

Zoonosis Trivia

Test your knowledge by answering the following questions. The answers are listed below.

1. What animal was responsible for the spread of plague in Europe between 1348 & 1350?
2. Leishmaniasis is transmitted through the bite of a female _____?
3. What RNA virus is commonly carried in deer mice/wild rodents and causes flu-like symptoms in humans?
4. What is the third leading cause of death from food poisoning (according to the CDC) and is one of the reasons we pasteurize milk?
5. What common animal parasite is associated with the migration of larvae in humans causing damage to the eyes and lower respiratory infections and can be found in sandboxes?
6. What disease is spread by mosquitoes and is notorious for grossly swollen body parts?
7. True or False. HCPHES Veterinary Public Health animal control officers have the authority to enter any secured or fenced lot, tract or parcel of land for the purpose of seizing a stray dog or cat.
8. According to the CDC, what is considered the leading bacterial cause of foodborne related diarrhea?
9. True or False. In Harris County, a veterinarian can determine if a biting animal is allowed home quarantine.
10. According to the CDC, what "Neglected Parasitic Infection" is considered to be the leading cause of death attributed to foodborne illness in the United States?

Answers: 1. Rats 2. Phlebotomine sandfly 3. Hantavirus 4. *Listeria monocytogenes* 5. *Toxocara* spp. 6. Elephantiasis 7. False 8. *Campylobacteriosis* 9. False 10. Toxoplasmosis

Harris County Public Health & Environmental Services
 Veterinary Public Health
 612 Canino Rd
 Houston, Texas 77076

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612 Canino Rd., Houston, Texas 77076
 Phone: 281-999-3191 Fax: 281-847-1911

Zoonotic diseases During Hunting Season



www.tpwd.state.tx.us

Did you know that more than one million hunters in Texas are in the midst of hunting season? Hunters and their dogs can be at risk of zoonotic diseases from infected animals, insect vectors and contaminated soil and water. While there are over 150 recognized zoonotic diseases, those significant to hunters, campers, hikers and their companion animals in Texas include: Anthrax, Chagas,

Hanta virus, Lyme, Rocky Mountain Spotted Fever, Tularemia, Ehrlichiosis, Typhus, Plaque, Q fever, Rabies, Salmonellosis, Brucellosis, Dengue fever and West Nile Virus. Below are a few recommendations to prevent a majority of these zoonotic diseases. The most important public health intervention to prevent most of these diseases is to wash hands effectively before and after handling an animal.

Animal bites:

Rabies is one of the most fatal diseases in warm blooded mammals. It is most common in high risk species such as bats, skunks, foxes, coyotes, and raccoons. To avoid rabies, avoid animals that show abnormal behavior e.g. aggressiveness, too friendly, disoriented, wandering aimlessly, out during the day when normally a nocturnal animal, showing signs of sickness or paralysis. Avoid touching dead animals. Rabies is a reportable disease. Please report any suspicious animals to the game warden. If a hunter is bitten or has physical contact (scratch or direct contact with brain or saliva) with a potential rabid animal, wash the affected area with soap and water. If possible, confine the animal appropriately and contact your local health department for rabies testing. If the animal is not available for testing, contact your local health department and your physician to discuss rabies post exposure prophylaxis (PEP). To avoid rabies in domestic animals, vaccinate against rabies. Prevent exposure between domestic animals and potentially rabid animals. If



Bat Bite: <http://agriflife.org/batsinschools/>

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Zoonosis Staff

Dipa Brahmhatt
 VMD, MPH, MS
 Zoonosis Veterinarian
 713-418-1801
dbrahmbhatt@hcphe.org

Tiffany Guidry, BS
 Veterinary/Zoonosis Technician
 713-418-1828
tguidry@hcphe.org

Websites:
www.hcphe.org/vph
www.countypets.com

Zoonosis: any infectious disease that is transmissible from animals to humans.

exposure does occur, report the incident to your local health department. Also, see a veterinarian as soon as possible for rabies PEP in animals.

Tick borne diseases: Examples of a few important zoonotic tick borne diseases in Texas are: Anaplasmosis, Ehrlichiosis, Rocky Mountain Fever, Lyme, and Tularemia. The clinical signs in both humans and animals can be very nonspecific and the best way to reduce the risk of these diseases is by preventing a tick bite.

Human prevention guidelines: Apply tick repellants to exposed skin and clothing. DEET and picaridin are common active ingredients in insect repellants. If the skin becomes wet from water or perspiration, dry the area with a towel and reapply the product. Permethrin repellants can be used only for outer clothing and shoes (not recommended for use on skin). Wear long sleeved shirts and long pants (tuck in your socks). Conduct a full tick check on the body after outdoor activities. In children, check behind the ears, back of the neck, around the waist and along the hairline. Remove the tick by using fine tipped tweezers, grasping the tick as close to the skin's surface as possible. Do not twist the tick, heat it with a match or soak it in alcohol before removal. After removal of the tick, the area can be cleaned with an antiseptic.

Prevention in hunting dogs: Treat the dogs with a topical acaricides e.g. fipronil, pyrethroids, amitraz or repellants (pyrethroids). Also, conduct a full body check after any outdoor activities and remove any tick appropriately, as soon as possible, as described above.

Mosquito borne diseases: The most common arboviral diseases in Texas, transmitted by mosquitos, are West Nile virus (WNV) and Dengue Fever. In 2013, Texas had 95 human cases of Dengue and 183 (113 neuroinvasive and 70 with fever) human cases of West Nile Virus. The best way to prevent these diseases is to avoid mosquito bites. Try to avoid outdoor activities during dusk and dawn as mosquito counts peak during those times. Wear long sleeved clothing when engaging in outdoor activities. When going outdoors, apply insect repellants to exposed skin and/or clothing (as directed on the product label). The following are examples of common active ingredients found in insect repellants: DEET, picaridin, IR3535, and some oils. Oils of lemon eucalyptus and para-methane-diol may provide longer-lasting protection. Mosquito-proof your house by installing and/or repairing screens on windows and doors. Empty standing water sources around your home (e.g. flowerpots, pool covers, pet water dishes, tires and birdbaths) on a regular basis. Dogs are less likely to contract arboviral diseases, but it is necessary to keep them on a monthly heartworm prevention to avoid heartworm disease.

Foodborne diseases/ Handling and cleaning carcass: Salmonellosis, Anthrax, Brucellosis. Do not shoot, consume or handle animals that behave abnormally or are ill. Report unusual behavior in animals to Texas Parks & Wildlife. Do not eat, smoke or drink while cleaning the carcass. Wear latex



Erythematous rash on posterior right arm of a woman who contracted Lyme disease
http://phil.cdc.gov/phil/details_linked.asp?pid=9874

gloves when field dressing any animal. Have an antler specific saw (if needed) and dispose of the blade after use. Avoid direct contact with any brain or spinal fluid from animals. Do not consume abnormal meat, brain, spinal cord, eyes, spleen, tonsils and lymph nodes from the animals. Do not consume any part of the carcass if the intestines have any abnormal smell or discharge or if blood unassociated with a bullet/shot/arrow is seen in the muscle. During warm weather (> 65°F) make sure that bags of ice are placed in the body cavity and protect the carcass against flies. Disinfect tools for processing the meat by mixing 1 tablespoon of bleach in 1 gallon of water. Do not eat undercooked or raw meat. Cook meat at 150 – 180 °F and use a meat thermometer to monitor the temperature. Do not feed dogs any raw, uncooked or blemished meat. Since dogs can acquire parasites from wild meat, their health should be monitored, frequent parasite exams performed, and appropriate anthelmintics administered when needed.

When in doubt, please do not hesitate to call your zoonosis veterinarian, Dr. Brahmhatt, at Harris County Veterinary Public Health at (713)418-1801.

References

AVMA: <https://www.avma.org/public/Health/Pages/Disease-Precautions-for-Hunters.aspx>
 CDC: http://www.cdc.gov/ticks/removing_a_tick.html; http://www.cdc.gov/ticks/avoid/on_pets.html;
<http://www.cdc.gov/westnile/prevention/index.html>
 DSHS: [http://www.dshs.state.tx.us/idcu/health/zoonosis/outdoor/;](http://www.dshs.state.tx.us/idcu/health/zoonosis/outdoor/file:///C:/Users/dbrahmbhatt/Downloads/2013WNVAnnual.pdf)
[file:///C:/Users/dbrahmbhatt/Downloads/2013WNVAnnual.pdf](http://www.dshs.state.tx.us/idcu/health/zoonosis/outdoor/file:///C:/Users/dbrahmbhatt/Downloads/2013WNVAnnual.pdf)
 Texas Game Wardens: <http://www.tpwd.state.tx.us/>



Cutaneous anthrax lesion on the neck
Image courtesy of the Public Health Image Library, US Centers for Disease Control and Prevention

Zoonotic disease fact sheets are available at <http://www.hcpes.org/vph/Publications/index.html>.

Zoonotic Disease Conference

The 7th Annual Zoonotic Disease Conference was held Sunday, September 14, 2014 at Baylor College of Medicine.

Many thanks to the National School of Tropical Medicine at Baylor College of Medicine, HCVMA, Merial & the Jacob & Terese Hershey foundation for their support!

The 8th Annual Zoonotic Disease Conference is tentatively scheduled for September 13, 2015.

Topics for the 2015 conference will include Ebola, MRSA and other zoonosis related presentations.

We hope you join us this year!

