

EPIGRAM

PRODUCED BY THE DISEASE CONTROL AND PREVENTION SERVICES
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HEALTH OFFICIALS CONFIRM VIBRIO VULNIFICUS CASE IN NASSAU COUNTY ~FLORIDIANS URGED TO TAKE PRECAUTION TO STAY HEALTHY AND SAFE~

FERNANDINA BEACH – The Florida Department of Health in Nassau County has confirmed a case of *Vibrio vulnificus* infection in Yulee. The affected person was crabbing in the area and sustained a bite while processing their catch. This brings the total number of confirmed *Vibrio vulnificus* cases during 2013 in Florida to 27 cases.

Vibrio vulnificus is a bacterium that normally lives in warm, brackish seawater. Since it is naturally found in warm marine waters, people with open wounds can be exposed to *Vibrio vulnificus* through direct contact with seawater. Also, *Vibrio vulnificus* can cause disease in those who eat raw shellfish. *Vibrio vulnificus* infections are rare, with an average of 30 people diagnosed with the disease each year in Florida.

Healthy individuals typically develop a mild disease; however *Vibrio vulnificus* infections can be a serious concern for people who have weakened immune systems, particularly those with chronic liver disease. They are more likely to develop *Vibrio vulnificus* bloodstream infections than healthy people. Symptoms of *Vibrio vulnificus* can include vomiting, diarrhea, and abdominal pain. Wound infection can lead to skin breakdown and blistering. In persons who have weakened immune systems, particularly those with chronic liver disease, *Vibrio vulnificus* can invade the bloodstream, causing a severe and life-threatening illness with symptoms like fever, chills, decreased blood pressure (septic shock) and blistering skin lesions.



Above Image 1. Water access in Nassau County, FL

Florida
Department of Health
Nassau County
30 South 4th Street
Fernandina Beach, FL 32034

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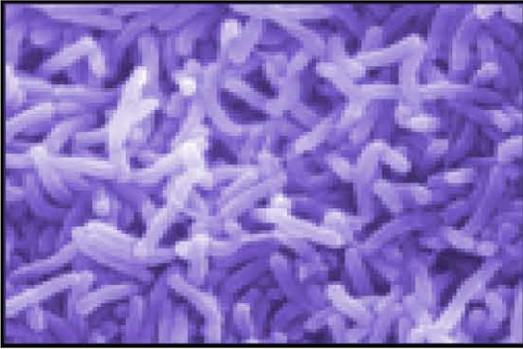
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DISEASE REPORTING	FLORIDA DEPARTMENT OF HEALTH NASSAU COUNTY CONTACTS	FLORIDA DEPARTMENT OF HEALTH NASSAU COUNTY CLINIC SITES	
Phone: (904) 548-1800	<u>Eugenia Ngo-Seidel, MD, MPH (Director)</u> (904) 548-1800 x 5212 Eugenia.Ngo-Seidel@flhealth.gov	<u>Fernandina Beach Clinic</u> 1620 Nectarine Street Fernandina Beach, FL 32034 (904) 548-1860	<u>Callahan Clinic</u> 208 Mickler Street Callahan, FL 32011 (904) 879-2306
Confidential Fax Line: (904) 277-7286	<u>Kim Geib, DNP, ARNP (PH Manager)</u> (904) 548-1800 x 5204 Kim.Geib@flhealth.gov	<u>Yulee Clinic</u> 528 Page's Dairy Road Yulee, FL 32097 (904) 548-1880	<u>Hilliard Clinic</u> 37203 Pecan Street Hilliard, FL 32046 (904) 845-5761
After Hours Lines: (904) 225-2351 (866) 535-0420 (toll free)	<u>Michelle George, MPH (Epidemiologist)</u> (904) 548-1800 x 5209 Michelle.George@flhealth.gov		
	<u>Vicki Roberts (Administrative Secretary)</u> (904) 548-1800 x5328 Vicki.Roberts@flhealth.gov		



VIBRIO VULNIFICUS (CONTINUED)



Above Image 2. *Vibrio Vulnificus*. <http://www.foodsafety.gov/poisoning/causes/bacteriaviruses/>

Individuals experiencing these symptoms should contact a physician immediately for diagnosis and treatment. Immunocompromised individuals with wound infections should also seek care promptly. The wound may require extensive debridement and sometimes the limb may need to be amputated.

Treatment of V. vulnificus infection:

If *V. vulnificus* is suspected, treatment should be initiated immediately because antibiotics improve survival. Aggressive attention should be given to the wound site; amputation of the infected limb is sometimes necessary. Clinical trials for the management of *V. vulnificus* infection have not been conducted. The antibiotic recommendations below come

from documents published by infectious disease experts; they are based on case reports and animal models.

- ✦ Culture of wound or hemorrhagic bullae is recommended, and all *V. vulnificus* isolates should be forwarded to a public health laboratory
- ✦ Blood cultures are recommended if the patient is febrile, has hemorrhagic bullae, or has any signs of sepsis
- ✦ Antibiotic therapy:
 - Doxycycline (100 mg PO/IV twice a day for 7-14 days) and a third-generation cephalosporin (e.g., ceftazidime 1-2 g IV/IM every eight hours) is generally recommended
 - A single agent regimen with a fluoroquinolone such as levofloxacin, ciprofloxacin or gatifloxacin, has been reported to be at least as effective in an animal model as combination drug regimens with doxycycline and a cephalosporin
 - Children, in whom doxycycline and fluoroquinolones are contraindicated, can be treated with trimethoprim-sulfamethoxazole plus an aminoglycoside
 - Necrotic tissue should be debrided; severe cases may require fasciotomy or limb amputation

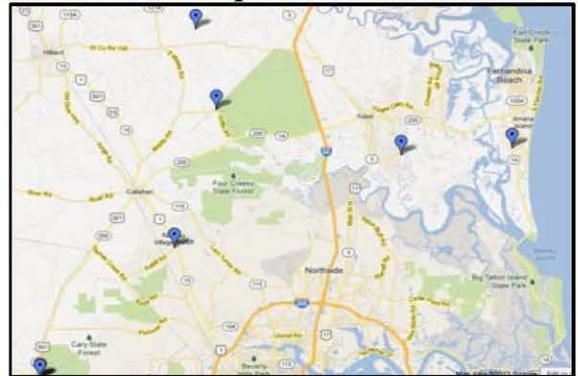
Prevention of V. vulnificus infections, particularly among immunocompromised patients:

- ✦ Do not eat raw oysters or other raw shellfish.
- ✦ Cook shellfish (oysters, clams, mussels) thoroughly.
- ✦ For shellfish in the shell, either a) boil until the shells open and continue boiling for 5 more minutes, or b) steam until the shells open and then continue cooking for 9 more minutes. Do not eat those shellfish that do not open during cooking. Boil shucked oysters at least 3 minutes, or fry them in oil at least 10 minutes at 375°F.
- ✦ Avoid cross-contamination of cooked seafood and other foods with raw seafood and juices from raw seafood.
- ✦ Eat shellfish promptly after cooking and refrigerate leftovers.
- ✦ Avoid exposure of open wounds or broken skin to warm salt or brackish water, or to raw shellfish harvested from such waters.
- ✦ Wear protective clothing (e.g., gloves) when handling raw shellfish.

Contact FDOH Nassau County at (904) 548-1800, extensions 5204 or 5209. After hours answering service (904) 225-2351. Additional clinical consultation can be obtained through the on call State Epidemiologist line for all notifiable conditions at (850) 245-4401. For additional information visit the Centers for Disease Control and Prevention website: <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/vibriov/>

ARBOVIRUS SURVEILLANCE: WEST NILE VIRUS CASE REPORTED IN NASSAU COUNTY

Florida Department of Health Nassau County issued a press release for a Mosquito-borne illness advisory for Nassau County on September 27, 2013. FDOH Nassau County received confirmation of a human case of West Nile Virus (WNV) in an adult male over the age of 65 (Table 1).



Above Image 3. Location of six Arbovirus Sentinel Chicken program sites for 2013. The sentinel sites are located throughout Nassau County.

Clinical criteria for diagnosis for WNV:

Neuroinvasive disease

- + Fever ($\geq 100.4^{\circ}\text{F}$ or 38°C) as reported by the patient or a health-care provider.
- + Meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction, as documented by a physician.
- + Absence of a more likely clinical explanation.

Non-neuroinvasive disease

- + Fever ($\geq 100.4^{\circ}\text{F}$ or 38°C) as reported by the patient or a health-care provider.
- + Absence of neuroinvasive disease.
- + Absence of a more likely clinical explanation.

The Florida Department of Health Nassau County continues to conduct county-wide surveillance in coordination with the arbovirus sentinel chicken program. **Year-to-date Nassau County has reported among sentinel chickens 12 Eastern Equine Encephalitis virus, 3 Highlands J virus and 10 West Nile virus positive conversions. The sentinel chicken conversions have occurred county wide. Additionally, in the reporting week of July 8th, Nassau County reported a horse positive for EEEV, on the west side of the County (Table 1).**

For clinicians who suspect arbovirus illness (viral meningitis and encephalitis), the FDOH Nassau County, Disease Control Program can be contacted to provide consultation and assistance. Testing of West Nile, Eastern Equine Encephalitis, St. Louis Encephalitis, dengue and malaria can be conducted through the Florida Department of Health’s Bureau of Public Health Laboratories. Contact FDOH Nassau County at (904) 548-1800, extensions 5204 or 5209. After hours answering service (904) 225-2351. Additional clinical consultation can be obtained through the on call State Epidemiologist line for all notifiable conditions at (850) 245-4401.

(Source: http://www.doh.state.fl.us/Environment/medicine/arboviral/pdfs/2013/2013Week37ArbovirusReport_9-14-2013.pdf)

Mosquito-borne Disease	Humans	Horses	Sentinel Chickens	Wild Birds
Eastern Equine Encephalitis Virus	0	1	12	0
West Nile Virus	1	0	10	0
Highlands J Virus	0	0	3	0
St. Louis Encephalitis	0	0	0	0

THINK PERTUSSIS IN YOUR DIFFERENTIAL DIAGNOSIS



Figure 3. Pertussis clinical features: Droplet spread is on average 3-6 feet.

The Florida Department of Health Nassau County has recently identified (3) lab confirmed case of pertussis in an infant and three school-aged adolescent children in Nassau County. Since August 23, 2013, the Department of Health has reported 10 cases of pertussis among residents in the community in both immunized and under immunized children and adults. DOH-Nassau's investigation is ongoing, while we have identified the direct contacts for recent cases, we want you to be aware that you may see additional cases in the community.

Consider pertussis in your differential diagnosis for persistent cough illnesses (a cough illness lasting >2 weeks with one of the following: paroxysms of coughing, inspiratory "whoop," or posttussive vomiting, without other apparent cause). As a result of waning immunity, a history of immunization dose not preclude the possibility of pertussis. **Test suspected cases of pertussis, obtain nasopharyngeal aspirate or swab prior to treatment to be sent for *Bordetella pertussis* polymerase chain reaction (PCR) and/or culture at a commercial laboratory or contact the Florida Department of Health Nassau County's Disease Control Program for consultation or assistance in testing suspect cases at, (904) 548-1800, extensions 5204 or 5209. Note: Nasopharyngeal swab for PCR testing for pertussis can be done up to 21 days after onset of symptoms and after antibiotic treatment. Testing is highly recommended in this case to confirm the case and to assist public health action.**

The most effective way to prevent pertussis is through vaccination with:

- + DTaP for infants and children (*Table 2. DTaP pediatric schedule*).
- + Tdap for preteens, teens and adults.
- + Tdap should be provided to pregnant women as a single dose Tdap during each pregnancy, recommended during (27 through 36 weeks). If not given during pregnancy, Tdap should be administered immediately postpartum in order to provide protection for both mother and newborn.

Dose	Age	Minimum Interval
Primary 1	2 months	-
Primary 2	4 months	4 weeks
Primary 3	6 months	4 weeks
Primary 4	15-18 months	6 months
Booster 1	4-6 years	-

For additional vaccine information visit: <http://www.cdc.gov/vaccines/vpd-vac/pertussis/>

FDOH-NASSAU HEALTH BULLETINS, ADVISORIES AND ALERTS ISSUED

Bulletin

- + *Health Officials Urge Residents to Avoid Contact with Wild and Stray Animals. October 9, 2013. Florida Department of Health Nassau County*
- + *Health Officials Confirm Vibrio Vulnificus Case in Nassau County ~Floridians Urged to Take Precautions to Stay Healthy, Safe~. October 3, 2013. Florida Department of Health Nassau County.*

Advisories

- + *Florida Department of Health Nassau County – Mosquito-borne Illness Advisory. September 27, 2013. Florida Department of Health Nassau County.*

State Issued HAN

- + *Florida Department of Health Reports Issues Information Regarding Salmonella Outbreak. October 9, 2013. Florida Department of Health. Access at <http://newsroom.doh.state.fl.us/>*
- + *Acute Hepatitis and Liver Failure Following the Use of Dietary Supplement Intended for Weight Loss or Muscle Building. October 8, 2013. CDC Health Advisory. Access at <http://emergency.cdc.gov/HAN/han00356.asp>*

REPORTABLE DISEASE FREQUENCY

September 2013 Reported Cases with Previous Three-Year Period Comparison

	Selection Date 9/01/2013 - 9/30/2013		Compare Date 1 Selection Date 9/01/2012 - 9/30/2012		Compare Date 2 Selection Date 9/01/2011 - 9/30/2011		Compare Date 3 Selection Date 9/01/2010 - 9/30/2010	
NASSAU COUNTY								
ANIMAL RABIES	0	0.00	1	1.33	0	0.00	0	0.00
CAMPYLOBACTERIOSIS	1	1.30	0	0.00	1	1.35	4	5.45
CRYPTOSPORIDIOSIS	1	1.30	0	0.00	0	0.00	0	0.00
DENGUE FEVER	1	1.30	0	0.00	0	0.00	0	0.00
GIARDIASIS	0	0.00	0	0.00	0	0.00	1	1.36
HAEMOPHILUS INFLUENZAE (INVASIVE DISEASE)	1	1.30	0	0.00	0	0.00	0	0.00
HEPATITIS B (+HBsAg IN PREGNANT WOMEN)	0	0.00	0	0.00	1	1.35	0	0.00
HEPATITIS B, CHRONIC	0	0.00	1	1.33	2	2.71	0	0.00
HEPATITIS C, CHRONIC	6	7.81	9	12.01	5	6.77	6	8.17
LYME DISEASE	0	0.00	1	1.33	0	0.00	0	0.00
PERTUSSIS	7	9.11	0	0.00	1	1.35	0	0.00
RABIES, POSSIBLE EXPOSURE	0	0.00	1	1.33	3	4.06	1	1.36
SALMONELLOSIS	9	11.71	6	8.00	6	8.13	6	8.17
SHIGELLOSIS	0	0.00	0	0.00	1	1.35	1	1.36
VARICELLA	0	0.00	0	0.00	1	1.35	2	2.72
WEST NILE VIRUS, NEUROINVASIVE	1	1.30	0	0.00	0	0.00	0	0.00
NASSAU COUNTY TOTALS:	27	35.13	19	25.33	21	28.42	21	28.59
FLORIDA STATEWIDE								
ANIMAL RABIES	7	0.04	9	0.05	18	0.10	9	0.05
CAMPYLOBACTERIOSIS	214	1.10	254	1.33	205	1.08	112	0.60
CRYPTOSPORIDIOSIS	49	0.25	43	0.22	45	0.24	45	0.24
DENGUE FEVER	31	0.16	20	0.10	15	0.08	34	0.18
GIARDIASIS	122	0.63	105	0.55	110	0.58	246	1.31
HAEMOPHILUS INFLUENZAE (INVASIVE DISEASE)	9	0.05	21	0.11	14	0.07	14	0.07
HEPATITIS B (+HBsAg IN PREGNANT WOMEN)	35	0.18	26	0.14	43	0.23	35	0.19
HEPATITIS B, CHRONIC	312	1.61	556	2.91	492	2.60	339	1.80
HEPATITIS C, CHRONIC	2323	11.96	2,951	15.43	1,938	10.24	2,033	10.80
LYME DISEASE	39	0.20	11	0.06	12	0.06	19	0.10
PERTUSSIS	68	0.35	35	0.18	30	0.16	36	0.19
RABIES, POSSIBLE EXPOSURE	208	1.07	165	0.86	174	0.92	141	0.75
SALMONELLOSIS	838	4.32	869	4.54	787	4.16	903	4.80
SHIGELLOSIS	158	0.81	131	0.68	172	0.91	110	0.58
VARICELLA	51	0.26	44	0.23	64	0.34	92	0.49
WEST NILE VIRUS, NEUROINVASIVE	1	0.01	17	0.09	7	0.04	5	0.03
FLORIDA STATEWIDE TOTALS:	4465	23.00	5257	27.48	4126	21.81	4173	22.17