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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 **blacklegged 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 malaise, headache, fever, myalgia, arthralgia, lymphadenopathy, and EM.² **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).^{1,2}

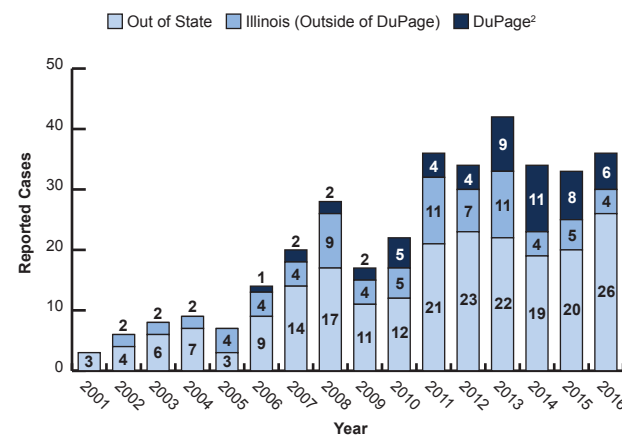
Lyme disease is the **most commonly reported vectorborne illness in the U.S.** In 2015, **95% of Lyme disease cases were reported from 14 states:** Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and Wisconsin. 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 blacklegged ticks in several counties throughout Illinois, including DuPage County.**⁵ 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).

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**).^{1,4} 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.**⁶ **Positive results of recommended two-tiered serologic testing can provide confirmation of infection.**² Testing methods that have not been adequately validated can be misleading and are not recommended.⁴ Laboratory tests are not recommended for patients who do not have symptoms typical of Lyme disease. Just as it is important to correctly diagnose Lyme disease when a patient has it, it is important to avoid misdiagnosis and treatment of Lyme disease when the true cause of the illness is something else.¹

Patients treated with **appropriate antibiotics in the early stages of Lyme disease usually recover rapidly and completely.**⁷ 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.^{1,8,9} 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.**^{1,9} The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well (e.g., anaplasmosis).^{1,2}

DuPage County Cases of Lyme Disease by Reported Exposure Site(s),¹ 2001-2016 (n=300)



1. Some cases were exposed to more than one site; cases with unknown exposure (n=18) 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

References:

1. www.cdc.gov/lyme/
2. www.cdc.gov/lyme/resources/tickbornediseases.pdf
3. www.cdc.gov/lyme/stats/index.html
4. www.cdc.gov/mmwr/pdf/ss/ss5710.pdf
5. www.dph.illinois.gov/topics-services/environmental-health-protection/structural-pest-control/common-ticks#resources
6. <https://www.cdc.gov/nndss/conditions/lyme-disease/case-definition/2017/>
7. www.cdc.gov/lyme/healthcare/index.html
8. www.dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/lyme-disease
9. www.cdc.gov/ticks/avoid/on_people.html

DUPAGE COUNTY HEALTH DEPARTMENT

CASES¹ OF REPORTABLE DISEASES*

* Last updated by the Illinois Department of Public Health in April 2016

CD REVIEW

Volume 13, No. 7 July 2017

	Report Within	2017		2016		2015		2014		2013		Median	
		Jan-Jun	Jan-Jun	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total ('13-'16)
Vaccine Preventable Diseases													
Chickenpox (varicella)	24 hrs	1	16	29	56	19	36	42	76	28	78	28	66
Diphtheria	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> , invasive	24 hrs	1	5	3	13	6	15	2	5	4	10	4	11.5
Hepatitis A	24 hrs	0	2	1	2	3	5	6	8	2	4	2	4.5
Hepatitis B	7 days	0	0	0	2	1	2	1	5	1	3	1	2.5
Hepatitis B (carriers)	7 days	3	48	57	122	68	137	42	112	69	110	57	117
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Influenza, ICU admissions	24 hrs	0	65	63	69	36	43	46	152	52	78	52	73.5
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Mumps	24 hrs	3	7	7	11	2	8	2	2	0	0	2	5
<i>Neisseria meningitidis</i> , invasive	24 hrs	0	0	1	1	1	1	0	0	0	0	0	0.5
Pertussis (whooping cough)	24 hrs	0	7	52	105	14	49	10	22	18	43	14	46
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
<i>Streptococcus pneumoniae</i> , invasive disease, in those < 5 yrs old	7 days	0	0	2	2	0	0	2	3	2	4	2	2.5
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	1	2	3	0	3	0	0	0	2
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
Campylobacteriosis	7 days	19	74	75	173	NR	NR	NR	NR	NR	NR	NR	NR
Chikungunya virus disease ³	7 days	0	0	0	4	1	2	0	0	NR	NR	0	2
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	3	0	1	2	2	0	0	0	1.5
Cryptosporidiosis	7 days	0	1	4	18	2	5	0	2	0	7	1	6
Cyclosporiasis	7 days	1	3	0	5	0	1	0	1	2	4	0	2.5
Dengue fever ³	7 days	0	0	0	3	2	3	1	1	1	3	1	3
Ehrlichiosis ²	7 days	0	0	1	2	1	1	0	0	0	0	0	0.5
Enteric <i>E. coli</i> infections ⁴	24 hrs	2	8	14	24	9	14	2	18	45	54	9	21
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	0	0	0	0	2	0	0	0	0
Hepatitis C (cases & carriers)	7 days	17	129	140	255	134	237	124	242	84	181	129	239.5
Hepatitis D	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	1	7	4	8	2	3	3	7	0	1	3	5
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	7 days	2	8	7	34	6	18	11	26	11	39	8	30
Leprosy	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	7 days	0	1	0	0	0	0	0	0	0	0	0	0
Listeriosis	7 days	1	2	0	0	0	2	0	2	0	2	0	2
Lyme disease ²	7 days	1	3	11	34	10	30	9	22	21	39	10	32
Malaria	7 days	0	0	7	10	1	4	0	2	4	7	1	5.5
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	2	2	6	10	1	16	1	6	NR	NR	1.5	10
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	10	18	16	59	15	73	15	51	26	44	16	55
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	3	0	0	0	0	0	0	0	0
Salmonellosis	7 days	10	49	41	119	61	133	35	115	62	128	49	123.5
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	0	6	10	21	5	27	7	18	6	18	6	19.5
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
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	0	6	11	4	10	3	9	1	3	3	9.5
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), community cluster ⁶	24 hrs	0	1	0	1	0	0	0	0	0	0	0	0
<i>Staphylococcus aureus</i> (vancomycin-resistant)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcal infections, group A invasive disease ⁷	24 hrs	2	14	11	18	14	22	21	29	15	21	14	21.5
Toxic shock syndrome ⁸	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	7	17	17	42	10	39	9	34	16	35	16	37
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	2	0	0	1	3	1	5	0	2	1	2.5
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	3	1	6	0	4	0	3	0	2	0	3.5
West Nile virus disease ³	7 days	0	0	0	10	0	9	0	5	0	6	0	7.5
Yersiniosis	7 days	0	0	3	4	0	1	1	3	1	2	1	2.5
Zika virus disease ³	7 days	0	0	3	11	NR	NR	NR	NR	NR	NR	NR	NR
STDs, HIV and AIDS													
AIDS ⁹ (April - June)	7 days	1	2	8	8	9	12	8	17	15	22	8	14.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	154	1004	1175	2417	1149	2382	1033	2056	891	1883	1033	2219
Gonorrhea	7 days	20	152	193	390	141	307	114	242	125	258	141	282.5
HIV infection ^{9,10} (April - June)	7 days	3	5	19	30	25	47	21	42	26	43	21	42.5
Syphilis ¹¹	7 days	2	20	35	59	16	42	18	41	17	34	18	41.5

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 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 HIV counts reflect all newly diagnosed HIV cases regardless of stage of disease at diagnosis.
 - ¹¹ Cases are provisional, based on test date per local health department investigation.
- NR = Not reported

Websites

CDC:
www.cdc.gov

IDPH:
www.dph.illinois.gov

DuPage:
www.dupagehealth.org

Archived issues of CD Review are available at:
www.dupagehealth.org/publications