Rabies

Rabies 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. Oregon State Public Health Laboratory will test most human exposures and Oregon State University, Veterinary Diagnostic Laboratory should test for animal-to-animal exposures.

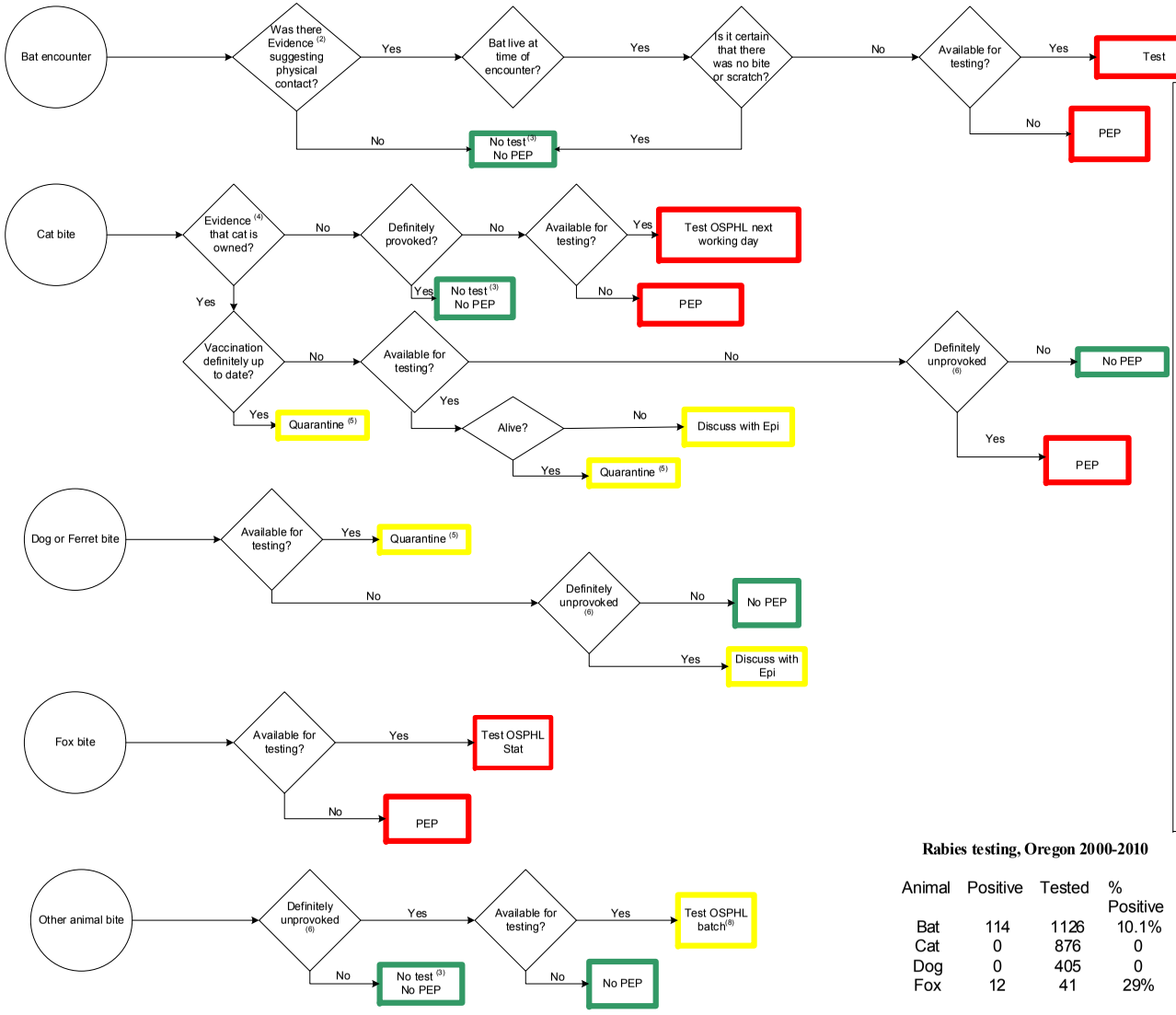
Ten bats, six foxes and a goat tested positive in 2010. All foxes and the goat were residents of Josephine County.

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, 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

Algorithm for Prevention of Rabies After Animal Encounters in Oregon [1]



Notes

1. Oregon law mandates reporting of any bite of a human being by any other mammal (Oregon Administrative Rule 333-018-0015[5] [c]); 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, aside from concern about rabies, prophylaxis against tetanus or bacterial infection might be warranted, 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 jogger run 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 971-673-1111

Rabies testing, Oregon 2000-2010

Animal	Positive	Tested	% Positive
Bat	114	1126	10.1%
Cat	0	876	0
Dog	0	405	0
Fox	12	41	29%

Oregon Health Authority

Office of Disease Prevention and Epidemiology

Acute and Communicable Disease Prevention

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Rabies tests in Oregon, 2000–2010
(Number of positive/total tested)

Year	Bat	Cat	Dog	Fox	Other
2000	8/73	0/79	0/56	1/4	0/4
2001	4/59	0/67	0/46	0/1	0/41
2002	12/134	0/102	0/27	2/4	0/29
2003	6/61	0/75	0/36	1/5	0/39
2004	7/88	0/105	0/42	0/2	0/27
2005	8/83	0/100	0/48	0/1	0/23
2006	23/126	0/72	0/26	2/4	0/41
2007	12/153	0/80	0/33	0/1	0/26
2008	13/128	0/58	0/23	0/3	0/53
2009	11/117	0/73	0/27	0/1	0/42
2010	10/104	0/67	0/41	6/15	1/48 (goat)
Totals 2000–2010	114/1126 10.1%	0/878	0/405	12/41 29.3%	1/373 (0.27%)

Animal rabies cases by county: Oregon, 2000–2010