

EPI Gram is a monthly publication of the Stark County Public Health Coalition. It contains a summary of provisional communicable disease reports and other key public health indicators, with summary tables for Stark County, Ohio. Some reportable conditions may be under investigation; and, at any given time, data may fluctuate from month to month for a specific category.

IN THE NEWS:

West Nile Virus (WNV): West Nile is an insect-borne flavivirus, known to be transmitted from mosquitoes to humans. Typically most individuals will experience very mild to moderate symptoms however in a small minority there is severe morbidity and mortality. In June 2008, West Nile was identified in a pool of mosquitoes in Ohio and since then has been identified in mosquito pools from Stark County. Currently, two human cases of West Nile Virus have been identified in Ohio, a 20-year-old female from Ottawa County and a 75-year-old female from Lorain County. In 2007, Stark County had one case in an 11-year-old female, and in 2006 three cases were reported. The information below is an excerpt from the Centers for Disease Control and Prevention website. For additional information on WNV, please visit

<http://www.cdc.gov/ncidod/dvbid/westnile/clinicians/>.

Clinical Suspicion

- The diagnosis of WNV infection relies on a high index of clinical suspicion and on results of specific laboratory tests.
- WNV or other arboviral diseases, such as St. Louis encephalitis, should be seriously considered in adults 50 years of age or older who have onset of unexplained encephalitis or meningitis in **late summer or early fall**.
- The **local presence** of WNV enzootic activity or other human cases of WNV infection should further raise the index of suspicion.
- Severe neurologic disease due to WNV infection has occurred in persons of **all ages**, and because year-round transmission is possible in southern states, WNV should always be considered in persons with unexplained encephalitis and meningitis.

Clinical Features of Severe Disease

- Fever, Gastrointestinal symptoms, Optic neuritis, Seizures, Weakness, Change in mental status, Myelitis, Polyradiculitis
- Flaccid paralysis is sometimes seen.
- A minority of patients with severe disease develop a maculopapular or morbilliform rash involving the neck, trunk, arms, or legs

Common Laboratory Findings of Severe Disease

- Total leukocyte counts in peripheral blood is mostly normal or elevated with lymphocytopenia and anemia also occurring.
- Hyponatremia is sometimes present, particularly among patients with encephalitis.
- Examination of the cerebrospinal fluid (CSF) shows pleocytosis, usually with a predominance of lymphocytes. Protein is universally elevated. Glucose is normal.
- Ataxia and extrapyramidal signs

Diagnostic Tests for Severe Disease

- The most efficient diagnostic method is detection of IgM antibody to WNV in serum collected within 8 to 14 days of illness onset or CSF collected within 8 days of illness onset using the IgM antibody-capture, enzyme-linked immunosorbent assay (MAC-ELISA).
- A significant increase in WNV-specific neutralizing antibody titer between acute- and convalescent-phase serum specimens confirms acute infection. These additional tests require growth of the virus and may take a week or longer (plus shipping time) to conduct.

Table 1 Summary of Air Quality Index, Pollen, and Mold Counts for Stark County, Ohio, including limited historical data.

	June 2008				July 2008			
	Monthly High	Monthly Low	Monthly Mean	Counts in highest reported health risk category	Monthly High	Monthly Low	Monthly Mean	Counts in highest reported health risk category
Pollen Count	320	5	78.8	N/A	65	5	28.8	N/A
Mold Count	14560	1410	5620	1 High	15760	6720	9573	1 High
Air Quality Index	77	31	42	3 Moderate	90	30	48.05	6 Moderate

Pollen and Mold counts are derived from rotorod samples on the 2nd story roof of the Canton City Health Department. The readings are from a 24 hour period\24 hour avg. on all work days. Mold counts of 6,500-12,999 are moderate and many individuals sensitive to molds may experience symptoms. Counts of 13,000 to 49,999 are high and most individuals with any sensitivity to molds will experience symptoms. These indices are produced from March to October. The Air Quality Index (AQI) is derived by comparison to EPA standards from the following readings: Particulate Matter 2.5 continuous monitoring on CCHD 2nd floor roof top and ozone monitors in Canton, Brewster, and Alliance. AQI ratings are 151-200: unhealthy (UH); 101-150: unhealthy for sensitive groups (UH sg); 51-100: moderate (M); 0-50: good (g).

Table 2 Summary of Select Vital Statistics for Stark County, Ohio

	June 2008	YTD 2008	2007 Total
Live Births	413	2653	5057
Births to Teens	50	317	537
Deaths	365	2179	4061

Due to the current method of reporting live births, all data is provisional.

Table 3 Stark County Crude Birth and Death Rates per 100,000 Population Rates are based on the US Census 2000 Stark County population of 377,438.

	2003	2004	2005	2006	2007
Birth	1260	1240	1211	1282	1342
Death	1110	1040	1140	1076	1076

Table 4 – Summary of Select Reportable Diseases for June 2008 in Stark County, Ohio (provisional data only)

Refer to “Case Definitions for Infectious Conditions Under Public Health Surveillance,” MMWR (Morbidity and Mortality Weekly Report) 1997; 46 (No. RR-10), the Ohio Department of Health Infectious Disease Control Manual or visit www.cdc.gov/epo/dphsi/casedef/index.htm for case definitions.

This report includes confirmed, probable and suspect cases.

	Alliance City			Canton City			Massillon City			Stark County			Stark County Totals			
	Jun 2008	YTD 2008	YTD 2007	Jun 2008	YTD 2008	YTD 2007	Jun 2008	YTD 2008	YTD 2007	Jun 2008	YTD 2008	YTD 2007	Jun 2008	YTD 2008	YTD 2007	5 Year annual average
Amebiasis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Campylobacteriosis	0	0	1	2	3	2	0	1	1	5	11	16	7	15	20	51.8
Chlamydia	7	40	47	46	319	280	4	40	30	**	**	143	**	**	500	1126.4
Creutzfeldt-Jakob Ds	0	0	0	0	0	0	0	0	0	2	3	1	2	3	1	0.6
Cryptosporidiosis	0	0	0	0	1	1	0	0	2	2	7	3	2	8	6	14
E Coli 0157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.4
E Coli	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
Enceph., WNV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.6
Enceph., Other	0	1	1	0	0	0	0	0	0	1	2	0	1	3	1	2.8
Giardiasis	0	1	4	0	3	4	0	1	2	1	12	14	1	17	24	49.2
Gonorrhea	0	10	8	18	176	209	2	16	22	**	**	67	**	**	306	646
Haemo. Influz., Bac	0	0	0	0	2	1	0	0	0	1	3	0	1	5	1	5.8
Hepatitis A	0	0	1	0	0	1	1	3	0	0	0	2	1	3	4	8
Hepatitis B*	0	1	0	1	7	6	0	3	2	1	6	11	2	17	19	44.6
Hepatitis C*#	2	15	16	8	34	52	3	14	8	3	46	49	16	109	125	273.5
Kawasaki Syndrome	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3.6
Legionellosis	0	0	0	0	1	1	0	0	0	0	3	0	0	4	1	12.2
Listeriosis	0	0	0	0	0	0	0	0	0	0	2	1	0	2	1	2.4
Lyme Disease	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	2.6
Malaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8
Meningitis, Asep	0	1	0	1	3	7	0	0	1	3	6	8	4	10	16	53.8
Meningitis Bac.	0	0	0	0	1	0	0	0	0	0	2	1	0	3	1	4.4
Meningococcal Dis.	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2.4
Mumps	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0.4
Pertussis	0	0	0	0	0	2	0	0	0	1	1	5	1	1	7	17
Salmonellosis	0	0	3	0	1	2	1	1	0	1	10	11	2	12	16	49.4
Shigellosis	0	0	0	12	23	0	7	8	0	7	12	0	26	43	0	11.8
Strep Inv A GAS	0	0	0	0	1	3	0	0	0	0	8	2	0	9	5	12.2
Strep B Newborn	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2
Strep Pneu ISP	1	2	1	2	8	14	1	3	1	4	27	20	8	40	36	47.8
Strep TSS	0	1	0	0	0	0	0	0	0	0	1	2	0	2	2	0.4
Syphilis	0	0	0	0	8	0	0	1	0	0	1	5	0	10	5	21.6
Typhoid Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Varicella#	0	2	6	1	7	17	1	2	4	2	25	91	4	36	118	#
Vibriosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Yersiniosis	0	0	0	0	1	0	0	0	0	0	2	4	0	3	4	2

*This includes all hepatitis reports; acute, chronic, and status not known. # Incomplete 5 yr average due to a change in reporting.

**This information is temporarily unavailable.

If you have any questions, including how to receive copies of this report, please contact Karen Schanz at (330) 493-9928 x287 or Schanzk@starkhealth.org or Christina Henning at (330) 489-3327 or Chenning@cantonhealth.org.