



DuPage County Health Department R E V I E W

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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
with suggestions
or to be added to the
distribution list.

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 Centers for Disease Control and Prevention (CDC) each year, making it the **most commonly reported vectorborne illness in the U.S.**² In 2013, **95% of Lyme disease cases were reported from 14 states:** Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and Wisconsin.²

In 2013, Lyme disease was the fifth most common nationally notifiable disease; however, this disease does not occur nationwide and is **concentrated heavily in the Northeast and upper Midwest.**² 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.³

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).⁴

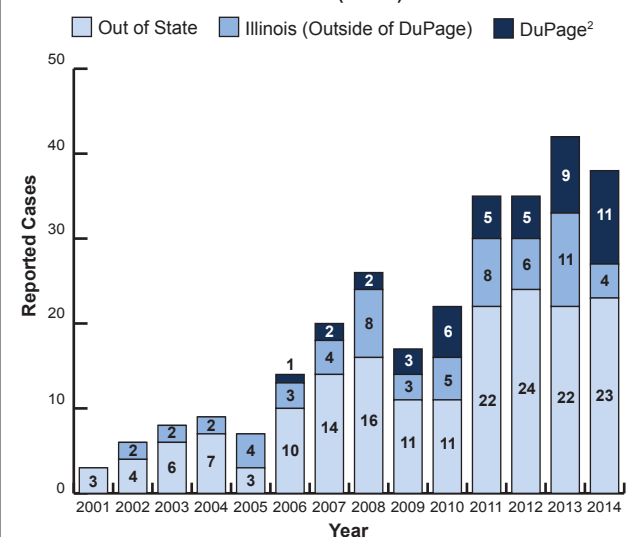
Lyme disease is **diagnosed** based on **symptoms**, physician-observed, objective **physical findings** (e.g., EM \geq 5 cm, facial palsy, or arthritis), and the possibility of **exposure** to infected ticks (having been in wooded, brushy, or grassy areas, i.e., potential tick habitats, **less than or equal to 30 days before onset of EM**).^{1,3} 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.³ However, **positive results of recommended two-tiered serologic testing can provide confirmation of infection in patients with musculoskeletal, neurologic, or cardiac symptoms.**^{3,5} Testing methods that have not been adequately validated can be misleading and are not recommended.³ 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.^{4,5} Steps to **prevent** Lyme disease include using insect repellent containing DEET, light-colored, protective clothing, walking in the center of trails, avoiding wooded and bushy areas with high grass and leaf litter, removing ticks promptly and appropriately, showering soon after being outdoors, proper groundskeeping, and trimming vegetation.^{1,6} 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/lyme/stats/index.html
3. www.cdc.gov/mmwr/pdf/ss/ss5710.pdf
4. www.idph.state.il.us/health/infect/LymeDiseaseHlthProviderInfo.pdf
5. www.cdc.gov/lyme/healthcare/clinicians.html
6. www.idph.state.il.us/public/hb/hblyme.htm

DuPage County Cases of Lyme Disease by Reported Exposure Site(s),¹ 2001-2014 (n=236)



1. Some cases were exposed to more than one site; cases with unknown exposure (n=16) were not included in this graph

2. Data for DuPage exposures are not readily available before 2005.

Source: Illinois Department of Public Health and Illinois-National Electronic Disease Surveillance System

DUPAGE COUNTY HEALTH DEPARTMENT

CASES¹ OF REPORTABLE DISEASES*

* Last updated by the Illinois Department of Public Health in February 2014

CD REVIEW

Volume 11, No. 7 July 2015

Vaccine Preventable Diseases	Report Within	2015		2014		2013		2012		2011		Median	
		June	Jan-Jun	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total ('11-'14)
Chickenpox (varicella)	24 hrs	2	19	42	75	28	78	51	93	40	82	40	80
Diphtheria	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	1	6	2	5	4	10	6	11	8	15	6	10.5
Hepatitis A	24 hrs	1	3	6	8	2	4	1	8	3	8	3	8
Hepatitis B	7 days	0	1	1	6	1	3	3	5	1	1	1	4
Hepatitis B (carriers)	7 days	5	67	41	111	69	110	51	101	49	113	51	110.5
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	1	1	0	0	0	0	0	0
Influenza, ICU admissions	24 hrs	1	36	43	141	52	78	8	64	24	24	36	71
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Mumps	24 hrs	1	3	1	1	0	0	1	1	2	3	1	1
Neisseria meningitidis, invasive	24 hrs	1	1	0	0	0	0	0	0	1	2	0	0
Pertussis (whooping cough)	24 hrs	1	13	10	22	18	43	128	195	83	268	18	119
Poliomyelitis	3 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	0	0	2	3	2	4	2	5	9	13	2	4.5
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Other Communicable Diseases													
Anaplasmosis ²	7 days	1	1	0	3	0	0	1	2	2	3	1	2.5
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
Chikungunya fever ³	7 days	0	0	0	0	NR	NR	NR	NR	NR	NR	0	0
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	2	2	0	0	0	1	1	3	0	1.5
Cryptosporidiosis	7 days	0	2	0	2	0	7	1	2	1	5	1	3.5
Cyclosporiasis	7 days	0	0	0	1	2	4	0	0	0	0	0	0.5
Dengue fever ³	7 days	1	1	1	1	1	3	0	1	1	1	1	1
Ehrlichiosis ²	7 days	0	0	0	1	0	0	0	0	0	0	0	0
Enteric E. coli infections ⁴	24 hrs	1	7	2	18	45	54	8	19	13	22	8	20.5
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	0	2	0	0	0	1	0	1	0	1
Hepatitis C (cases & carriers)	7 days	19	128	122	240	84	182	97	171	93	189	97	185.5
Hepatitis D	7 days	0	0	0	0	0	0	0	0	0	1	0	0
Histoplasmosis	7 days	0	1	3	7	0	1	2	2	0	1	1	1.5
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	7 days	0	6	11	26	11	39	6	25	3	14	6	25.5
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	0	2	0	2	0	2	1	2	0	2
Lyme disease ²	7 days	4	7	9	22	21	39	14	27	13	32	13	29.5
Malaria	7 days	0	1	0	2	4	7	1	2	1	7	1	4.5
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	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, animal case	24 hrs	0	0	1	6	NR	NR	NR	NR	NR	NR	0.5	6
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	9	12	15	51	26	44	18	43	12	30	15	43.5
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	0	0	0	0	0	1	0	0	0	0
Salmonellosis	7 days	18	54	35	115	62	128	49	123	45	95	49	119
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	1	5	7	18	6	18	8	20	7	22	7	19
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	1	4	3	9	1	3	2	7	1	3	2	5
Staphylococcus aureus, methicillin resistant (MRSA), community cluster ⁶	24 hrs	0	1	0	0	0	0	1	1	0	0	0	0
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	0	0	0	0	0	0	0	1	0	0
Streptococcal infections, group A invasive disease ⁷	24 hrs	0	14	21	29	15	21	13	20	19	30	15	25
Toxic shock syndrome ⁸	7 days	0	0	0	0	1	1	0	0	1	1	0	0.5
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	3	10	9	34	16	35	11	26	9	23	10	30
Tularemia	3 hrs	0	0	0	0	0	0	0	1	0	0	0	0
Typhoid fever	24 hrs	0	1	1	5	0	2	1	2	3	3	1	2.5
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	1	0	3	0	2	1	4	0	3	0	3
West Nile virus disease ³	7 days	0	0	0	5	0	6	0	56	0	2	0	5.5
Yersiniosis	7 days	0	0	1	3	1	2	3	3	2	3	1	3
STDs, HIV and AIDS													
AIDS ⁹ (April - June)	7 days	**	7	7	15	16	25	9	17	7	16	7	16.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	148	997	959	2056	891	1883	913	1861	762	1599	913	1872
Gonorrhea	7 days	16	123	102	242	125	258	125	239	103	241	123	241.5
HIV infection ⁹ (April - June)	7 days	6	7	17	29	13	28	10	20	11	24	11	26
Syphilis ¹⁰	7 days	4	13	17	41	17	34	10	19	18	24	17	29

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

⁷ Includes streptococcal toxic shock syndrome and necrotizing fasciitis

⁸ Due to *Staphylococcus aureus*

⁹ HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis.

¹⁰ Cases are provisional, based on test date per local health department investigation.

NR = Not reported

** = Count of 5 cases or less

Websites

CDC:
www.cdc.gov

IDPH:
www.dph.illinois.gov

DuPage:
www.dupagehealth.org

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www.dupagehealth.org/publications