

# Don't Get Bit

Rabies Education

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# The Reader Will Be Able To...

- List three animals that can transmit rabies.
- Explain three ways rabies can be transmitted.
- Recall three symptoms of rabies in animals and people.
- Name three things that can be used to prevent rabies.
- Discuss three things to do if a person is bit by an animal.



# STOP...

Some pictures used in this power point are pictures of real animal bites.

These pictures may be disturbing to some people.



# What Is Rabies?

- Rabies is a disease caused by a virus that enters the body through a bite from an infected animal.
- This disease can cause death in almost every person if not treated quickly.
- Rabies is a zoonotic disease (a disease transmitted to people by animals),



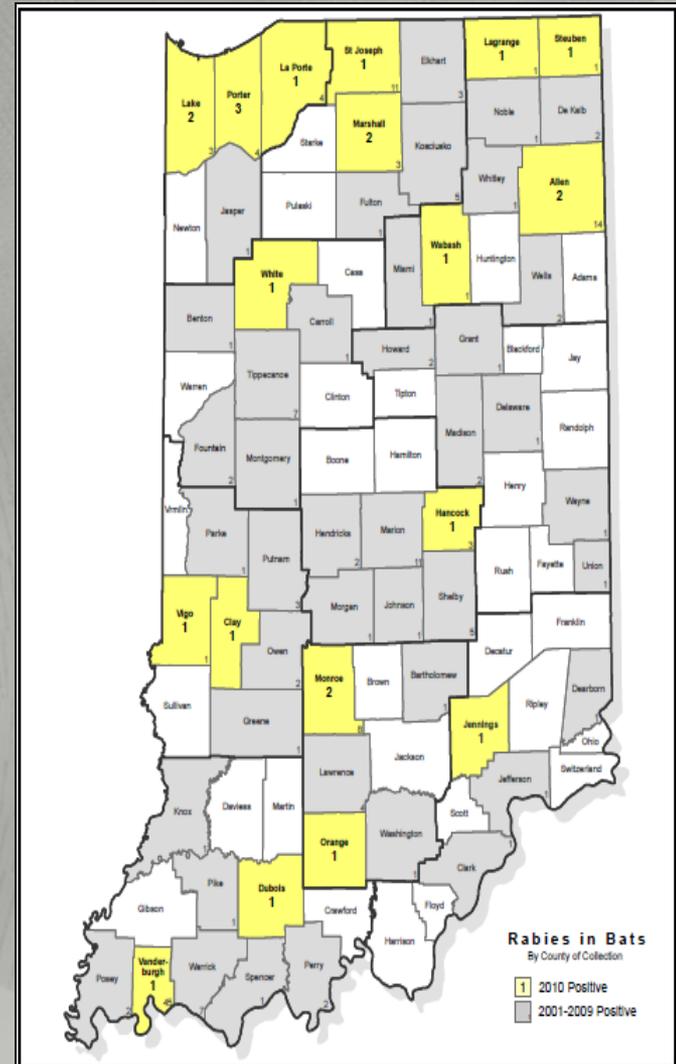
# Number Of Cases...

- Over the last 100 years, rabies in the United States has changed dramatically.
- More than 90% of all animal cases reported annually to CDC now occur in wildlife; before 1960 the majority were in domestic animals.
- The number of rabies-related human deaths in the United States has declined from more than 100 annually at the turn of the last century to one or two per year in the 1990's.



# Rabies In Indiana...

- Rabies in humans is most often caused by bats.
- While cat and dog bites may have some risk they are unlikely to have rabies in Indiana.
- Last positive dog: 1989; Last positive cat: 1984.



# What Animals Are Infected...

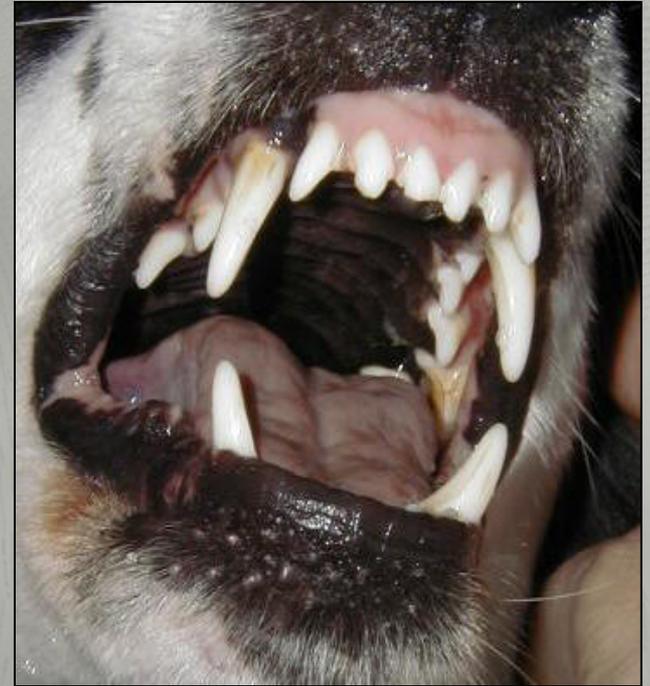
- All species of mammals are susceptible to rabies virus infection, but only a few species are important as reservoirs for the disease.
- While rabies has been identified in several species of mammals the following 5 are reservoirs in the U.S.
  - **Bats**
  - Raccoons
  - Skunks
  - Foxes
  - Coyotes





# Transmission of Rabies...

- Transmission of Rabies usually begins when infected saliva of a host is passed to an uninfected animal.
- The most common mode of rabies transmission is through the bite of an infected host.

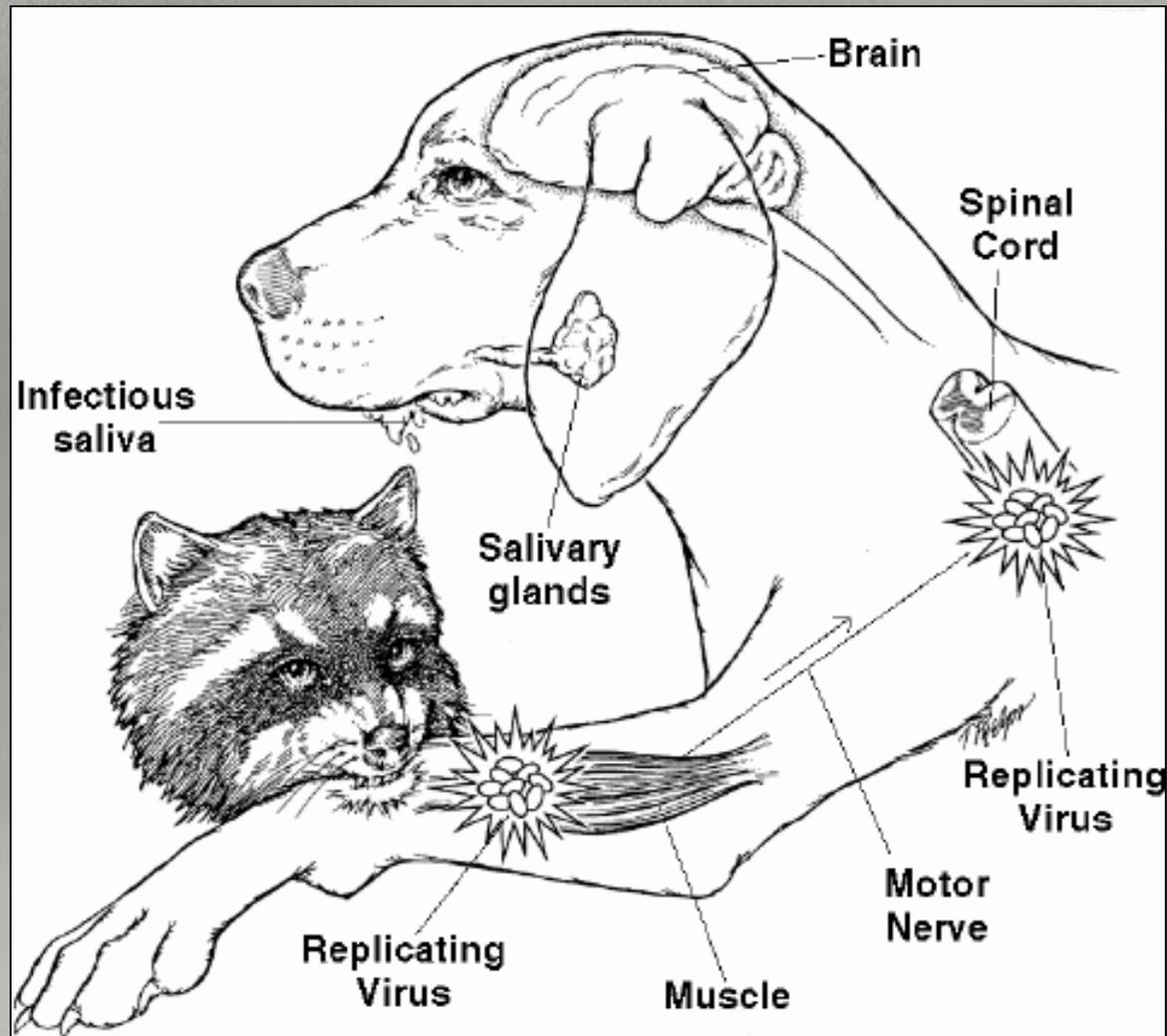


# The Infectious Path of the Rabies Virus

- Raccoon is bitten by a rabid animal.
- Rabies virus enters the raccoon through infected saliva.
- Rabies virus spreads through the nerves to the spinal cord and brain.
- The virus incubates in raccoon's body for approximately weeks to months. The raccoon has no signs of illness during this time.
- When it reaches the brain, the virus multiplies rapidly, passes to the salivary glands, and the raccoon begins to show signs of the disease.

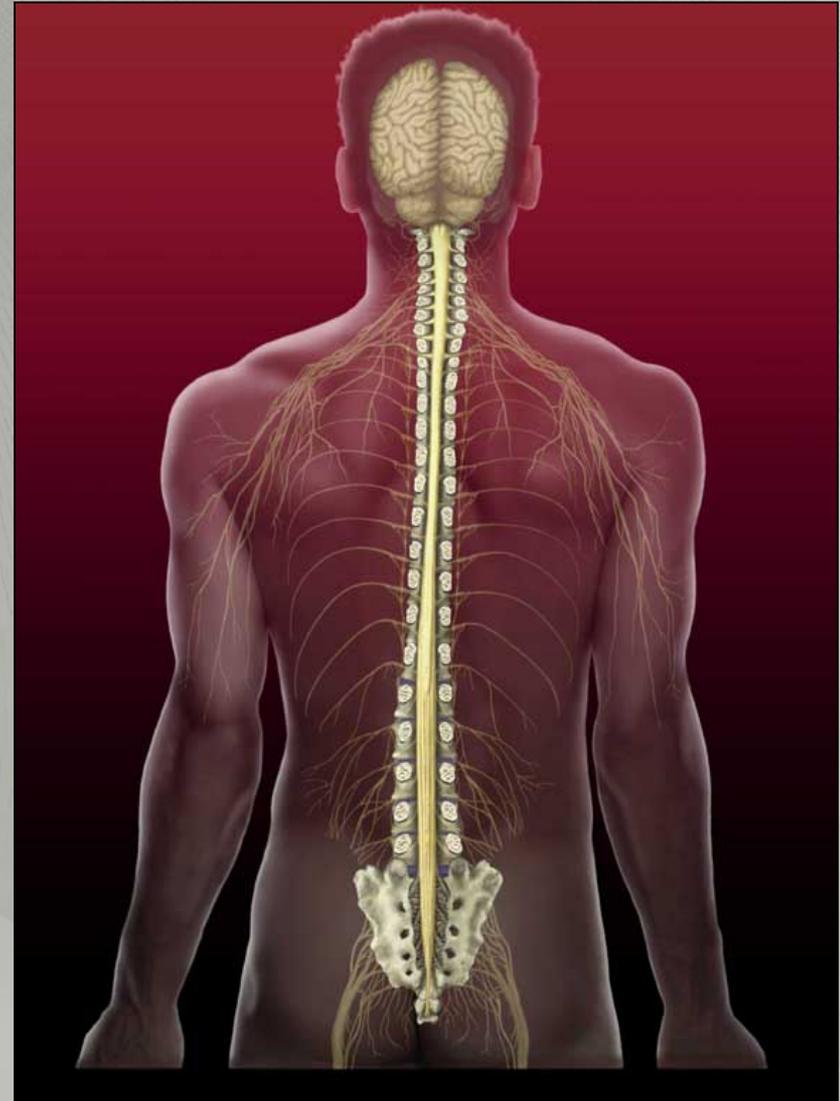


# Rabies Transmission In Animals...

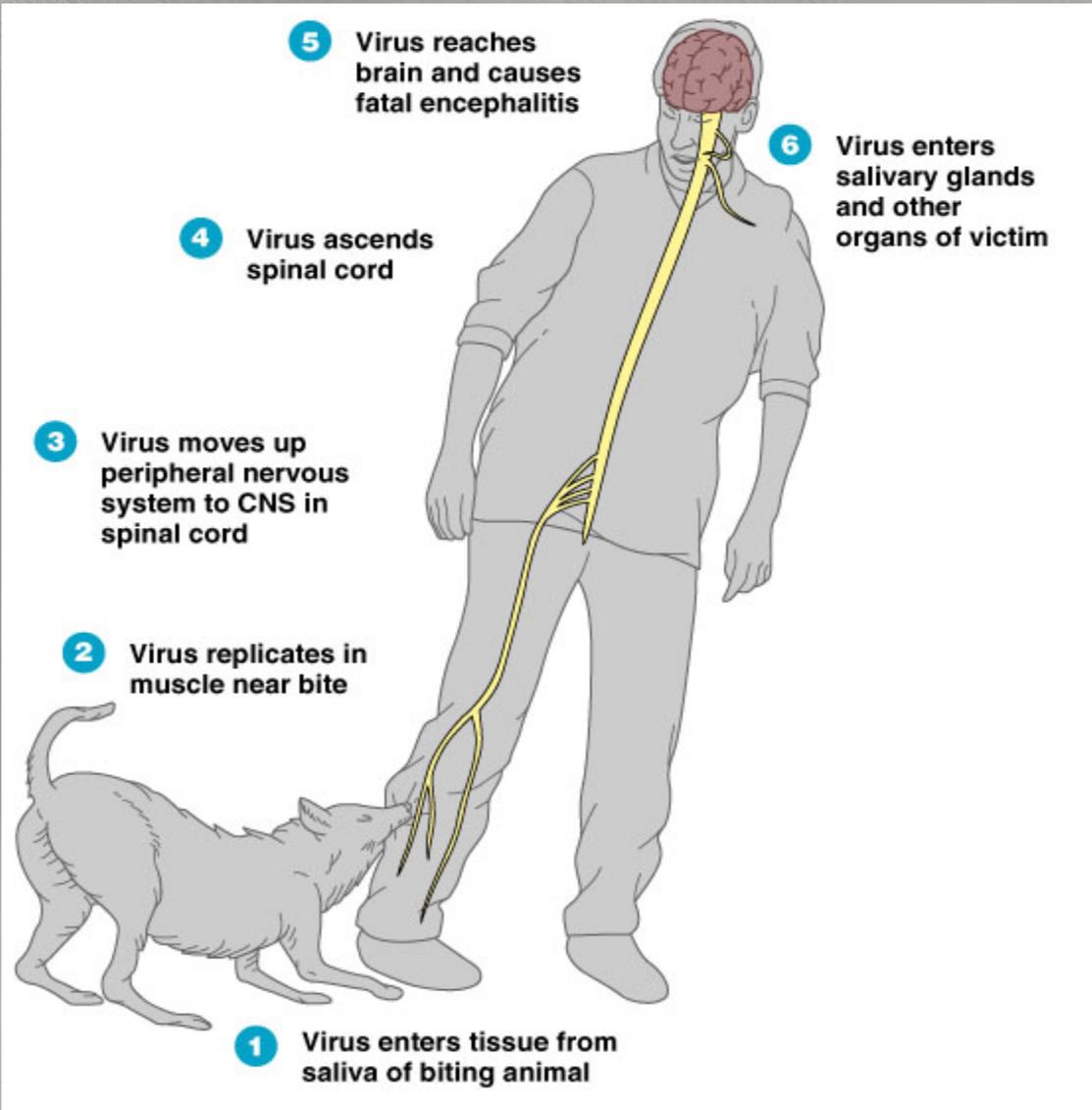


# What Does Rabies Do...

- If a person is bitten by an animal with Rabies, the virus proceeds from the bite or the wound into the nerve tissue.
- The virus then moves through the nerve tissue the spinal cord then reaches the brain.



# How Rabies Is Transmitted...



# Transmission...

- There has never been a documented case of human-to-human rabies transmission.
- In rare cases, the virus has been transmitted to tissue and organ transplant recipients from an infected organ.



# Other Material...

- Contact such as petting or handling an animal, or contact with blood, urine or feces does not constitute an exposure **EXCEPT BATS!**
- Due to bat grooming behaviors and the potential for unrecognized bites--direct skin contact with bats may be considered an exposure risk.
- Rabies virus becomes noninfectious when it dries out and when it is exposed to sunlight.
- Different environmental conditions affect the rate at which the virus becomes inactive. But in general, if the material containing the virus is dry, the virus can be considered noninfectious.



**DO NOT TOUCH A BAT  
WITH OUT GLOVES**

# Bats...

- Rabid bats may lose their ability to fly, or may not fly well.
- They will be found on the ground, in pools, lakes which makes them more likely to come in contact with people.
- A healthy bat typically avoids contact with people or animals and usually will not be found resting on the ground.



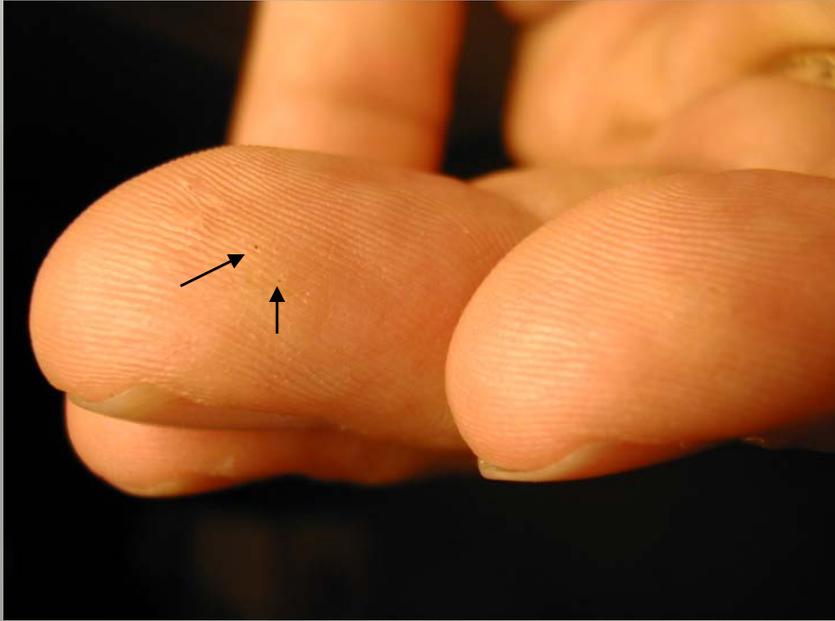
**DO NOT TOUCH A BAT  
WITH OUT GLOVES**

# Bat Bites...

- Bat bites may not be noticed because bat teeth are very tiny and razor sharp.
- Examining a person for a bat bite is unreliable, because bat bites can be no bigger than a needle prick.
- ANY direct contact with a bat should be considered a possible rabies exposure.



# Bat Bite...



**The brown dots are blood spots that disappear after a cleansing with soap and water**



**Big Brown Bat Bite**

Source: Nebraska Department of Health and Human Services

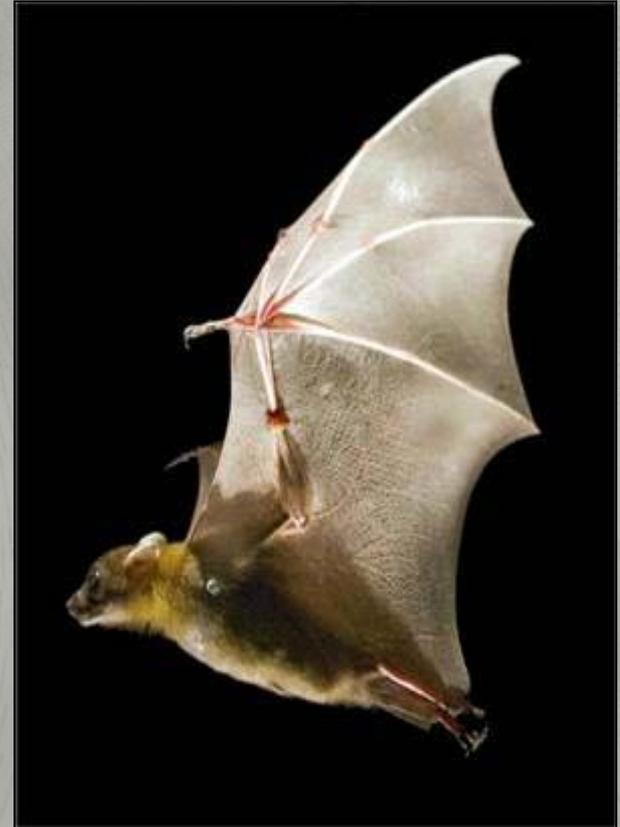
# Bat In A Room...

- If someone wakes up and finds a bat in the room, or a bat is found in the room of an unattended small child, an intoxicated or mentally incapacitated person, or pet the possibility exists that they have been bitten or scratched by the bat. They should call a health care provider ASAP!



# How To Capture A Bat...

- Bats should be captured ONLY if there has been direct contact with a person or pet, or if the bat was found in the room of someone who might have been exposed.
- Click on the bat to read how to capture a bat the safe way.



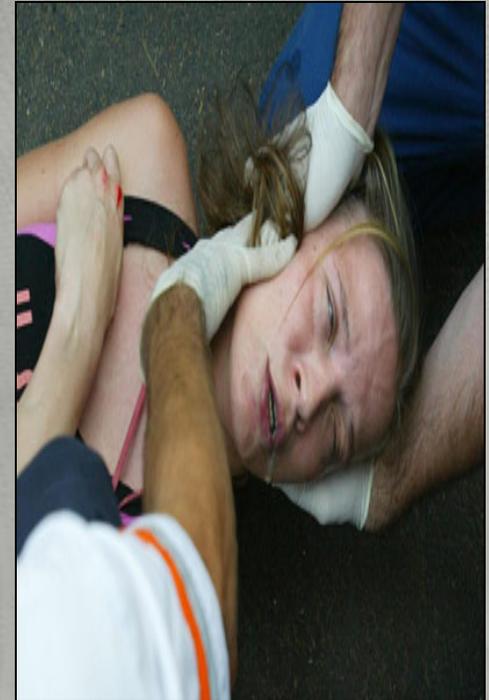
# Symptoms...

- The average time from symptoms in humans to develop is 3-12 weeks.
- One of the most distinctive signs of a rabies infection is:
  - Tingling or twitching sensation around the area of the animal bite.



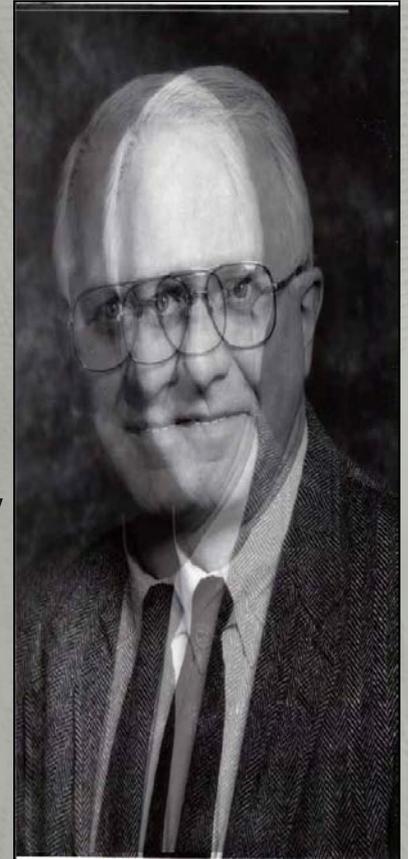
# Symptoms Of Rabies...

- As the infection progresses, someone infected with rabies may develop any of these symptoms:
  - Irritability, excessive movements or agitation
  - Confusion, hallucinations
  - Aggressiveness, bizarre or abnormal thoughts
  - Muscle spasms, abnormal postures, Seizures
  - Weakness or paralysis (when a person cannot move some part of the body)
  - Extreme sensitivity to bright lights, sounds, or touch
  - Increased production of saliva or tears
  - Difficulty speaking



# Symptoms Of Rabies...

- As the virus spreads to other parts of the nervous system, these symptoms may develop:
  - Double vision
  - Problems moving facial muscles
  - Abnormal movements of the diaphragm and muscles that control breathing
  - Difficulty swallowing and increased production of saliva, causing the "foaming at the mouth" usually associated with a rabies infection
- Once clinical signs of rabies appear, the disease is nearly always fatal, and treatment is typically supportive.



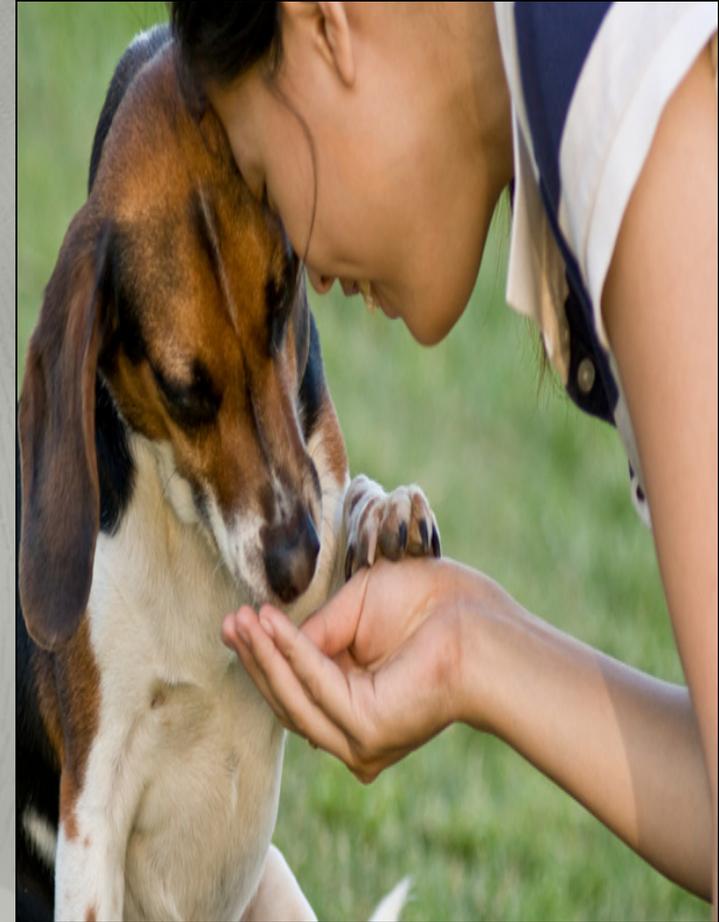
# Bites...

- Any penetration of the skin by teeth constitutes a bite exposure.
- All bites, regardless of body site, represent a potential risk of rabies transmission, but that risk varies with the species of biting animal, the anatomic site of the bite, and the severity of the wound.
- Bites by some animals, such as bats, can inflict minor injury and thus be difficult to detect.



# Bites...

- Was the bite from a provoked or an unprovoked attack?
- Bites inflicted on a person attempting to feed or handle an apparently healthy animal should generally be regarded as provoked.
- An unprovoked attack, is more likely to indicate that the animal is rabid.



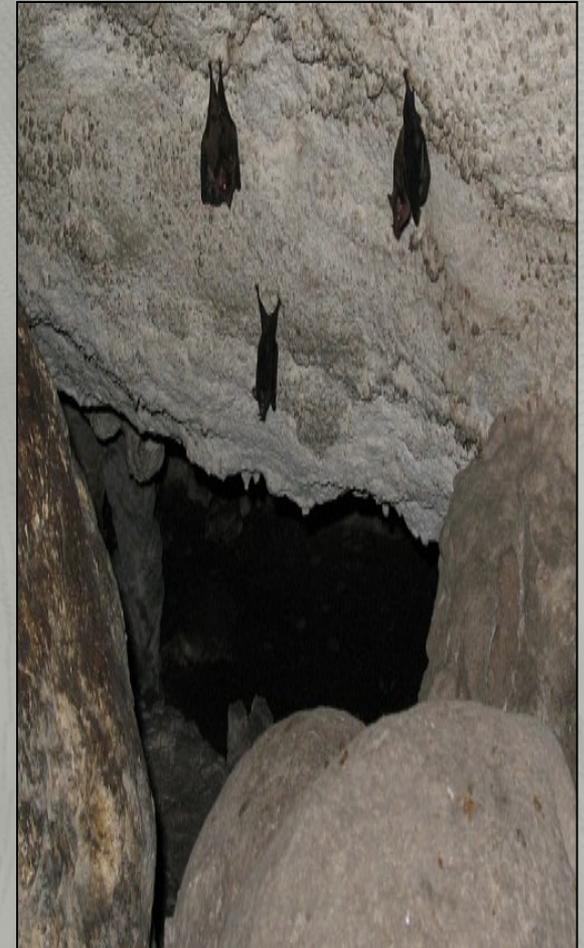
# Nonbites...

- The contamination of open wounds, abrasions, mucous membranes, or theoretically, scratches (potentially contaminated with infectious material from a rabid animal) constitutes a nonbite exposure.
- Other contact by itself, such as petting a rabid animal and contact with blood, urine, or feces of a rabid animal, does not constitute an exposure and is not an indication for treatment unless it is a BAT!



# Risk Factors...

- Traveling or living in developing countries where rabies is more common, including countries in Africa and Southeast Asia
- Activities that are likely to put you in contact with wild animals that may have rabies, such as exploring caves where bats live or camping without taking precautions to keep wild animals away from your campsite.



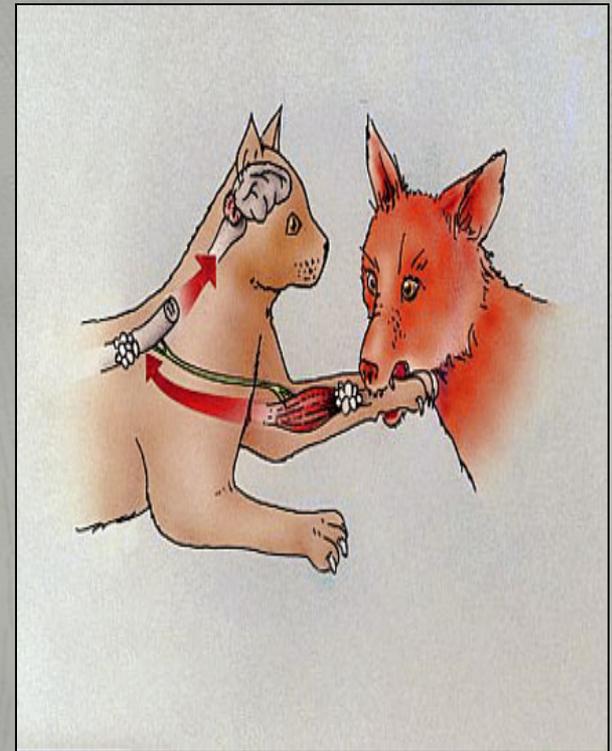
# Wound Location...

- Wounds to the head or neck may help the rabies virus travel to your brain more quickly.



# Risk For Pets...

- Any animal bitten or scratched by either a raccoon, skunk, fox, coyote or a bat that is not available for testing should be regarded as having been exposed to rabies.
- Unvaccinated dogs, cats, and ferrets exposed to a rabid animal should be euthanized immediately.
- If the owner is unwilling to have this done, the animal should be placed in strict isolation for 6 months and vaccinated 1 month before being released.



# Risk For Pets...

- Animals with expired vaccinations need to be evaluated on a case-by-case basis. Dogs and cats that are currently vaccinated are kept under observation for 45 days.
- Small mammals such as squirrels, rats, mice, hamsters, guinea pigs, gerbils, chipmunks, rabbits, and hares are almost never found to be infected with rabies and have not been known to cause rabies among humans in the United States.



# Risk For Pets...

- Bites by these animals are usually not considered a risk of rabies unless the animal was sick or behaving in any unusual manner and rabies is widespread in your area.



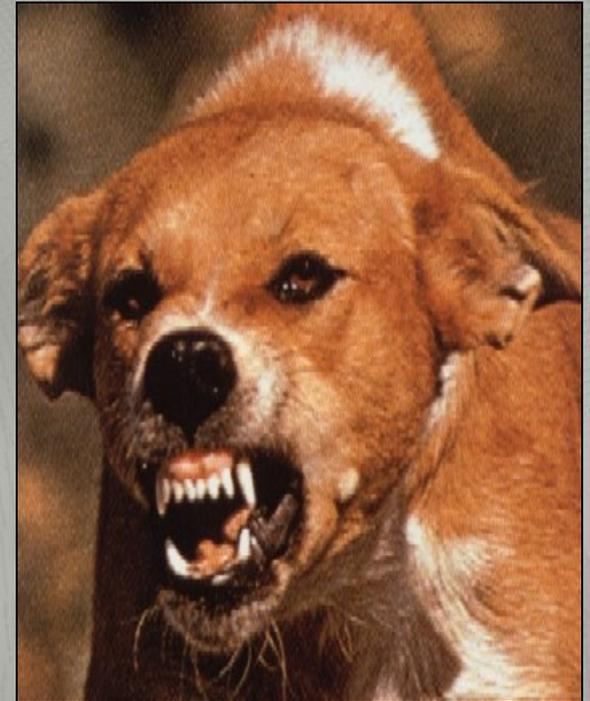
# What You Can Do For Your Pet...

- Visit your veterinarian with your pet on a regular basis and keep rabies vaccinations up-to-date for all cats, ferrets, and dogs.
- Maintain control of your pets by keeping cats and ferrets indoors and keeping dogs under direct supervision.
- Call animal control to remove all stray animals from your neighborhood since these animals may be unvaccinated or ill.



# Symptoms In Animals...

- Behavior change
- 80% become lethargic
- Starts to bite
- Uncoordinated
- Drooling
- Difficulty swallowing
- Paralysis of facial and throat muscles
- Rabid wild animals can lose their fear of humans



# What To Do...

- Wash the bite area with soap and water for 10 minutes and cover the bite with a clean bandage.
- Immediately call your doctor and go to a nearby emergency department.
- Anyone with a possible rabies exposure must be treated in a hospital.



# What To Do...

- Call local animal-control authorities to help find the animal that caused the bite.
- The animal may need to be detained and observed for signs of rabies.
- If you know the owner of the animal that has bitten you or your child or someone, get all the information about the animal, including vaccination status and the owner's name and address.



For animal control issues within your area click on the truck.

# What To Do...

- Notify your local health department, particularly if the animal hasn't been vaccinated.
- If you suspect that your child has been bitten by an unknown dog, bat, rat, or other animal, contact your doctor immediately or take your child to the emergency department.

**Official Indiana Animal Bites Report**  
Indiana State Department of Health  
State Form 14072 (R3/4-04)

Reporting Agency Case Number \_\_\_\_\_

Reporting Agency \_\_\_\_\_

Reporting by (name) \_\_\_\_\_

Reporting by (phone) \_\_\_\_\_

Received by (name) \_\_\_\_\_

Release Date \_\_\_\_\_

Incident On Off Property \_\_\_\_\_

Victim Type (circle 2)  
Human Animal / Juvenile Adult

Incident Location Address \_\_\_\_\_  
County \_\_\_\_\_  
Exposure Date \_\_\_\_\_

Reported Date \_\_\_\_\_ Reported Time \_\_\_\_\_

	VICTIM INFORMATION	OWNER INFORMATION
Victim	<b>Person bitten (if animal victim, use this space for animal victim's owner):</b> Last Name _____ First Name _____ Date of Birth _____ Sex <input type="radio"/> M <input type="radio"/> F Street Address _____ City _____ Zip _____ Telephone Home: _____ Work: _____	<b>Owner of Animal:</b> Last _____ First _____ Mid. _____ Date of Birth _____ Street Address _____ City _____ Zip _____ Sex <input type="radio"/> M <input type="radio"/> F Home Telephone _____ Work Telephone _____ Biting Animal: Dog <input type="radio"/> Cat <input type="radio"/> Other <input type="radio"/> Color/Markings _____ Name _____ Sex <input type="radio"/> M <input type="radio"/> F <input type="radio"/> Y <input type="radio"/> N Neutered <input type="radio"/> Y <input type="radio"/> N
	<b>Parent if victim is a juvenile:</b> Last _____ First _____ Mid. _____ Street Address _____ City _____ Zip _____ Telephone Home: _____ Work: _____	Breed _____ Animal's veterinarian _____ Prior incidents _____ Rabies/Vaccine <input type="radio"/> Y <input type="radio"/> N Date _____ Rabies Tag Number _____ License Number _____ Microchip Number _____ Citation issued? <input type="radio"/> Y <input type="radio"/> N
Animal	<b>If animal victim:</b> Breed/Species _____ Color/Markings _____ Name _____ Vaccine Date (rabies) _____ Sex <input type="radio"/> M <input type="radio"/> F (if animal victim) Quarantined? Yes <input type="radio"/> No <input type="radio"/> Time of bite _____ Treating Physician (or veterinarian) Name _____ Telephone: _____	Location of Quarantine _____ Date of Quarantine _____ Quarantined by (name) _____ Release Date _____ Released from Quarantine by (name): _____ Owner release card (date received): _____ Released from shelter quarantine (date): _____ Lab #/Result: _____
Incident & Circumstances	<b>Location on Body and Extent of Injury:</b> Victim's statement of incident (animal owner if animal victim): _____	<b>Animal owner's statement of incident:</b> _____
	<b>State Department of Health required information (must be completed):</b> Species (fill in the correct biting species): <input type="radio"/> Bat <input type="radio"/> Dog <input type="radio"/> Hyster <input type="radio"/> Raccoon <input type="radio"/> Cattle <input type="radio"/> Ferret <input type="radio"/> Horse <input type="radio"/> Rat <input type="radio"/> Cat <input type="radio"/> Fox <input type="radio"/> Mouse <input type="radio"/> Squirrel <input type="radio"/> Chipmunk <input type="radio"/> Gerbil <input type="radio"/> Rabbit <input type="radio"/> Other _____ If other, specify _____ Did the animal exhibit any of the following: <input type="radio"/> Convulsions <input type="radio"/> Aggression <input type="radio"/> Inability to eat/drink <input type="radio"/> Excessive salivation <input type="radio"/> Paralysis <input type="radio"/> Depression	<b>Circumstances:</b> <input type="radio"/> Animal confined (indoors, penned, tethered, or on leash) <input type="radio"/> Animal not confined (stray, roaming, etc.) <input type="radio"/> Wild Animal <input type="radio"/> Provoked <input type="radio"/> Unprovoked <input type="radio"/> Unknown <input type="radio"/> Other _____ <b>Action taken with animal:</b> <input type="radio"/> No Action <input type="radio"/> Body destroyed <input type="radio"/> Escaped/not found <input type="radio"/> Head sent to ISDH Lab <input type="radio"/> Pet quarantined (see dates above) <input type="radio"/> Other _____ (log see form only) <input type="radio"/> Unknown
	I, the undersigned, have received a copy of the quarantine guidelines, have read them, and understand them. I agree to comply with all provisions of the quarantine guidelines and understand that noncompliance may result in seizure of my pet if it is in home quarantine or loss of my pet if it is not properly claimed at the end of the quarantine period from the quarantining agency.	
	Witness _____ Date _____	Signature _____

DISTRIBUTION: White - Enforcing Agency, Canary - Local Health Department, Pink - Owner

# Diagnosis

- In animals, rabies is diagnosed using direct antibody test, which looks for the presence of rabies virus antigens in brain tissue.
- In humans, several tests are required.
- Within a few hours, a diagnostic laboratory can determine whether or not an animal is rabid and inform the responsible medical personnel.
- The laboratory results may save a patient from unnecessary physical and psychological trauma, and financial burdens, if the animal is not rabid.



# Treatment...

- In the United States, postexposure prophylaxis consists of a regimen of one dose of immune globulin and four doses of rabies vaccine over a 14-day period.
- Rabies immune globulin and the first dose of rabies vaccine should be given by your health care provider as soon as possible after exposure.



# Rabies Immunoglobulin (RIG)

- This is only given once to people who have been bitten by a high risk animal.
- The goal of RIG to provide immediate, passive antibodies to the bite victim.
- RIG may be given up to 7 days after the first dose of vaccine.
- RIG is weight based and it is often necessary to give several injections at the same time to get it all into the body.



# Treatment...

- The first vaccine is given on day 0, then given on days 3, 7, and 14, for a total of 4 doses of vaccine.
- Current vaccines are relatively painless and are given in your arm, like a flu or tetanus vaccine.



# Course Evaluation...

Please Take A Few Minutes To Complete The Course Evaluation.

Click On The Bat



# Source...

- American Veterinary Medical Association
- Centers For Disease Control
- Indiana State Department Of Health
- Kids Health
- Mayo Clinic
- Med Line
- Merck Veteran Manual
- National Association of State Public Health Veterinarians, Inc
- World Health Organization

