

## Rabies

**R**abies is an acute infection of the central nervous system caused by a neurotropic rhabdovirus of the genus *Lyssavirus*. All mammals, including humans, are susceptible to rabies. In humans, rabies causes a rapidly progressive and fatal encephalomyelitis. The incubation period in humans is usually two to 12 weeks, but there have been documented incubation periods as long as seven years. Bites from infected animals constitute the primary route of transmission. Transplanted organs, including corneas from patients with undiagnosed rabies, have also caused infection in recipients.

The Pacific Northwest is considered to be free of terrestrial rabies. In Oregon, the main reservoirs of rabies are bats and animals, such as foxes and cats that may come in contact with rabid bats. An average of 10% of the bats tested in Oregon are positive for rabies. This is a targeted sample of bats that have bitten humans and animals. Bat contact and bat bites should be carefully evaluated in a timely manner. All potential human exposures should result in a call to a local public health department office. The Oregon State Public Health Laboratory will test most human exposures and Oregon State University, Veterinary Diagnostic Laboratory will test for animal-to-animal exposures.

Eleven bats, five foxes and a coyote tested positive in 2011. All foxes and the coyote were residents of Josephine County.

Persons not previously immunized for rabies who are exposed to a rabid animal should obtain human rabies immune globulin (HRIG) infiltrated at the site of the bite and four doses of rabies vaccine, one each on days 0, 3, 7 and 14. Prior to 2008, a five-dose regimen was recommended; however, studies indicated that four doses of vaccination in combination with HRIG elicited an immune response and an additional dose was not associated with more favorable outcomes.

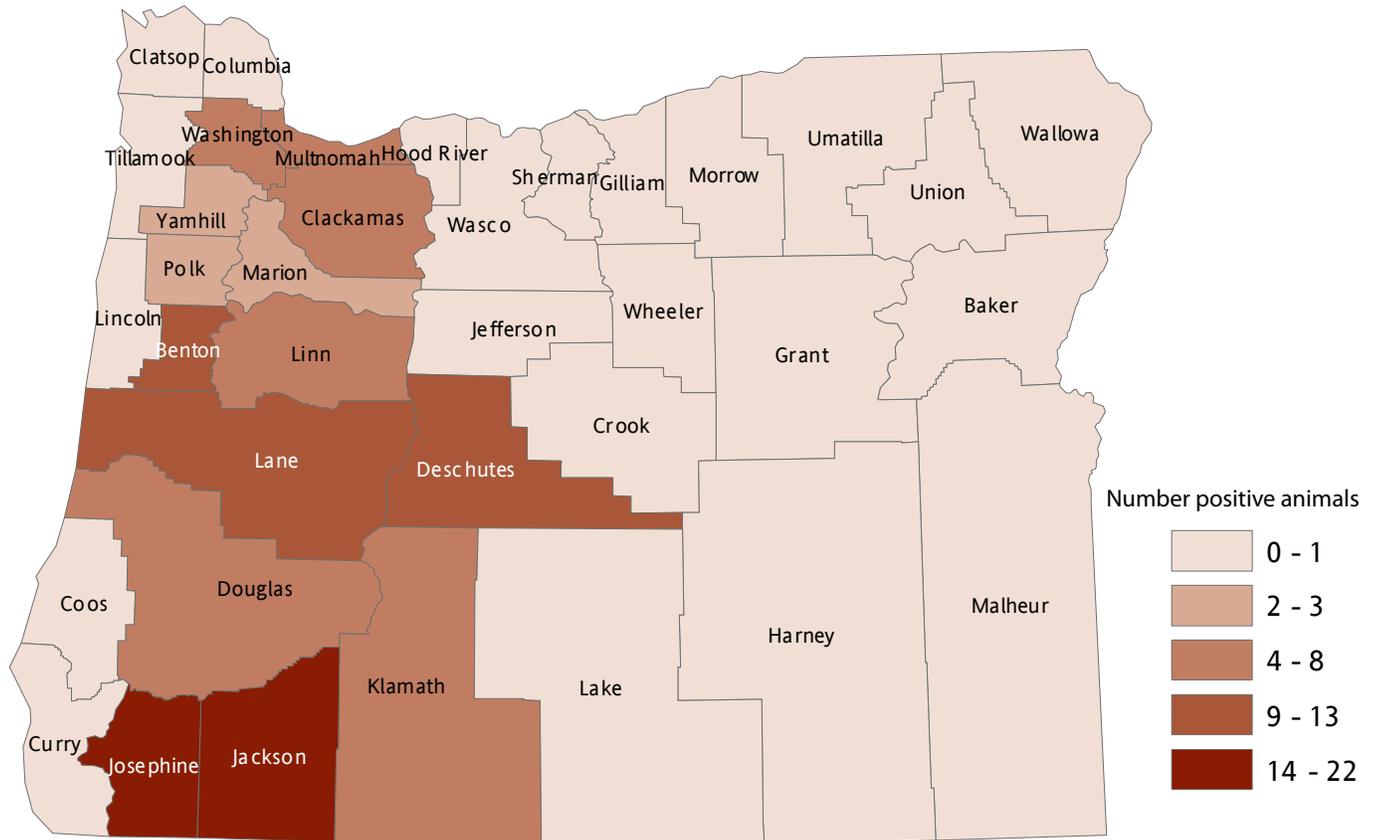
Though bats are the reservoir in Oregon, canine rabies still accounts for the majority of human rabies cases worldwide. Travelers to rabies-enzootic countries should be warned to seek immediate medical care if they are bitten by any mammal.

Additional information and an algorithm to follow for assessment of rabies risk are provided here. For a larger copy of this algorithm visit: <http://public.health.oregon.gov/DiseasesConditions/DiseasesAZ/rabies/Documents/rabalg.pdf>.

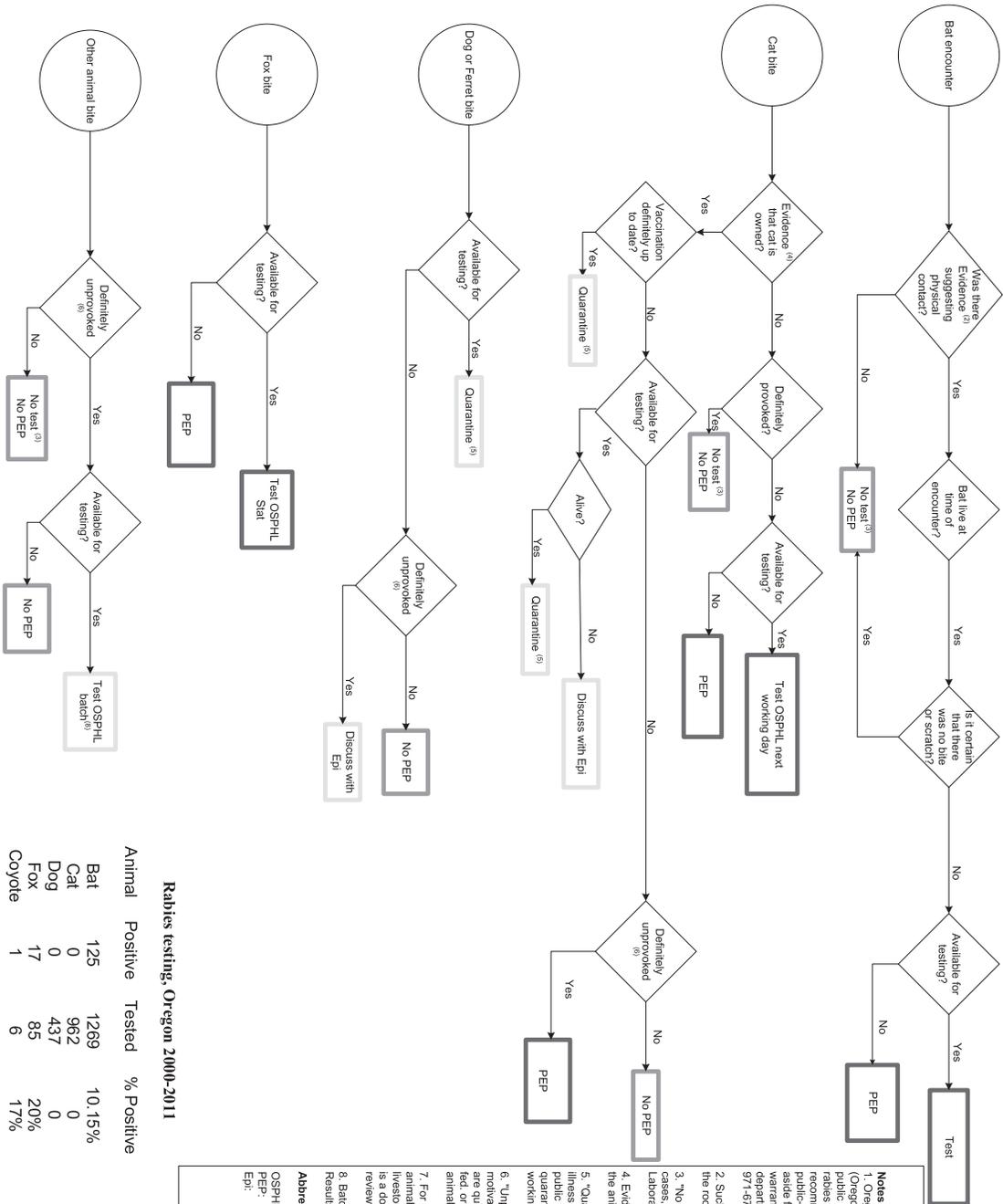
Rabies tests in Oregon, 2000–2011 (number of positive/total tested)

Year	Bat	Cat	Dog	Fox
2000	8/73	0/79	0/56	1/4
2001	4/59	0/67	0/46	0/1
2002	12/134	0/102	0/27	2/4
2003	6/61	0/75	0/36	1/5
2004	7/88	0/105	0/42	0/2
2005	8/83	0/100	0/48	0/1
2006	23/126	0/72	0/26	2/4
2007	12/153	0/80	0/33	0/1
2008	13/128	0/58	0/23	0/3
2009	11/117	0/73	0/27	0/1
2010	10/104	0/67	0/41	6/15
2011	11/143	0/84	0/32	5/44
<b>Totals 2000–2011</b>	<b>125/1269</b> <b>10%</b>	<b>0/962</b>	<b>0/437</b>	<b>17/85</b> <b>20%</b>

Animal rabies cases by county: Oregon, 2002–2011



Algorithm for Prevention of Rabies After Animal Encounters in Oregon <sup>(1)</sup>



Rabies testing, Oregon 2000-2011

Animal	Positive	Tested	% Positive
Bat	125	1269	10.15%
Cat	0	962	0
Dog	0	437	0
Fox	17	85	20%
Coyote	1	6	17%

Notes

1. Oregon law mandates reporting of any bite of a human being by any other mammal (Oregon Administrative Rule 333-018-0015[5] [6]); such reports should be made to the local public health authority for the jurisdiction in which the patient resides. Decisions about rabies PEP are the purview of the clinician attending the patient; although these recommendations regarding the need for rabies PEP represent the best judgment of state public health officials, they are not binding on clinicians. Clinicians should be advised that, while the need for rabies PEP is determined by the clinician, the local health department has the warrant, depending on the nature of the wound and the animal involved. Local health department personnel are advised to call Acute and Communicable Disease Prevention at 971-673-1111 with specific questions regarding application of these guidelines.
2. Such evidence might include, e.g., a young child's waking up, crying, with a bat found in the room.
3. "No Test" means that the animal will not be tested at OSPHL, at state expense. In such cases, the animal may be tested at the Oregon State University Veterinary Diagnostics Laboratory (541-737-3261) at private expense.
4. Evidence of ownership might include, e.g., presence of collar or previous appearances of the animal in a neighborhood.
5. "Quarantine" means confining a dog, cat or ferret for 10 days to observe for signs of illness after biting a human being. The nature of the confinement is determined by the local public health authority. If the animal develops neurological illness during the period of quarantine, it should be euthanized and its head shipped to OSPHL for testing within one working day.
6. "Unprovoked" implies that in the context of the situation there was no obvious alternative motivation for the animal to bite. A good history is essential. In practice, unprovoked bites are quite rare. Examples of provocation would include being hit by a car, being handled, fed, or caged; being cornered in a garage, having a pigger/turn past your yard or crowding animal's space, etc.
7. For purposes of determining need for rabies PEP, wolf-hybrids are considered wild animals and not dogs. Wolf-dog hybrids that bite or otherwise expose persons, pets, or livestock should be considered for euthanasia and rabies examination. Whether an animal is a dog or a wolf-dog hybrid must be determined by a licensed veterinarian, subject to review by the State Public Health Veterinarian or designee (OR 333-019-0022).
8. Batch testing for rabies is generally done at OSPHL on Mondays and Wednesdays. Results are available the following day.

Abbreviations

- OSPHL: Oregon State Public Health Laboratory (503-229-5882)
- PEP: Post-Exposure Prophylaxis against rabies
- Epi: Epidemiologists at the Oregon Department of Human Services; Weekdays, nights and weekends 571-573-1111



Office of Disease Prevention and Epidemiology  
Acute and Communicable Disease Prevention

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