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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**).¹ 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).¹ 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).^{1,2} Lyme disease is diagnosed based on symptoms, physical findings (e.g., rash), and the **possibility of exposure to infected ticks**.¹

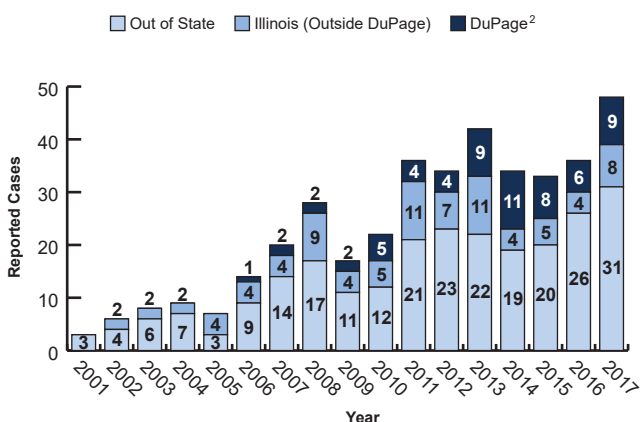
Lyme disease is the **most commonly reported vectorborne illness in the U.S.**, and accounted for **82% of all tickborne disease reports during 2004-2016**.³ In 2015, **95% of Lyme disease cases were reported from 14 states:** Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and Wisconsin. This disease does not occur nationwide and is concentrated heavily in the northeast and upper Midwest.⁴ 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.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**. 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**).^{1,6,7} 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.² 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**.¹ However, **positive results of recommended two-tiered serologic testing can provide confirmation of infection in patients with musculoskeletal, neurologic, or cardiac symptoms**.⁸ 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.^{1,9}

Patients treated with **appropriate antibiotics in the early stages of Lyme disease usually recover rapidly and completely**.⁸ 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.^{1,5,10} 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**.^{1,10} The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well (e.g., anaplasmosis).^{1,6,7}

DuPage County Cases of Lyme Disease by Reported Exposure Site(s),¹ 2001-2017 (n=336)



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. www.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/stats/index.html
5. www.dph.illinois.gov/topics-services/environmental-health-protection/structural-pest-control/common-ticks#resources
6. www.cdc.gov/lyme/resources/TickborneDiseases.pdf
7. www.cdc.gov/ticks/tickborneDiseases/TickborneDiseases-P.pdf
8. www.cdc.gov/lyme/healthcare/index.html
9. www.cdc.gov/mmwr/volumes/66/wr/mm6623a3.htm
10. 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 14, No. 6 June 2018

	Report Within	2018		2017		2016		2015		2014		Median	
		May	Jan-May	Jan-May	Total	Jan-May	Total	Jan-May	Total	Jan-May	Total	Jan-May	Total ('14-'17)
Vaccine Preventable Diseases													
Chickenpox (varicella)	24 hrs	5	17	15	35	25	56	17	36	39	76	17	46
Diphtheria	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> , invasive	24 hrs	1	9	4	9	3	13	5	15	2	5	4	11
Hepatitis A	24 hrs	1	3	2	3	1	2	2	5	4	8	2	4
Hepatitis B	7 days	0	1	0	1	0	2	1	2	1	5	1	2
Hepatitis B (carriers)	7 days	10	41	45	100	46	122	62	137	35	112	45	117
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Influenza, ICU admissions	24 hrs	1	112	66	122	63	69	35	43	45	152	63	95.5
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Mumps	24 hrs	3	8	4	8	4	11	1	8	2	2	4	8
<i>Neisseria meningitidis</i> , invasive	24 hrs	0	0	0	0	1	1	0	1	0	0	0	0.5
Pertussis (whooping cough)	24 hrs	0	6	7	36	37	105	13	49	10	22	10	42.5
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	2	0	1	1	2	0	0	2	3	1	1.5
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Other Communicable Diseases													
Anaplasmosis ²	7 days	0	0	0	1	0	1	0	3	0	3	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	16	49	55	161	60	173	NR	NR	NR	NR	55	167
Chikungunya virus disease ³	7 days	0	0	0	0	0	4	1	2	0	0	0	1
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	2	1	3	0	1	2	2	1	2
Cryptosporidiosis	7 days	2	12	1	18	3	18	2	5	0	2	2	11.5
Cyclosporiasis	7 days	3	3	1	7	0	5	0	1	0	1	0	3
Dengue fever ³	7 days	0	0	0	1	0	3	0	3	1	1	0	2
Ehrlichiosis ²	7 days	0	0	0	0	0	2	0	1	0	0	0	0.5
Enteric <i>E. coli</i> infections ⁴	24 hrs	1	12	10	23	6	24	7	14	2	18	7	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	0	0	0	0	0	0	2	0	0
Hepatitis C (cases & carriers)	7 days	18	84	115	294	120	255	112	237	109	242	112	248.5
Hepatitis D	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	0	2	6	9	3	8	1	3	3	7	3	7.5
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	7 days	0	1	6	28	4	34	6	18	5	26	5	27
Leprosy	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	7 days	0	0	1	1	0	0	0	0	0	0	0	0
Listeriosis	7 days	0	0	1	4	0	0	0	2	0	2	0	2
Lyme disease ²	7 days	1	3	2	36	3	34	4	30	4	22	3	32
Malaria	7 days	0	3	0	3	6	10	1	4	0	2	1	3.5
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	12	4	10	0	16	1	6	1	11
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	8	28	9	84	9	59	6	73	11	51	9	66
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	1	1	0	1	0	3	0	0	0	0	0	0.5
Salmonellosis	7 days	9	40	40	105	30	119	38	133	28	115	38	117
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	0	2	5	14	10	21	4	27	5	18	5	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	1	5	0	3	5	11	3	10	3	9	3	9.5
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), community cluster ⁶	24 hrs	0	0	1	1	0	1	0	0	0	0	0	0.5
<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	0	19	12	24	8	18	14	22	19	29	14	23
Toxic shock syndrome ⁸	7 days	0	1	0	0	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	17	10	43	14	42	7	39	7	34	10	40.5
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	3	2	4	0	0	1	3	1	5	1	3.5
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	2	4	6	1	6	0	4	0	3	1	5
West Nile virus disease ³	7 days	0	0	0	6	0	10	0	9	0	5	0	7.5
Yersiniosis	7 days	0	1	0	1	2	4	0	1	1	3	1	2
Zika virus disease ³	7 days	0	1	0	1	1	11	NR	NR	NR	NR	1	6
STDs, HIV and AIDS													
AIDS ⁹ (April - June)	7 days	--	1	2	5	8	8	9	12	8	17	8	10
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	139	780	930	2372	1017	2417	930	2382	874	2056	930	2377
Gonorrhea	7 days	19	110	154	428	156	390	118	307	92	242	118	348.5
HIV infection ^{9,10} (April - June)	7 days	--	5	5	16	19	30	25	47	21	42	19	36
Syphilis ¹¹	7 days	2	21	28	55	31	59	10	42	14	41	21	48.5

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