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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**).<sup>1</sup> 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).<sup>1</sup> Typical symptoms include malaise, headache, fever, myalgia, arthralgia, lymphadenopathy, and EM.<sup>2</sup> **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).<sup>1</sup>

Lyme disease is the **most commonly reported vectorborne illness in the U.S.** In 2014, **96% 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.<sup>3</sup> 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.<sup>4</sup>

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).<sup>5</sup>

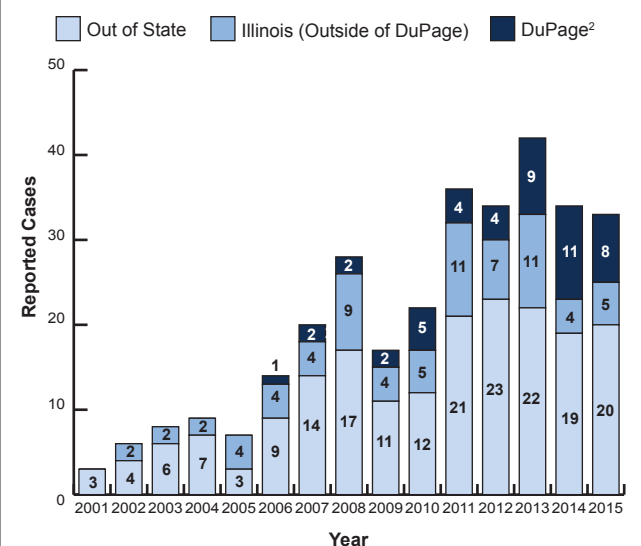
Lyme disease is **diagnosed** based on **symptoms**, physician-observed, objective **physical findings** (e.g., EM  $\geq$  5 cm, facial palsy, or arthritis), and the possibility of **exposure** to infected ticks (having been in wooded, brushy, or grassy areas, i.e., potential tick habitats, **less than or equal to 30 days before onset of EM**).<sup>1,4</sup> 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**.<sup>1</sup> 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.<sup>4</sup> However, **positive results of recommended two-tiered serologic testing can provide confirmation of infection in patients with musculoskeletal, neurologic, or cardiac symptoms**.<sup>4,6</sup> Testing methods that have not been adequately validated can be misleading and are not recommended.<sup>4</sup> 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.<sup>1</sup>

Patients treated with **appropriate antibiotics in the early stages of Lyme disease usually recover rapidly and completely**.<sup>6</sup> 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.<sup>1,7</sup> 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**.<sup>1</sup> The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well (e.g., anaplasmosis).<sup>1</sup>

### 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. www.cdc.gov/lyme/healthcare/index.html
7. www.dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/lyme-disease

DuPage County Cases of Lyme Disease by Reported Exposure Site(s),<sup>1</sup> 2001-2015 (n=266)



1. Some cases were exposed to more than one site; cases with unknown exposure (n=15) were not included in this graph.  
2. Data for DuPage exposures are not readily available before 2005.  
Sources: Illinois Department of Public Health and Illinois-National Electronic Disease Surveillance System

DUPAGE COUNTY HEALTH DEPARTMENT

CASES<sup>1</sup> OF REPORTABLE DISEASES\*

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

CD REVIEW

Volume 12, No. 7 July 2016

Vaccine Preventable Diseases	Report Within	2016		2015		2014		2013		2012		Median	
		Jun	Jan-Jun	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total	Jan-Jun	Total ('12-'15)
Chickenpox (varicella)	24 hrs	4	29	19	36	42	76	28	79	51	95	29	77.5
Diphtheria	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	0	3	6	15	2	5	4	10	6	11	4	10.5
Hepatitis A	24 hrs	0	1	3	5	6	8	2	4	1	8	2	6.5
Hepatitis B	7 days	0	0	1	2	1	5	1	3	3	5	1	4
Hepatitis B (carriers)	7 days	10	56	68	137	42	112	69	110	51	101	56	111
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Influenza, ICU admissions	24 hrs	0	63	36	43	46	152	52	78	8	64	46	71
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Mumps	24 hrs	3	7	2	8	2	2	0	0	1	1	2	1.5
Neisseria meningitidis, invasive	24 hrs	0	1	1	1	0	0	0	0	0	0	0	0
Pertussis (whooping cough)	24 hrs	10	46	14	49	10	22	18	43	128	195	18	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
Streptococcus pneumoniae, invasive disease, in those < 5 yrs old	7 days	1	2	0	0	2	3	2	4	2	5	2	3.5
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other Communicable Diseases</b>													
Anaplasmosis <sup>2</sup>	7 days	0	0	2	3	0	3	0	0	1	2	0	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 <sup>3</sup>	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Campylobacteriosis	7 days	13	72	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chikungunya fever <sup>3</sup>	7 days	0	0	1	2	0	0	NR	NR	NR	NR	0	1
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	0	1	2	2	0	0	0	1	0	1
Cryptosporidiosis	7 days	1	4	2	5	0	2	0	7	1	2	1	3.5
Cyclosporiasis	7 days	0	0	0	1	0	1	2	4	0	0	0	1
Dengue fever <sup>3</sup>	7 days	0	0	2	3	1	1	1	3	0	1	1	2
Ehrlichiosis <sup>2</sup>	7 days	0	0	1	1	0	0	0	0	0	0	0	0
Enteric E. coli infections <sup>4</sup>	24 hrs	3	8	9	14	2	18	45	54	8	19	8	18.5
Glomerulonephritis <sup>5</sup>	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	2	0	0	0	1	0	0.5
Hepatitis C (cases & carriers)	7 days	17	136	136	239	122	240	86	184	97	196	122	217.5
Hepatitis D	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	1	4	2	3	3	7	0	1	2	2	2	2.5
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	7 days	3	7	6	18	11	26	11	39	6	25	7	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	0	2	0	2
Lyme disease <sup>2</sup>	7 days	5	8	10	30	9	22	21	39	14	27	10	28.5
Malaria	7 days	0	6	1	4	0	2	4	7	1	2	1	3
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	6	1	16	1	6	NR	NR	NR	NR	1	11
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	7	16	15	73	15	51	26	44	18	43	16	47.5
Reye syndrome	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever <sup>5</sup>	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain spotted fever <sup>2</sup>	7 days	1	1	0	0	0	0	0	0	0	1	0	0
Salmonellosis	7 days	7	36	61	133	35	115	62	128	49	123	49	125.5
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	0	10	5	27	7	18	6	18	8	20	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 <sup>3</sup>	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	6	4	10	3	9	1	3	2	7	3	8
Staphylococcus aureus, methicillin resistant (MRSA), community cluster <sup>6</sup>	24 hrs	0	0	0	0	0	0	0	0	1	1	0	0
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcal infections, group A invasive disease <sup>7</sup>	24 hrs	2	10	14	22	21	29	15	21	13	20	14	21.5
Toxic shock syndrome <sup>8</sup>	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	3	17	10	39	9	34	16	35	11	26	11	34.5
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	1	0	0
Typhoid fever	24 hrs	0	0	1	3	1	5	0	2	1	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	1	0	4	0	3	0	2	1	4	0	3.5
West Nile virus disease <sup>3</sup>	7 days	0	0	0	9	0	5	0	6	0	56	0	7.5
Yersiniosis	7 days	0	2	0	1	1	3	1	2	3	3	1	2.5
Zika virus disease <sup>3</sup>	7 days	0	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
<b>STDs, HIV and AIDS</b>													
AIDS <sup>9</sup> (April - June)	7 days	**	**	9	11	8	15	15	26	10	17	9.5	16
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	156	1053	1094	2382	1033	2056	891	1883	913	1861	1033	1969.5
Gonorrhea	7 days	24	152	138	307	114	242	125	258	125	239	125	250
HIV infection <sup>9,10</sup> (April - June)	7 days	**	**	19	38	15	37	25	47	18	33	18.5	37.5
Syphilis <sup>11</sup>	7 days	3	30	18	42	18	41	17	34	10	19	18	37.5

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

- <sup>1</sup> Provisional cases, based on date of onset
  - <sup>2</sup> Listed in CD Rules and Regulations under "Tickborne Disease"
  - <sup>3</sup> Listed in CD Rules and Regulations under "Arboviral Infections"
  - <sup>4</sup> O157:H7, STEC, EIEC, ETEC, EPEC
  - <sup>5</sup> Listed in CD Rules and Regulations under "Streptococcal infections, group A invasive disease sequelae"
  - <sup>6</sup> Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period
  - <sup>7</sup> Includes streptococcal toxic shock syndrome and necrotizing fasciitis
  - <sup>8</sup> Due to *Staphylococcus aureus*
  - <sup>9</sup> HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis.
  - <sup>10</sup> HIV counts reflect all newly diagnosed HIV cases regardless of stage of disease at diagnosis.
  - <sup>11</sup> 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](http://www.cdc.gov)

**IDPH:**  
[www.idph.state.il.us](http://www.idph.state.il.us)

**DuPage:**  
[www.dupagehealth.org](http://www.dupagehealth.org)

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