



Office of Disease Control
and Health Protection

EPI-LOG

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To report a disease or outbreak:

Phone: 386-274-0634 M-F, 8 a.m.-5 p.m.
Fax: 386-274-0641
After hours: 386-316-5030
P.O. Box 9190, Bin #111
Daytona Beach, FL 32120-9190

Non Food-borne *Salmonella*
By: David Parfitt, MPH

It is estimated that the bacteria *Salmonella* causes one million illnesses in the United States annually. Symptoms typically develop between 12 and 72 hours after infection and can consist of fever, diarrhea and abdominal cramps. Those who are elderly, young or immune compromised are most susceptible to severe illness. While transmission to humans is usually from contaminated food, many animals, including pets, can carry the illness. This can include but not limited to reptiles, amphibians and birds. The Centers for Disease Control and Prevention (CDC) suggests that approximately 3 percent of households in the United States own a reptile, including turtles, lizards and snakes. An estimated 70,000 individuals are infected with salmonellosis each year from reptile contact. A recent outbreak of salmonellosis was caused by the bacteria *Salmonella* Cotham and *Salmonella* Kisarawe linked to the handling of bearded dragons a popular pet reptile. The outbreak impacted 166 individuals across 36 states. In addition, multi-state outbreaks of salmonellosis linked to small turtles and turtle habitats have also occurred.

In addition, amphibians such as frogs, salamanders and newts can also carry the bacteria. A nationwide outbreak investigated from 2009-2011 which involved 42 states was associated to African dwarf frogs and their habitats. The outbreak of salmonellosis from *Salmonella* Typhimurium was connected to a breeding facility in Madera County, California. Pet owners can take some simple precautions to reduce the risk of amphibian or reptile associated salmonellosis. Always wash hands after handling, feeding or cleaning the habitat of any reptile or amphibian. Supervise children when handling amphibians or reptiles and assist with hand washing. Children under the age of five should be particularly cautious. Also, do not clean habitats in areas used for food preparation and seek medical care if experiencing any of the associated symptoms.

Increasingly residents are maintaining live poultry flocks in backyards as an alternative to

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the growing concerns of factory farms and to maintain a greener lifestyle. Live poultry can carry *Salmonella* on their bodies and can spread the bacteria through their feces all while appearing healthy. Backyard poultry enthusiasts should take precautions when handling these birds including cleaning cages. Basic protections include washing hands, keeping hands away from the mouth, not allowing live poultry inside the home and to thoroughly cook eggs. In addition, children under the age of five and those with weak immune systems should not handle live poultry. These simple safeguards can help ensure a healthy home while enjoying the benefits of backyard flocks. Physicians and health care providers should inquire about animal exposures with suspect salmonellosis cases.

Animal	Year	Cases	Hosp	States
Frozen Feeder Rodents	2014	41	7	21
Live Poultry	2014	251	80	37
Pet Bearded Dragons	2014	150	64	35
Live Poultry	2013	356	62	39
Live Poultry	2013	158	29	30
Small Turtles	2013	473	78	43
Hedgehogs	2012	26	8	12
Live Poultry	2012	46	13	11
Live Poultry	2012	93	21	23
Live Poultry	2012	195	34	27
Dry Dog Food	2012	49	10	20
African Dwarf Frogs	2011	241	72	42
Chicks and Ducklings	2011	68	19	20
Frozen Rodents	2010	34	1	17
Water Frogs	2010	85	16	31
Dry Pet Food	2007	62	18	10

Non food-borne *Salmonella* outbreaks 2007-2014

For further information contact the Florida Department of Health in Volusia County at 386-274-0651 or visit the Florida Department of Health (Animal Contact and Human Health) webpage at <http://www.floridahealth.gov/diseases-and-conditions/diseases-from-animals/index.html>.

Tuberculosis Blood Tests

By: Cynthia Adams, RN

Up until 2001 the only way to diagnose latent tuberculosis infection (LTBI) was with the tuberculin skin test (TST). There are concerns and limitations with the use and interpretation of the TST. In this article I will discuss the use of blood tests for the detection of tuberculosis (TB) infection.

An Interferon Gamma Release Assay (IGRA) is a blood test that can determine if a person has been infected with TB bacteria. An IGRA measures how strong a person's immune system reacts to TB bacteria. Two IGRAs are approved by the U.S. Food and Drug Administration (FDA) and are available in the United States:

- 1) QuantiFERON TB Gold in-Tube test (QFT-GIT)
- 2) T-SPOT TB test (T-Spot)

A positive IGRA result means that a person has been infected with TB bacteria. Additional tests are needed to determine if the person has LTBI or TB Disease. A negative IGRA result means that the person's blood did not react to the test and that LTBI or TB Disease is not likely.

An IGRA can be used in place of a Tuberculin Skin Test (TST,) for any situation where a TST is recommended. In general, a person should have either a TST or an IGRA, but not both. Factors in selecting which test to use include the reason for testing, test availability and cost.

Certain people should be tested for TB bacteria because they are more likely to get TB Disease, including:

- People who have spent time with someone who has TB Disease
- People with HIV infection or another medical problem that weakens the immune system
- People who have symptoms of TB Disease (fever, night sweats, cough, coughing up blood and weight loss)
- People from a country where TB Disease is common (most countries in Latin America, the Caribbean, Africa, Asia, Eastern Europe and Russia)
- People who live or work in congregate settings such as homeless shelters, prisons, jails or nursing homes
- People who use illegal drugs

If a person is found to be infected with TB bacteria, further evaluation is needed. TB Disease can be diagnosed by medical history, physical examination, chest x-ray and other laboratory tests. TB Disease is treated with a combination of drugs as recommended by a health care provider. If a person does not have TB Disease, but has TB bacteria in the body and a normal chest x-ray, then LTBI is diagnosed. The decision about taking treatment for LTBI will be based on a person's chances of developing TB Disease and their willingness to comply with the recommended medication regimen until treatment is completed.



Clostridium difficile

By: April Pojero, RN [Florida Hospital Memorial Medical Center]

Hospital acquired infections (HAI) and antibiotic resistance have been hot topics in the news over the last several years. HAIs are commonly caused by antibiotic resistant bacteria. Earlier this year the White House released the National Action Plan for Combating Antibiotic-Resistant Bacteria. There are many different organisms that can be spread in healthcare settings. One of the most common is *Clostridium difficile*.

Clostridium difficile (C. diff) is a spore-forming anaerobic bacteria causing life-threatening diarrhea. C. diff causes close to half a million illnesses and approximately 29,000 deaths each year.

You may be at risk if you are on antibiotics, proton pump inhibitors such as over the counter Protonix, Nexium, or Prevacid. You may also be at risk if you have been in a healthcare setting such as a hospital or nursing home. More than 80 percent of C. diff deaths occur in people 65 years and older, however, a healthy and young individual can also become infected.



C. diff is spread by touching unclean surfaces, especially in healthcare settings, contaminated with feces from an infected person. Eating before washing your hands after touching an infected surface is a sure fire way to contract C. diff and DILIGENT hand hygiene is STRONGLY suggested to help reduce the risk of C. diff infection.

Taking antibiotics improperly can also cause bacteria to become "Super-bugs" and become resistant to current antibiotics, so complying with physicians antibiotic directions are strongly encouraged.

If you suspect you or a loved one may have contracted C. diff, contact your physician to be tested for this bacteria in a timely fashion to prevent spread the of infection to family and friends, and to get proper medical attention before it becomes deadly!

For more information go to: http://www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html

Volusia County Disease Activity*	2nd Quarter 2015	2nd Quarter 2014	YTD 2015 (30 Jun)	Full Year 2014
Vaccine Preventable				
Mumps	0	1	0	1
Pertussis	0	4	2	17
Varicella	4	2	4	8
CNS Diseases and Bacteremias				
Creutzfeldt-Jakob disease (CJD)	0	0	0	2
Haemophilus influenzae (invasive)‡	1	1	1	6
Meningitis (bacterial, cryptococcal, mycotic)	1	1	1	1
Meningococcal disease	0	0	1	0
Staphylococcus aureus (GISA/VISA)	0	0	0	0
Streptococcus pneumoniae (invasive disease)‡	2	10	5	34
Enteric Infections				
Campylobacteriosis	26	18	43	61
Cryptosporidiosis	7	4	13	49
Cyclosporiasis	0	0	0	1
Escherichia coli, shiga-toxin producing (STEC)	1	4	1	17
Giardiasis	5	5	6	16
Listeriosis	1	0	1	0
Salmonellosis	26	29	52	146
Shigellosis	3	7	3	19
Typhoid Fever	0	0	0	0
Viral Hepatitis				
Hepatitis A	0	0	0	2
Hepatitis B, acute	2	0	4	6
Hepatitis B, chronic	22	24	41	84
Hepatitis C, acute	1	0	3	2
Hepatitis C, chronic	211	194	390	745
Hepatitis E	0	0	0	0
Hepatitis +HBsAg in pregnant women	1	2	1	7
Vector Borne, Zoonoses				
Brucellosis	0	1	0	1
Chikungunya	0	0	0	4
Dengue Fever	0	0	0	1
Ehrlichiosis/Anaplasmosis	2	1	2	2
Lyme disease	1	1	3	11
Malaria	0	0	0	2
Monkey bite	0	0	0	0
Q Fever, acute	0	0	0	0
Rabies, animal	0	2	0	3
Rabies (possible exposure)	47	40	59	116
Rocky Mountain spotted fever/Spotted Fever	2	0	3	0
Rickettsiosis	2	0	3	0
West Nile virus, neuroinvasive	0	0	0	4
HIV/AIDS†				
HIV	28	27	69	119
AIDS	9	15	24	54
STDs†				
Chlamydia	501	409	898	1672
Gonorrhea	148	119	280	438
Syphilis				
Infectious (Primary and Secondary)	5	6	9	17
Early latent (Infection for <1 year)	4	6	5	11
Late latent (Tertiary)	5	8	7	32
Latent, unknown duration	0	8	0	8
Others				
Carbon monoxide poisoning	6	14	15	27
Ciguatera Fish Poisoning	0	1	0	1
Hansen's Disease (Leprosy)	0	0	2	2
Hemolytic Uremic Syndrome	0	0	0	0
Influenza due to novel or pandemic strains	0	0	0	0
Influenza-associated pediatric mortality	0	0	0	0
Lead poisoning	1	0	1	6
Legionellosis	0	2	0	7
Pesticide related illness or injury	0	0	0	0
Tuberculosis	-	-	2	8
Vibriosis	1	0	1	4

*Includes reported confirmed/probable cases. Data is provisional and subject to change.
† Numbers are for Area 12 (Volusia/Flagler)
‡ Only reportable for young children

World Rabies Day 2015

By: Paul Rehme, DVM, MPH

End Rabies Together is the theme for World Rabies Day 2015 which we recognize on September 28. There are an estimated 55,000 rabies deaths every year worldwide. We do not see human cases routinely in the United States (2-3 deaths each year) but spend an estimated 500 million dollars annually for rabies prevention.

We continue to see rabid animals in the state of Florida but through diligent use of rabies post-exposure prophylaxis we have not had a Florida acquired human case since 1948. We have not had an animal test positive for rabies in Volusia County in over a year but that doesn't mean we should let our guard down.

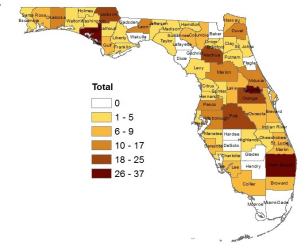
Because rabies is essentially 100% fatal, all animal bites should be evaluated to determine the rabies risk. Bites (or any potential for saliva exposure) from raccoons, bats, skunks, and stray domestic animals are considered high risk, while those from unvaccinated dogs, cats, or ferrets kept as pets are considered to be medium risk. Exposures by wild rodents, opossums, mice, livestock, and immunized dogs, cats, or ferrets are considered low-risk for rabies transmissions, and seldom require rabies post-exposure prophylaxis (PEP).

Some bites, especially those that are unprovoked or by high-risk animals, may require immediate PEP. Bites around the head or neck are considered high priority, and should be reported immediately by phone. If there are any questions at all about the rabies risk for your patients call an epidemiologist for consultation, using the after-hours number if necessary (386-316-5030). The incubation period for human rabies ranges anywhere from one week up to a couple of years. PEP given anytime during the incubation period is effective at disease prevention so should be given regardless of the length of time after the bite for high or medium risk bites in which the animal's status is unknown.

For previously unvaccinated persons, PEP consists of human rabies immunoglobulin (HRIG) and four vaccines given on days 0, 3, 7, and 14. HRIG is administered on day 0 to provide immediate antibodies until the patient responds to vaccination. The recommended dose of HRIG is 20 IU/kg of body weight. If anatomically feasible the full dose of HRIG should be thoroughly infiltrated in the area around and into the wounds. Any remaining volume should be administered intramuscularly (IM) at an anatomical site distant from vaccine administration. It should not be given in the gluteals. Vaccine is administered at a recommended dose of 1.0ml IM in the deltoid area.

Providers should report all animal bites to the Florida Department of Health in Volusia County via fax by filling out an Animal Bite Report Form and faxing it to 274-0641. We use the information on the form to evaluate individual rabies risk and notify animal control services if necessary. We also aggregate the information at the end of the year to try to identify opportunities for intervention to reduce the number of animal bites here in the county and consequently decrease the risk from rabies. The animal bite form is available at this link: <http://volusia.floridahealth.gov/programs-and-services/infectious-disease-services/epidemiology/documents/animal-incident-report-dec-2013.pdf>. Together we can prevent human rabies in Volusia County.

Reported Animal Rabies in Florida - 2011-2015



Florida Department of Health in Volusia County
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