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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 Services  
(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**).<sup>1</sup> Typical symptoms include fever, headache, fatigue, and a characteristic skin rash called **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> If left untreated, infection can spread to **joints** (e.g., arthritis in one or a few joints), the **heart** (e.g., acute onset of atrioventricular conduction defects), and the **nervous system** (e.g., facial or Bell's palsy).<sup>1,2</sup> Lyme disease is diagnosed based on symptoms, physical findings (e.g., rash), and the **possibility of exposure to infected ticks**.<sup>1</sup>

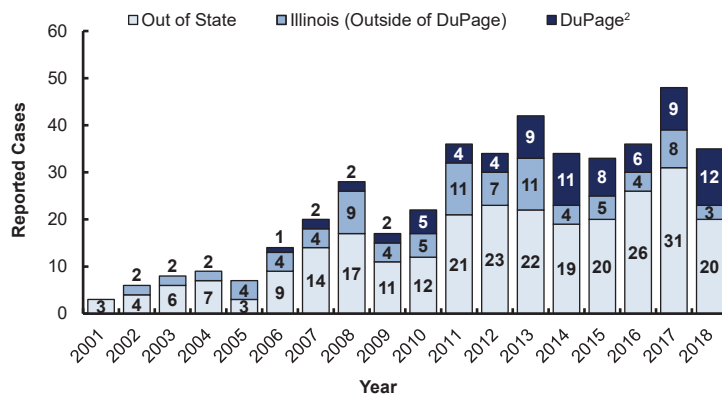
Lyme disease is the **most commonly reported vectorborne illness in the U.S.**, and accounted for **82% of all tickborne disease reports during 2004-2016**.<sup>3</sup> Lyme disease cases are concentrated in the Northeast and upper Midwest, with 14 states accounting for over 96% of reported cases.<sup>4</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 increased.<sup>4</sup>

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**. 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>1,6</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>2</sup> Laboratory blood tests are helpful if used correctly and performed with validated methods. **Laboratory tests are not recommended for patients who do not have symptoms typical of Lyme disease**.<sup>1</sup> However, **positive results of recommended two-tiered serologic testing can provide confirmation of infection in patients with musculoskeletal, neurologic, or cardiac symptoms**.<sup>7</sup> 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>1,8,9</sup>

Patients treated with **appropriate antibiotics in the early stages of Lyme disease usually recover rapidly and completely**.<sup>8</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>1,5,10</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>1,10</sup> The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well (e.g., anaplasmosis).<sup>1,6</sup>

DuPage County Cases of Lyme Disease by Reported Exposure Site(s),<sup>1</sup> 2001-2018 (n=363)



1. Some cases were exposed to more than one site; cases with unknown exposure (n=21) 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/index.html
2. wwwn.cdc.gov/nndss/conditions/lyme-disease/case-definition/2017/
3. www.cdc.gov/mmwr/volumes/67/wr/mm6717e1.htm?s\_cid=mm6717e1
4. www.cdc.gov/lyme/datasurveillance/index.html
5. www.dph.illinois.gov/topics-services/environmental-health-protection/structural-pest-control/common-ticks#resources
6. www.cdc.gov/ticks/tickbornediseases/TickborneDiseases-P.pdf
7. www.cdc.gov/lyme/healthcare/index.html
8. www.cdc.gov/mmwr/volumes/66/wr/mm6623a3.htm
9. www.cdc.gov/lyme/postlds/index.html
10. www.cdc.gov/ticks/avoid/on\_people.html

**DUPAGE COUNTY HEALTH DEPARTMENT**  
**CASES<sup>1</sup> OF REPORTABLE DISEASES\***

\* Last updated by the Illinois Department of Public Health, effective January 1, 2019.

**CD REVIEW**  
Volume 15, No. 6 June 2019

	Report Within	2019		2018		2017		2016		2015		Median	
		May	Jan-May	Jan-May	Total	Jan-May	Total	Jan-May	Total	Jan-May	Total	Jan-May	Total ('15-'18)
<b>Vaccine Preventable Diseases</b>													
Chickenpox (varicella)	24 hrs	8	25	19	42	15	35	25	56	17	36	17	39
Diphtheria	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> , invasive	24 hrs	0	5	8	16	4	9	3	13	5	15	4	14
Hepatitis A	24 hrs	1	5	3	6	2	3	1	2	2	5	2	4
Hepatitis B (acute, chronic, perinatal)	7 days	3	42	45	93	45	100	46	124	63	139	45	112
Influenza, deaths in < 18 yrs old	7 days	0	1	0	0	0	0	0	0	0	0	0	0
Influenza, ICU admissions	24 hrs	3	80	113	125	66	121	63	69	35	43	63	95
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Mumps	24 hrs	1	3	8	12	4	8	4	11	1	8	4	9.5
<i>Neisseria meningitidis</i> , invasive	24 hrs	0	0	0	0	0	0	1	1	0	1	0	0.5
Pertussis (whooping cough)	24 hrs	1	14	6	34	7	36	37	105	13	49	7	42.5
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
<i>Streptococcus pneumoniae</i> , invasive disease, in those < 5 yrs old	7 days	0	1	2	6	0	1	1	2	0	0	0	1.5
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other Communicable Diseases</b>													
Anaplasmosis	7 days	0	0	0	0	0	1	0	1	0	3	0	1
Anthrax	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Arboviral Disease (other and unspecified) <sup>2</sup>	7 days	0	0	0	0	0	2	1	1	0	0	0	0.5
Babesiosis	7 days	0	0	0	1	0	0	0	1	0	0	0	0.5
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
Campylobacteriosis	7 days	14	68	52	160	55	161	60	173	NR	NR	53.5	161
Chikungunya virus disease	7 days	0	0	0	2	0	0	0	4	1	2	0	2
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Cryptosporidiosis	7 days	3	10	13	31	1	18	3	18	2	5	3	18
Cyclosporiasis	7 days	0	0	5	141	1	7	0	5	0	1	0	6
Dengue virus infection	7 days	0	0	0	2	0	1	0	3	0	3	0	2.5
Ehrlichiosis	7 days	0	0	0	0	0	0	0	2	0	1	0	0.5
Enteric <i>E. coli</i> infections <sup>3</sup>	24 hrs	0	10	15	39	10	23	6	24	7	14	7	23.5
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	0	0	0	0	0
Hepatitis C (acute, chronic, perinatal)	7 days	15	99	90	190	115	294	120	255	112	237	112	246
Hepatitis D	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	0	5	3	6	6	9	3	8	1	3	3	7
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	7 days	1	4	1	37	6	28	4	34	6	18	4	31
Leptospirosis	7 days	0	0	0	0	1	1	0	0	0	0	0	0
Listeriosis	7 days	0	1	0	0	1	4	0	0	0	2	0	1
Lyme disease	7 days	1	2	4	27	2	36	3	34	4	30	3	32
Malaria	7 days	0	1	3	4	0	3	6	10	1	4	1	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	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, animal case	24 hrs	0	0	0	8	1	12	4	10	0	16	0	11
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	11	22	28	167	9	84	9	59	6	73	9	78.5
Spotted fever rickettsiosis	7 days	0	1	1	2	0	1	0	3	0	0	0	1.5
Salmonellosis	7 days	10	39	40	118	39	104	30	118	37	131	37	118
<i>Salmonella</i> Paratyphi infection <sup>4</sup>	24 hrs	0	1	2	2	1	1	0	1	1	2	1	1.5
<i>Salmonella</i> Typhi infection	24 hrs	0	2	3	4	2	4	0	0	1	3	1	3.5
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	4	9	3	10	5	14	10	21	4	27	4	17.5
Smallpox	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Smallpox vaccination, complications	24 hrs	0	0	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 <sup>5</sup>	24 hrs	5	16	20	33	12	24	8	18	14	22	12	23
Toxic shock syndrome <sup>6</sup>	7 days	0	0	1	1	0	0	0	0	0	0	0	0
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	3	12	17	50	10	42	14	42	7	39	10	42
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	3	4	2	14	4	6	1	6	0	4	2	6
West Nile virus disease	7 days	0	0	0	18	0	6	0	10	0	9	0	9.5
Zika virus disease	7 days	0	0	1	1	0	1	1	11	NR	NR	0.5	1
<b>STDs, HIV and AIDS</b>													
AIDS <sup>7</sup> (April - June)	7 days	--	3	5	15	7	12	9	12	10	13	8	12.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	77	708	1042	2545	988	2495	1017	2417	930	2382	988	2456
Gonorrhea	7 days	17	139	159	443	159	451	156	390	118	307	156	416.5
HIV infection <sup>7,8</sup> (April - June)	7 days	--	11	12	24	17	39	23	43	28	56	20	41
Syphilis <sup>9</sup>	7 days	2	26	28	73	28	55	31	59	10	42	28	57
<b>Outbreaks<sup>10</sup></b>													
Foodborne	24 hrs	1	2	1	6	0	2	1	3	2	3	1	3
Waterborne	24 hrs	0	0	0	0	0	0	1	1	0	0	0	0
Person to Person	24 hrs	1	42	61	80	46	66	30	47	40	53	40	59.5
Other and Unspecified	24 hrs	0	0	0	1	0	0	0	0	0	0	0	0

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> Including, but not limited to, California serogroup virus diseases, Eastern equine encephalitis virus disease, Powassan virus disease, St. Louis encephalitis virus disease, Western equine encephalitis virus disease, and yellow fever. Chikungunya virus disease, dengue virus infection, West Nile virus disease, and Zika virus disease are listed individually.

<sup>3</sup> O157:H7, STEC

<sup>4</sup> *Salmonella enterica* serotypes Paratyphi A, B [tartrate negative], and C

<sup>5</sup> Includes streptococcal toxic shock syndrome and necrotizing fasciitis

<sup>6</sup> Due to *Staphylococcus aureus*

<sup>7</sup> HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis.

<sup>8</sup> HIV counts reflect all newly diagnosed HIV cases regardless of stage of disease at diagnosis.

<sup>9</sup> Cases are provisional, based on test date per local health department investigation.

<sup>10</sup> Listed based on report submission date

NR = Not reported

**Websites**

**CDC:**  
[www.cdc.gov](http://www.cdc.gov)

**IDPH:**  
[www.dph.illinois.gov](http://www.dph.illinois.gov)

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

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