. “Provocation” can occur in numerous ways. Obvious provocation would be reaching into a car window to pet a dog, or pushing/hitting an animal to make it retreat. Subtle acts can also provoke a dog. For example, pedaling a bike might excite a dog to bite at a person’s moving feet, or walking too close to a chained dog might make a dog feel threatened enough to lash out and bite.
- c. Any animal under a 10-day observation period that shows signs of illness or aberrant behavior should be euthanized IMMEDIATELY and submitted for rabies evaluation.
- d. Optimally, observation or quarantine should occur at an official animal control facility; however, these are not widely available. If an animal’s owner can adequately confine an animal for the full 10 day-period, this is usually acceptable. Animal control authorities—Village Public Safety Officers or Environmental Health Officers—must make an individual assessment in conjunction with SOE for each situation. For home quarantines, the designated animal control authority must be in regular contact with the owner to ensure that the animal is confined and not showing signs of illness. If acceptable quarantine cannot be arranged, the animal should be euthanized and submitted for testing.
- e. To be considered fully vaccinated, an animal must have received a series of two vaccines that have been given at least a year apart; with the first one given after the animal was 12 weeks of age. Although full or partial vaccination prevents rabies in the vast majority of domestic animals, proof of vaccination does not automatically ensure that an animal did not contract the disease. A rabid dog from Cold Bay had actually received one rabies vaccine; however, it was administered at 12 weeks of age while the dog was undergoing treatment for a severe gunshot wound.
- f. All rabies testing is conducted at the Alaska State Virology Laboratory in Fairbanks. Testing is not always warranted. For example, an unvaccinated dog hit by a car, in a non-enzootic rabies area, that subsequently bites a person trying to touch it, would not generally need to be tested. SOE should be consulted to determine whether it is necessary to test these animals.
- g. SOE staff can provide consultation for PEP decisions, but the final decision is ultimately between the provider and the patient/guardian. As of 2014, SOE no longer supplies rabies PEP biologics.

Alaska Section of Epidemiology (SOE) General Guidelines for Determining the Disposition of a Dog that Bites or is Bitten¹

Scenario	Dog vaccinated ²	Dog unvaccinated
Dog bites human	<p>Dog must be quarantined for 10 days.³</p> <ul style="list-style-type: none"> If animal shows any signs of illness, must be euthanized immediately and tested for rabies. 	<p>Dog may be immediately euthanized if sick or stray.</p> <p>If owned and well, dog must be quarantined for 10 days.^{3,4}</p> <ul style="list-style-type: none"> If animal shows any signs of illness, must be euthanized immediately and tested for rabies. Once 10-day period is over, animal should be immediately vaccinated.
Rabid fox bites dog	<p>Dog must be immediately re-vaccinated.</p> <p>Then, confined by the owner for 45 days.</p> <ul style="list-style-type: none"> If the owner cannot reliably and completely confine the animal, SOE strongly recommends euthanasia. If animal shows any signs of illness, must be euthanized immediately and may be tested for rabies. 	<p>Dog may be immediately euthanized if sick or stray.</p> <p>If owner will not allow dog to be euthanized, animal must be strictly confined for 4-6 months.⁴</p> <ul style="list-style-type: none"> SOE strongly recommends euthanasia and would like complete assurance that the owner can reliably and completely confine the dog. If animal shows any signs of illness, must be euthanized immediately and may be tested for rabies. Dog should be vaccinated upon entry into confinement, if possible within 96 hours of exposure. Consideration should be given to extending the quarantine from 4 to 6 months if vaccination is delayed.

Notes:

- Please contact SOE for consultation about any suspected human exposures to rabies or other guidance in determining scenario management.
- Vaccinated means that a dog has received a rabies vaccination at least 28 days prior to the incident. SOE considers a complete vaccination series to be that the animal had one vaccination after the age of 3 months, a booster 1 year later, and then boosters every 3 years thereafter or in accordance to manufacturer recommendations.
- “Quarantine” facilities must be reviewed by SOE. At a minimum, an animal in quarantine must be confined to a single location and unable to freely access other animals and humans. If no acceptable facilities exist, SOE may recommend euthanasia.
- SOE may seek to obtain a court order requiring euthanasia if the scenario is highly suspicious for rabies.
- Adapted from the National Association of State Public Health Veterinarians, Compendium of Animal Rabies Prevention and Control, 2016. Available at <http://www.nasphv.org/Documents/NASPHVRabiesCompendium.pdf>. These guidelines are also incorporated into Alaska State Regulations (7 AAC 27.022). Note that the provision for a 4-month quarantine is new as of 2016; state regulations continue to require 6 months.



Indications for Rabies Post-Exposure Prophylaxis (PEP)

Exposure to a potentially rabid animal is considered a public health emergency. Many factors must be considered when evaluating a person for PEP. Rabies is a fatal disease and public health recommendations for PEP will tend to be cautious. Even so, because PEP involves 2 weeks of injections with substantial cost in actual vaccine, personnel time, and travel time for patients, the decision to treat should be based upon **all** of the following criteria.

	Consider PEP	PEP not likely indicated
1. Type of animal:		
Dog, fox, etc	X	
Rodent, vole, squirrel, etc.		X

Rationale: In Alaska, the fox population is the reservoir for rabies. Although a small rodent theoretically could acquire rabies, they would first have to survive a bite from a rabid animal (a fox or dog)—which is highly unlikely. Rabies among small rodents has been detected only in areas of the United States where the reservoir population has either been raccoons or skunks because these animals are capable of delivering a potentially non-lethal bite to a small rodent. Unless the exposure to the small rodent occurred outside of Alaska (and even then), PEP is **almost never indicated** for such bites.

	Consider PEP	PEP not likely indicated
2. Geographic location:		
Enzootic area	X	
Non-enzootic area		X

Rationale: Rabies is enzootic among the fox population in the northern and western parts of Alaska, with cyclic epizootics occurring every 3-4 years. Exposures that occur in enzootic areas are more likely to warrant PEP. An Access database of all animals tested at the Alaska State Virology Laboratory since 1971 is on the network. Additionally, maps or geographic information about cases in recent years can be found in *Bulletins* or on the rabies webpage (<http://dhss.alaska.gov/dph/Epi/id/Pages/rabies/default.aspx>). Part of the geographic assessment should include the animal’s travel history, (e.g., was the animal recently transported from a rabies enzootic area?) A health certificate that includes proof of current rabies vaccination is required for all international flights and international border crossings. For exposures that occur in other states, defer the decision to public health authorities in those locations. Note that in Spring 2013, a wolf from the Chandalar Lakes region (just south of the Brooks Range) was submitted for rabies testing. The wolf exhibited abnormal behavior and had lunged toward a trapper who shot the animal. Rabies was confirmed at ASVL; this was the first confirmation of rabies south of the Brooks Range since the 1940s. Additional data are needed to understand whether rabies is established farther south than previously appreciated, or whether the wolves were of more northern origin and simply following migrating caribou herds. More information on enhanced wildlife surveillance techniques is available at: http://www.adfg.alaska.gov/static/home/news/pdfs/rabies_faq.pdf.

	Consider PEP	PEP not likely indicated
3. Circumstance of bite:		
Unprovoked	X	
Provoked		X

Rationale: Rabid animals are likely to be disoriented, confused and respond inappropriately to stimuli and therefore tend to bite when unprovoked. Provoking an animal can occur in a variety of different ways. For example, animals on chains or leashes may feel threatened when approached because they are immobilized. Incidents involving small children who poke or prod animals or make quick movements around an animal's head would be classified as provoked.

	Consider PEP	PEP not likely indicated
4. Vaccination status of animal:		
None	X	
Current		X
Out of date	X	

Rationale: Adequate rabies vaccination of an animal consists of an initial series of two vaccines given 12 months apart beginning no earlier than 12 weeks of age. Thereafter, rabies vaccine must be boosted with a single dose at least every 3 years, or as indicated by the vaccine manufacturer.

	Consider PEP	PEP not likely indicated
5. Animal available for testing or quarantine:		
Yes	X—can wait for results	
No	X	

Rationale: If the brain from the animal that bit the patient is available to be tested, PEP can be delayed until test results are available. The Alaska State Virology Laboratory will usually have results available within 24 hours of receiving an animal head. If substantial delays are anticipated or the animal has a high likelihood of being rabid, PEP can be instituted knowing that treatment can be discontinued when results are available. In circumstances where an animal is unlikely to be rabid and is not exhibiting signs of illness, the animal may be placed under quarantine instead of euthanized for testing. The animal is quarantined for 10 days and if alive and healthy at the end of the quarantine period, considered to be free of rabies. Animals must have virus in their saliva to infect another animal/human. Virus appears in the saliva after it has traveled through the central nervous system to the brain. Therefore, when animals are infectious they are days away from death. Ten days is a generous estimate for how long an animal would survive after the time they began to exhibit clinical signs.

	Consider PEP	PEP not likely indicated
6. Vaccination status of human:		
Yes	X	
No	X	

Rationale: Even if a human has already been vaccinated against rabies, this would not preclude receiving PEP. However, PEP for vaccinated persons consists of only two doses of vaccine given at days 0 and 3. Persons who have received the pre-exposure series since ~1977 (when human diploid cell vaccine became licensed) are considered fully vaccinated.



Alaska Division of Public Health

Prevention Promotion Protection

RABIES POST-EXPOSURE PROPHYLAXIS TREATMENT SHEET

Patient name: _____

Date of Birth: _____

1. Post-exposure prophylaxis (PEP) consists of **both** antibody (Human Rabies Immune Globulin or HRIG) and human rabies vaccine (Imovax® or RabAvert®) with one exception: persons previously immunized require treatment with **only** human rabies vaccine.
2. The dose of HRIG is 20 I.U./kg body weight. MOST HRIG contains 150 I.U./cc; check your product first. HRIG should be given as soon as possible after the incident; however, **HRIG is not indicated if more than 7 days have passed since the first dose of human rabies vaccine was given.** As much as anatomically feasible of the HRIG should be infiltrated into and around the wound or bite. The remainder (if any) should be given by intramuscular injection at an anatomical site distant from vaccine administration.

$$\frac{\text{Patient weight}}{\text{Patient weight}} \text{ lbs} \times \frac{0.454 \text{ kg}}{1 \text{ lb}} \times \frac{20 \text{ I.U.}}{1 \text{ kg}} \times \frac{1 \text{ cc}}{150 \text{ I.U.*}} = \frac{\text{Volume HRIG}}{\text{Volume HRIG}} \text{ cc}$$

**double check the product potency before calculating.*

3. **For immunocompetent persons without a history of previous immunization with rabies vaccine, four doses of vaccine are required,** 1.0 ml each, given intramuscularly in the deltoid region (or anterolateral thigh for infants and small children). The first dose should be given as soon as possible after the exposure. Day 0 is the day that the first dose of human rabies vaccine is given; additional doses should be given on each of days 3, 7, and 14 after the first dose. **Human rabies vaccine should never be given in the gluteal area** as studies have shown this may result in lower neutralizing antibody titers.
4. For **persons previously immunized** (i.e., history of a 3-dose pre-exposure series or a post-exposure series), **only human rabies vaccine should be given and only on days 0 and 3.**
5. Immunosuppressive agents should not be administered during PEP unless essential for the treatment of other conditions. **When PEP is administered to an immunosuppressed person, a 5th dose of vaccine is indicated on day 28.** It is also recommended that serum be tested for rabies neutralizing antibody after the series is completed to ensure that an acceptable response has developed. Consultation with CDC Rabies Branch (404-639-1050) is recommended on a case-by-case basis if there are concerns about how a person's current disease process or medications might impact the scheduling of PEP and subsequent titers.
6. **It is critical that each dose of human rabies vaccine be given as scheduled.** Health care providers must make certain that patients are not lost to follow-up. Consultation can be obtained from the Section of Epidemiology at (907) 269-8000 during business hours or 1-800-478-0084 after hours.

		Lot #	Date Due	Date Given	Provider
HRIG	Full dose (day 0)	_____	_____	_____	_____
Imovax® or RabAvert®	1st dose (day 0)	_____	_____	_____	_____
	2nd dose (day 3)	_____	_____	_____	_____
	3rd dose (day 7)	_____	_____	_____	_____
	4th dose (day 14)	_____	_____	_____	_____
ONLY give if immunosuppressed	5th dose (day 28)	_____	_____	_____	_____

RABIES EXPOSURE ASSESSMENT FORM

Please fill out one form for each person who was potentially exposed to the rabid animal, "name or description." on or after Date XX, 20XX; which is 10 days prior to the dog showing signs of illness.

Today's date: _____

PERSONAL INFORMATION

Name: _____

Weight _____ lbs

DOB: _____

Parent or guardian if <18 yrs old: _____

Address: _____

Phone #: _____

EXPOSURE ASSESSMENT (circle Yes or No)

1. Did the dog bite you? Yes No

Describe circumstances, date(s) and anatomical location (s) of contact: _____

2. Did you have contact with the dog's saliva? Yes No

Describe circumstances, date(s) and anatomical location (s) of contact: _____

3. Did you have any other physical contact with the dog such as petting or playing, or did you come into contact with feces, urine, or blood from the dog? Yes No

If Yes, date(s) and description of the contact: _____

4. Additional comments (including history of prior rabies vaccination): _____
- _____

DETERMINATION OF RABIES EXPOSURE (circle one)

Bite Exposure

Non-bite Exposure

Not Exposed

Rabies prophylaxis is recommended for persons with bite and non-bite exposures. Contact the Section of Epidemiology if you have any questions: 907-269-8000, 800-478-0084

Reference: Human Rabies Prevention —United States, 2008 Recommendations of the Advisory Committee on Immunization Practices 2008 <http://www.cdc.gov/mmwr/PDF/rr/rr5703.pdf> (see page 12).