

EPI-LOG



Tick-borne Illnesses

Here in Volusia County, there are many summer outdoor activities our families and pets enjoy. However, several species of ticks are widely distributed in tropical and temperate climates and are capable of spreading diseases. Ticks live in grassy, brushy, or wooded areas. If you enjoy camping, gardening, or hunting, you could come into close contact with ticks. Ticks can also attach onto our pets if they spend time outdoors.

Several species of ticks found in Florida transmit disease to humans. These include the American Dog tick (*Dermacentor variabilis*), Blacklegged tick (*Ixodes scapularis*), Brown Dog tick (*Rhipicephalus sangeineus*), and the Lone star tick (*Amblyomma americanum*). Ticks locate animals and people by sensing body odors, heat, and moisture. While some ticks attach onto the skin immediately, others will wander to areas where the skin is thinner, such as under the arms, around the ears, around your waist, and behind the knees. Ticks transmit pathogens that cause disease when they begin feeding, which ranges from 10 minutes to two hours. Reportable tick-borne illnesses include Lyme disease, ehrlichiosis, anaplasmosis, Rocky Mountain spotted fever (RMSF), and babesiosis. In 2017, Volusia County reported eight tick-borne illnesses to the state.



To prevent tick-borne illnesses: Avoid bushy or wooded areas and walk in the center of trails. Treat your clothes,

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camping gear, and shoes with EPA-registered insect repellents that contain DEET, permethrin, or picaridin. (<https://www.epa.gov/insect-repellents>) After you come indoors, check your clothing for ticks and take a shower within two hours. To kill ticks on clothing, you can tumble dry them on high heat for 10 minutes. Remember to also check your pets.

If you find a tick, use a plain set of fine-tipped tweezers. Grasp the tick as close to the skin as possible and pull upwardly with steady, even pressure. Avoid twisting or jerking the tweezers. Never crush a tick with your fingers. Wash the area with soap and water, and dispose of the tick in alcohol, or flush it down the toilet. Avoid using heat or home remedies in an attempt to detach the tick from your skin. The goal is to remove the tick as soon as possible.

Symptoms of tick-borne illnesses include fever/chills, headaches, fatigue, muscle aches, and joint pain. Another common symptom is a rash, which is typically associated with Lyme disease, RMSF, and ehrlichiosis. Patients with Lyme disease may develop the classic "bull's eye" rash. If you have had tick exposure and develop symptoms, it is important to see a physician or healthcare provider.

For more information see <http://www.floridahealth.gov/diseases-and-conditions/tick-and-insect-borne-diseases/index.html>

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Vibriosis

Vibriosis (non-cholera) is an infection caused by *Vibrio* species other than *V. cholerae*. *Vibrio* bacteria naturally live in warm marine and estuarine environments. They are present in higher concentrations between May and October when water temperatures are warmer. Human illness is known to be caused by a dozen *Vibrio* species. Common species in the United States include *Vibrio parahaemolyticus*, *Vibrio vulnificus*, and *Vibrio alginolyticus*. It is estimated that 80,000 people become infected each year, resulting in about 500 hospitalizations and 100 deaths in the United States. On an average Volusia County has about 4-5 cases a year.

Many times people get infected by eating raw or undercooked shellfish, particularly oysters. When bacteria is ingested, it causes watery diarrhea, abdominal cramping, nausea, vomiting, fever and chills. *Vibrio* species can also cause a skin infection when an open wound is exposed to brackish water (often where the river meets the sea) or salt water. Anyone can get this infection but people with compromised immune systems or those with chronic liver disease are more likely to get infected.

Vibriosis is diagnosed by testing stool, wound or blood samples. Treatment is not required in mild cases, but patients are advised to drink plenty of fluids to replace lost fluids following diarrhea. Antibiotics are used in severe or prolonged illnesses.

Risks of vibriosis can be reduced by avoiding consumption of raw or under cooked seafood (oysters or other shellfish), washing hands with soap and water after handling raw shellfish, taking care to avoid cross contamination of cooked shellfish with raw shellfish and its juices, keep wounds (including cuts and scrapes) out of brackish water or salt water, seek medical advice in case of infection as a result of skin contact with brackish water or raw seafood.

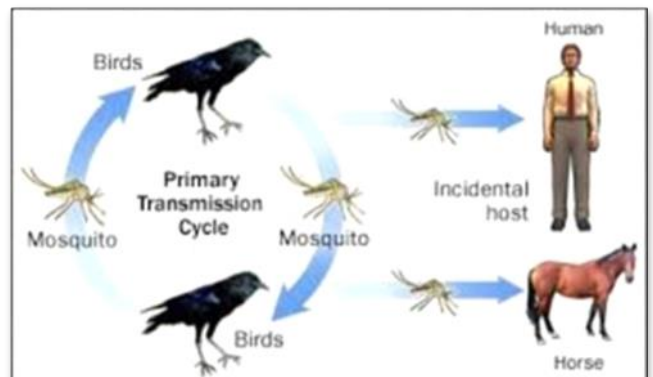
For information on *vibrios*, follow the link: <https://www.cdc.gov/vibrio/index.html>
<https://www.cdc.gov/vibrio/images/vibrio.png>



Eastern Equine Encephalitis

Eastern Equine Encephalitis (EEE) is a rare disease in humans with only about seven cases reported nationally each year. Florida has reported twelve cases in the last ten years, none from Volusia County. In 2018, positive EEE samples from 23 horses, one mule, one owl, one emu, four emu flocks, one mosquito pool, and 46 sentinel chickens have been reported from 20 counties. This includes 10 sentinel chickens and an emu flock in Volusia County. In humans the case fatality rate is 30-45 percent. It is common to have long-term sequelae in survivors.

Residents should take precautions against mosquitoes while engaged in outdoor activities and drain standing water where mosquitoes might breed. Providers should keep EEE in mind when treating patients especially those who report mosquito bites.



For more information, visit this link: <http://www.floridahealth.gov/diseases-and-conditions/eastern-equine-encephalitis/index.html>

Volusia County Disease Activity*	1st Quarter 2018	1st Quarter 2017	YTD 2018	Full Year 2017
Vaccine Preventable				
Mumps	0	0	0	0
Pertussis	1	1	1	6
Varicella	4	1	4	6
CNS Diseases and Bacteremias				
Creutzfeldt-Jakob disease (CJD)	0	0	0	0
Haemophilus influenzae (invasive)‡	7	0	7	6
Meningitis (bacterial, cryptococcal, mycotic)	0	0	0	1
Meningococcal disease	1	0	1	0
Staphylococcus aureus (GISA/VISA)	0	0	0	0
Streptococcus pneumoniae (invasive disease)‡	9	11	9	30
Enteric Infections				
Campylobacteriosis	17	21	17	79
Cryptosporidiosis	4	1	4	12
Cyclosporiasis	0	0	7	7
Escherichia coli, shiga-toxin producing (STEC)+	1	0	1	4
Giardiasis	5	3	5	16
Listeriosis	0	0	0	1
Salmonellosis	21	17	21	127
Shigellosis	8	0	8	14
Typhoid Fever	0	0	0	0
Viral Hepatitis				
Hepatitis A	0	0	0	3
Hepatitis B, acute	7	3	7	26
Hepatitis B, chronic	33	13	33	73
Hepatitis C, acute	3	1	3	8
Hepatitis C, chronic	191	214	191	886
Hepatitis E	0	0	0	0
Hepatitis +HBsAg in pregnant women	0	0	0	3
Vector Borne, Zoonoses				
Brucellosis	0	0	0	0
Chikungunya	0	0	0	0
Dengue Fever	0	0	0	0
Ehrlichiosis/Anaplasmosis	0	0	0	1
Lyme disease	0	1	0	4
Malaria	0	0	0	1
Monkey bite	0	0	0	0
Q Fever, acute	0	0	0	0
Rabies, animal	0	0	0	0
Rabies (possible exposure)	46	35	46	135
Rocky Mountain spotted fever/Spotted Fever Rickettsiosis	0	0	0	1
West Nile virus, neuroinvasive	0	0	0	1
Zika virus disease	1	0	1	1
HIV/AIDS†				
HIV	29	26	29	99
AIDS	7	11	7	46
STDs†				
Chlamydia	519	513	519	2128
Gonorrhea	189	207	189	884
Syphilis				
Infectious (Primary and Secondary)	9	2	9	26
Latent (early and late)	17	31	17	80
Congenital	0	0	0	1
Others				
Carbon monoxide poisoning	3	3	3	25
Ciguatera Fish Poisoning	0	0	0	0
Hansen's Disease (Leprosy)	0	2	0	5
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	10	1	10	32
Legionellosis	0	1	0	12
Pesticide related illness or injury	0	0	0	0
Tuberculosis	-	-	2	5
Vibriosis	0	0	0	7

*Includes reported confirmed/probable cases. Data is provisional and subject to change. † Numbers are for Volusia/ County only ‡ Only reportable for young children

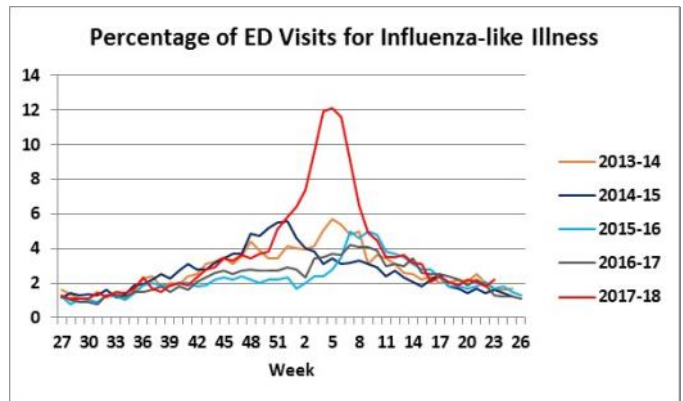
Influenza Season Wrap-Up

The past influenza season peaked during week six (Jan 28 – Feb 3) at the highest level in several years. Since then the numbers have returned to normal seasonal levels. Influenza continues to circulate in the summer at low levels. Although parts of Florida and the United States did see increased mortality from the flu this past season, we did not see an increase in Volusia County. There were eight pediatric flu deaths in the state last year. None were in Volusia County. This is similar to what has been seen in previous seasons.

The Florida Department of Health began enhanced surveillance for intensive care unit patients less than 65 years of age with laboratory confirmed influenza. Seventy percent of these patients were not vaccinated and 90 percent had other underlying medical conditions. The predominant influenza virus for this past season was A (H3).

For the 2018-19 influenza season a new intranasal live attenuated influenza vaccine will be added to the list of recommended vaccines. It's use had previously been not recommended because of perceived low effectiveness. It's not too early to start planning influenza vaccine campaigns for the next season.

For more information see: <https://www.cdc.gov/flu/> or <http://www.floridahealth.gov/diseases-and-conditions/influenza/index.html>.



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