

## Bites, Bats, and being safe ...a quiz about *RABIES*



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## Overview

- What is rabies?
- What animals transmit rabies?
- “The unapparent bat bite”
- Rabies exposure treatment
- Reporting bites
- Dog bite prevention

## Quiz #1 - What is rabies?

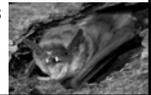
- A. A bacteria that eats flesh
- B. A virus that infects the brain
- C. A fungus that infects the toes



Photo stanford.edu

## What is rabies?

- Virus
- Transmitted in saliva, by bites
  - Contacts with blood, urine, feces of infected animal are NOT considered exposure.
  - Does not survive long outside of body
- Causes brain inflammation in mammals
- Fatal once symptomatic
- Kills 55,000 people per year worldwide
  - Most infected after dogs bites in other countries
  - Kills 1-3 Americans per year – often from bats
  - Many thousands of Americans exposed and treated.



## Quiz #2 - What is the most common incubation period for rabies in people?

- A. Twelve hours
- B. One or two days
- C. 4-12 weeks

Range = 10 days – 7 years.  
Several cases in US have had 1-2 year incubation periods.

## Human Rabies Symptoms

- Numbness, tingling of bitten limb
- Headache, flu-like signs
- Problems swallowing, drooling
- Fear of wind and water
- Agitation, disorientation
- Slurring of words
- Tremors, seizures
- Coma
- Death



## Rabies Symptoms - Animals

- Furious rabies
  - Aggressive, attacking drooling, unafraid.
- Dumb rabies
  - Weak, paralyzed, unafraid, drooling.



Photo utexas.edu

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## Quiz #3 - Which animal is the *MOST* likely to carry rabies?

- A. Coyote
- B. Squirrel
- C. Rat
- D. Bat



## Quiz #4 - Which animal is the *LEAST* likely to carry rabies?

- A. Skunk
- B. Squirrel
- C. Raccoon
- D. Bat



## Wild Animals

In California

- BATS and SKUNKS – highest risk of rabies
- Raccoons, foxes, and coyotes are also considered high rabies risks.
- Squirrels, rodents, rabbits – almost no risk.



Sizes of photos reflect relative risk Of rabies carriage in California as of 2007

## Dogs and cats

United States

- Low-to-moderate risk
- Dogs
  - Legally-required rabies vaccination since 1950s
- Cats
  - Vaccination laws vary
  - More rabid cats than dogs in US
- Before laws: thousands of rabies cases
  - 1937 – LA County rabies cases
    - Dogs – 1730
    - Cats – 20
    - Humans – 1

## Dogs and cats

### Outside United States

- Some rabies-free areas (England, Taiwan, New Zealand)
- Very high risk many places - dogs
  - 2005 Mexico – over 100 rabid dogs reported around Mexico City
  - 2006 China – over 3000 people died from rabies from dog bites
- Huge increase in smuggling of puppies into US since 2004
  - 10,000 crossing Mexican border/year, hundreds by air, forged papers
  - Sold by classified ads, swap meets, parking lots. \$\$\$\$
  - Are we importing rabid dogs?



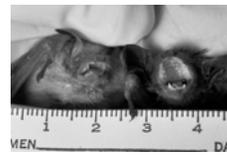
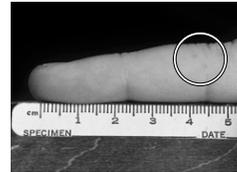
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Quiz #5 - You find a bat in a room with a child. You remove the child from the room, then you:

- A. Open the windows and try to get the bat to fly away.
- B. Kill the bat with a broom and throw it out.
- C. Cover the bat with a bucket to trap it (without touching it) and call Animal Control.

## Bat Bites



- Most human rabies in US from bites of insect-eating bats.
- Some bites too small to see.
- Bites from bats are considered rabies exposures.
  - Unless bat is tested and is negative.
- Bats found near children, pets, or sleeping people **MUST** be tested for rabies.
  - Even if there is no known bite.

Pictures courtesy CDC

Eastern pipistrelle and Silver-haired bat

Bats roosting in crevice between balcony and side of house, Woodland Hills, 2005.



## Bats and Rabies

- Most bats not rabid
  - Fewer than 1/1000
  - Protected by law
- Rabid bats
  - More likely to be
    - On ground
    - Flying in daylight
    - Near people, pets

## Rabid bats in LA

- Summer camp
  - 3 bats (2 rabid)
  - 14 children touched
- Elementary school
  - 3 bats (2 rabid)
  - None touched
- High school
  - 1 rabid bat, several “rescued” bats
  - Teacher helped kids take bats home
  - 6 students needed treatment
- 24 in 2007
  - usually 8-12



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## Quiz #6 - If a person is exposed to rabies, the treatment to prevent rabies is:

- Vaccine given four times in the upper arm over two weeks, plus one dose of immune globulin near bite wound.
  - One shot (vaccine) in the upper arm.
  - 30 shots (vaccines) in the stomach given over a two month period.
- Note: treatment must start LONG before symptoms appear.



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## Quiz #7 - A child says a dog bit him in the school yard. You:

- Inspect the injury, tell the nurse, tell the parents.
  - Same as #1, but also insist that the child's parents get rabies treatment for him.
  - Same as #1, but also:
    - Find out where the dog is now, what type of dog
    - Find out where it lives (if not a stray)
    - Report the bite to Public Health or Animal Control
- Note: child might not need rabies treatment.

## Reporting Animal Bites

### Who is required to report bites by law?

- Anyone with knowledge of bite
- Report to Public Health or Animal Control
- Location, description of animal important!

### What happens then?

- Dogs and cats
  - 10 day quarantine or test for rabies
- Horses, livestock
  - 30 day quarantine or test
- Wild mammals
  - No quarantine – test only
- Squirrel, rodent, rabbit bites NOT legally reportable

CA Laws: [www.dhs.ca.gov/ps/dccdc/disb/pdf/Rabies%20law%20and%20regs.pdf](http://www.dhs.ca.gov/ps/dccdc/disb/pdf/Rabies%20law%20and%20regs.pdf)

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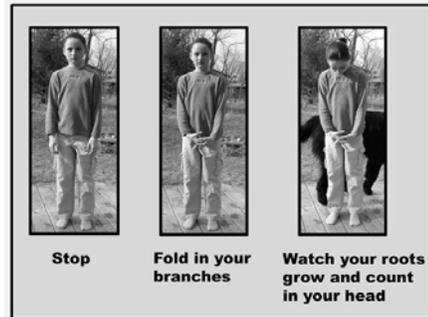
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## Quiz #8 - What should children do when approached by a stray dog?

- A. Hold out a hand for the dog to sniff it.
- B. Hold very still, arms held in to body, looking away from dog.
- C. Run away, scream for help

## Be A Tree



[www.be-a-tree.com](http://www.be-a-tree.com)

## Dog Bite Data

Every year in the U.S.

- 4.7 million bitten, 800,000 seek medical care, about a dozen die.<sup>1</sup>

Children and dog bites

- Age 4 years and younger
  - most bites to head and face
- Age 5-9 most frequently bitten
- Dog usually known to child (family or friend's dog)
- Child usually instigates confrontation

<sup>1</sup> – Centers for Disease Control and Prevention

## Dog Breeds and Dog Bites

Breed ≠ Bite risk prediction

Key factors determining dog's bite risk

- History
  - prior aggression to people, to other animals, predatory behavior
- Training and socialization
- Stress and pain level
- Dog-behavior education of children (and adults)

## Stray dog bite prevention for kids

- "Be a tree" (without branches)
  - Be quiet, motionless, hand in armpits, no eye contact with dog.
  - Do not run or scream!
- If dog begins to bite:
  - "Feed" bookbag or jacket to dog.
- If knocked to ground:
  - Fetal position, cover face and neck with hands.

## Owned Dog Bite Prevention

- Get right dog
- Exercise, socialize, train dog
- Notice dog's pain, feelings
- Seek medical care for dog
- Train children to "read" dog, stay away from dog's "things"
  - Dogs view children as siblings, not leaders
- Never leave small children alone with *any* dog (even a Chihuahua!)



Questions?

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