



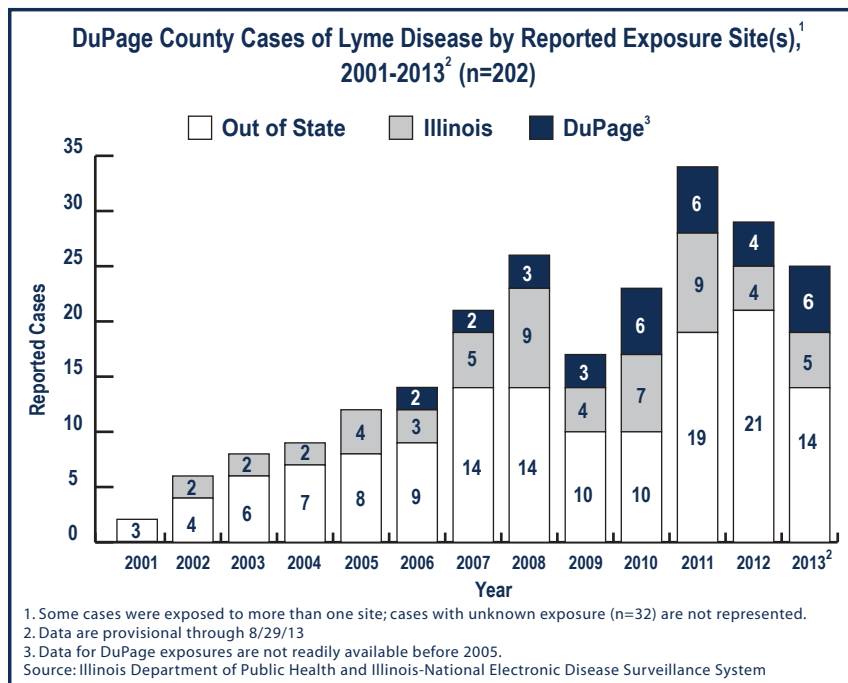
The purpose of this two-page surveillance update is to promote the control and prevention of **communicable disease (CD)** by providing clinically relevant information and resources to healthcare professionals in DuPage County.



Under the Microscope Lyme Disease

For questions or to report a suspect or known case of Lyme disease, please call the DuPage County Health Department at (630) 221-7553.

Lyme disease is caused by the bacterium *Borrelia burgdorferi* and is transmitted to humans by the bite of an infected **black-legged tick** (*Ixodes scapularis*, also known as the **deer tick**).¹ The first clinical marker for the disease is usually a circular skin lesion (i.e., **erythema migrans [EM]**) that occurs in 70-80% of patients at the site of a tick bite after an **incubation period of 3-30 days** (average is about 7 days).¹ Typical symptoms include fever, headache, fatigue, and EM. **If left untreated, late manifestations can occur** involving the **joints** (e.g., arthritis in one or a few joints), **heart** (e.g., acute onset of atrioventricular conduction defects), and **nervous system** (e.g., facial or Bell's palsy).¹



More than 30,000 cases of Lyme disease are reported to the Centers for Disease Control and Prevention (CDC) each year, making it the **most commonly reported vectorborne illness in the U.S.**^{2,3} In 2011, 96% of Lyme disease cases were reported from 13 states: Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, Virginia, and Wisconsin.³

In 2011, Lyme disease was the sixth most common nationally notifiable disease; however, this disease does not occur nationwide and is **concentrated heavily in the Northeast and upper Midwest.**³ Although cases occur throughout the year, **most cases have onset in June, July, or August**, the three months in which ticks actively seek mammalian hosts and human outdoor activity is greatest.⁴

In a continuing effort to assess and monitor Lyme disease risk in Illinois, public health officials have **identified infected black-legged ticks in**

several counties throughout Illinois, including DuPage County. The incidence of Lyme disease in Illinois has overall increased in recent years, with a number of cases **acquiring the infection within Illinois** (without a history of travel to regions previously known to be endemic, e.g., Wisconsin).⁵

Lyme disease is **diagnosed** based on **symptoms**, physician-observed, objective **physical findings** (e.g., EM > 5 cm, facial palsy, or arthritis), and the possibility of **exposure** to infected ticks (having been in wooded, brushy, or grassy areas, i.e., potential tick habitats, **less than or equal to 30 days before onset of EM**).^{1,4} Not all patients with Lyme disease will develop the characteristic bull's eye rash, and many may not recall a tick bite; **history of a tick bite is not required.**¹ Validated laboratory tests can be very helpful but are not generally recommended in a patient with recent onset (2-3 weeks) of a characteristic EM rash.⁴ However, **positive results of recommended two-tiered serologic testing can provide confirmation of infection in patients with musculoskeletal, neurologic, or cardiac symptoms.**^{4,6} Testing methods that have not been adequately validated can be misleading and are not recommended.⁴ Laboratory testing is not recommended for persons who do not have symptoms of Lyme disease.¹

Most cases of **Lyme disease can be treated** successfully with a course of appropriate antimicrobial therapy.^{5,6} Steps to **prevent** Lyme disease include using insect repellent containing DEET, wearing light-colored, protective clothing, walking in the center of trails, removing ticks promptly and appropriately, showering soon after being outdoors, proper groundskeeping, and trimming vegetation.^{1,7} While it is a good idea to take preventive measures against ticks year-round, extra vigilance is indicated in **warmer months (April-September) when ticks are most active.**¹ The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well (e.g., anaplasmosis).¹

References:

1. www.cdc.gov/lyme/
2. www.cdc.gov/media/releases/2013/p0819-lyme-disease.html
3. www.cdc.gov/lyme/stats/index.html
4. www.cdc.gov/mmwr/pdf/ss/ss5710.pdf
5. www.idph.state.il.us/health/infect/LymeDiseaseHlthProviderInfo.pdf
6. www.cdc.gov/lyme/healthcare/clinicians.html
7. www.idph.state.il.us/public/hb/hblyme.htm



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General Information

Communicable Disease and Epidemiology
(630) 221-7553

Environmental Health
(630) 682-7400

Immunizations
(630) 682-7400

Sexually Transmitted Diseases
(630) 221-7553

HIV/AIDS
(630) 221-7553

Tuberculosis
(630) 221-7522

School Health
(630) 221-7300

Travel Clinic
(630) 682-7400

Animal Care & Control
(630) 407-2800

Please contact Communicable Disease and Epidemiology at (630) 221-7553 or palak.panchal@dupagehealth.org to send suggestions or to be added to the distribution list.

DUPAGE COUNTY HEALTH DEPARTMENT
CASES¹ OF REPORTABLE DISEASES*

* Last updated by the Illinois Department of Public Health in March 2008

CD REVIEW

Volume 9, No. 8 August 2013

Vaccine Preventable Diseases	Report Within	2013		2012		2011		2010		2009		Median	
		Jul	Jan-Jul	Jan-Jul	Total	Jan-Jul	Total	Jan-Jul	Total	Jan-Jul	Total	Jan-Jul	Total ('09-'12)
Chickenpox (varicella)	24 hrs	4	32	59	93	41	82	71	95	88	146	59	94
Diphtheria	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	1	5	9	11	8	15	4	7	5	11	5	11
Hepatitis A	24 hrs	0	2	4	8	4	8	2	3	2	6	2	7
Hepatitis B	7 days	1	2	3	5	0	0	1	4	5	8	2	4.5
Hepatitis B (carriers)	7 days	8	70	59	97	60	113	63	108	68	127	63	110.5
Influenza, deaths in < 18 yrs old	7 days	0	1	0	0	0	0	0	0	0	1	0	0
Influenza ICU admissions	24 hrs	0	52	8	59	24	24	0	3	NR	NR	16	24
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	1	1	0	0
Mumps	24 hrs	0	0	1	1	2	3	0	2	2	2	1	2
Neisseria meningitidis, invasive	24 hrs	0	0	0	0	1	2	1	1	3	6	1	1.5
Pertussis (whooping cough)	24 hrs	1	18	148	195	111	268	23	92	11	26	23	143.5
Poliomyelitis	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcus pneumoniae, invasive disease, in those < 5 yrs old	7 days	1	3	3	5	9	13	4	8	6	8	4	8
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Other Communicable Diseases													
Anaplasmosis ²	7 days	0	0	1	2	2	3	0	0	0	0	0	1
Anthrax	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, foodborne	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, other	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Brucellosis	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
California encephalitis ³	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	1	1	3	1	1	0	0	1	1
Cryptosporidiosis	7 days	1	1	2	2	3	5	2	5	3	5	2	5
Cyclosporiasis	7 days	1	3	0	0	0	0	0	0	1	1	0	0
Dengue fever ³	7 days	0	1	1	1	1	1	2	4	0	4	1	2.5
Ehrlichiosis ²	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Enteric E. coli infections ⁴	24 hrs	2	46	9	18	16	22	12	18	7	12	12	18
Giardiasis	7 days	6	19	24	34	22	44	29	49	20	40	22	42
Glomerulonephritis ⁵	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Hantavirus pulmonary syndrome	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Hemolytic uremic syndrome	24 hrs	0	0	1	1	1	1	0	0	0	0	0	0.5
Hepatitis C (cases & carriers)	7 days	11	93	107	171	105	189	116	187	132	213	107	188
Hepatitis D	7 days	0	0	0	0	0	1	0	0	0	0	0	0
Histoplasmosis	7 days	0	0	2	2	0	1	2	2	1	2	1	2
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	11	11	48	181	0	5.5
Legionellosis	7 days	9	20	8	25	4	14	7	11	6	13	7	13.5
Leprosy	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	7 days	0	0	1	2	2	2	2	6	2	3	2	2.5
Lyme disease ²	7 days	7	24	23	27	21	32	12	19	14	18	21	23
Malaria	7 days	2	6	2	2	1	7	1	4	3	4	2	4
Ophthalmia neonatorum	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Plague	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Psittacosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Q fever ⁶	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	1	25	31	43	16	30	24	54	12	15	24	36.5
Reye syndrome	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever ⁵	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain spotted fever ²	7 days	0	0	1	1	0	0	0	0	0	0	0	0
Salmonellosis	7 days	12	71	59	123	60	95	83	136	51	89	60	109
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	3	9	9	20	9	22	26	27	5	12	9	21
Smallpox	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Smallpox vaccination, complications	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
St. Louis encephalitis ³	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Staphylococcus aureus, methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	1	3	7	2	3	5	6	4	6	3	6
Staphylococcus aureus, methicillin resistant (MRSA), community cluster ⁷	24 hrs	0	0	1	1	0	0	1	1	0	1	0	1
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	0	0	0	1	1	1	0	0	0	0.5
Streptococcal infections, group A invasive disease ⁸	24 hrs	0	15	15	20	20	30	12	20	10	14	15	20
Toxic shock syndrome ⁹	7 days	0	1	0	0	1	1	0	0	0	0	0	0
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	2	18	13	26	14	18	18	26	18	29	18	26
Tularemia	3 hrs	0	0	0	1	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	0	1	2	3	3	2	3	3	5	2	3
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	1	1	2	4	0	3	0	1	1	2	1	2.5
West Nile disease ³	7 days	0	0	4	56	0	2	0	17	0	0	0	9.5
Yersiniosis	7 days	0	1	3	3	2	3	0	0	3	5	2	3
STDs, HIV and AIDS													
AIDS ¹⁰ (July - September)	7 days	--	11	9	17	7	16	17	26	8	19	9	18
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	101	916	1065	1861	884	1599	908	1542	940	1555	916	1577
Gonorrhea	7 days	17	137	147	239	130	241	136	223	124	225	136	232
HIV infection ¹⁰ (July - September)	7 days	--	9	10	20	11	24	21	27	20	40	11	25.5
Syphilis	7 days	0	3	10	19	18	24	14	25	18	33	14	24.5

DuPage County healthcare providers and hospitals must report any suspected or confirmed case of these diseases to the local health authorities within the number of hours or days indicated.

REPORTING NUMBERS:

Communicable Diseases

(630) 221-7553

24 hours: (630) 682-7400

Tuberculosis

(630) 221-7522

STDs

(630) 221-7553

HIV/AIDS:

(630) 221-7553

¹ Provisional cases, based on date of onset

² Listed in CD Rules and Regulations under "Tickborne Disease"

³ Listed in CD Rules and Regulations under "Arboviral Infections"

⁴ O157:H7, STEC, EIEC, ETEC, EPEC

⁵ Listed in CD Rules and Regulations under "Streptococcal infections, group A invasive disease sequelae"

⁶ Q fever case in 2004 not related to any suspected bioterrorism threat or event

⁷ Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period

⁸ Includes streptococcal toxic shock syndrome and necrotizing fasciitis

⁹ Due to *Staphylococcus aureus*

¹⁰ HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis

NR = Not reported

** = Count of 5 cases or less

Websites

CDC:

www.cdc.gov

IDPH:

www.idph.state.il.us

DuPage:

www.dupagehealth.org

Archived issues of CD Review are available at:

www.dupagehealth.org/publications