



DuPage County Health Department R E V I E W

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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.



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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 or
ebarajas@dupagehealth.org
to send suggestions
or to be added to the
distribution list.

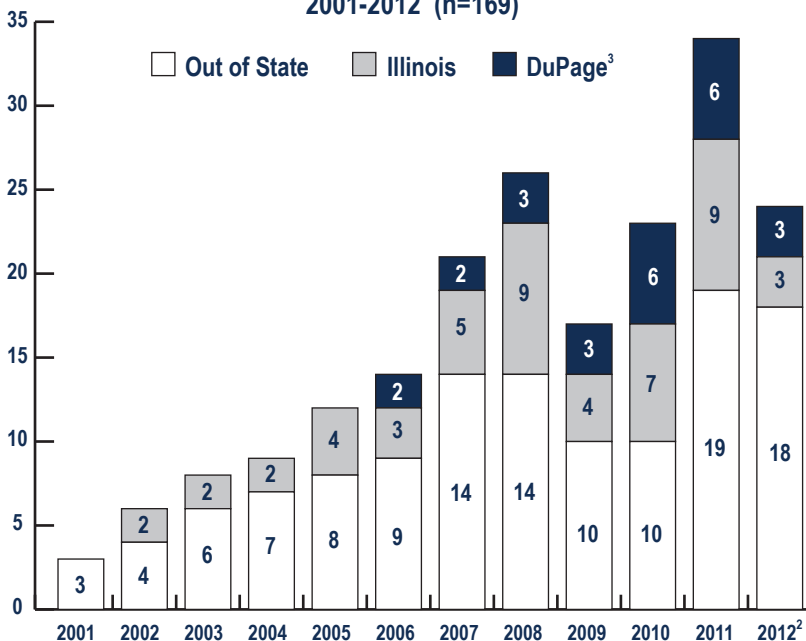


Under the Microscope Lyme Disease

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

Reported DuPage County Cases of Lyme Disease by Exposure Site(s),¹ 2001-2012² (n=169)



1. Some cases were exposed to more than one site
2. Data are provisional through 8/20/12
3. Data for DuPage exposures are not readily available before 2005.
Source: Illinois Department of Public Health, Illinois-National Electronic Disease Surveillance System

Lyme disease is the most commonly reported vector-borne illness in the U.S. Nearly 40,000 new cases were reported in 2009, with the majority of reported cases occurring in the northeastern and north-central states.^{1,2,3} The blacklegged tick (or deer tick, *Ixodes scapularis*) spreads the disease in the northeastern, mid-Atlantic, and north-central (including Illinois) U.S., and the western blacklegged tick (*Ixodes pacificus*) spreads the disease on the Pacific Coast.¹

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.²

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 recently **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 ≥ 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**).^{1,2} 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.² However, positive results of recommended two-tiered serologic testing can provide confirmation of infection in patients with musculoskeletal, neurologic, or cardiac symptoms.^{2,5} Testing methods that have not been adequately validated can be misleading and are not recommended.² 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, removing ticks promptly and appropriately, proper groundskeeping, and trimming vegetation.⁶ 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/mmwr/pdf/ss/ss5710.pdf
3. www.cdc.gov/mmwr/PDF/wk/mm5853.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 HEALTH DEPARTMENT

CASES¹ OF REPORTABLE DISEASES*

* Last updated by the Illinois Department of Public Health in March 2008

CD REVIEW

Volume 8, No. 8 August 2012

Vaccine Preventable Diseases	Report Within	2012		2011		2010		2009		2008		Median	
		Jul	Jan - Jul	Jan - Jul	Total	Jan - Jul	Total	Jan - Jul	Total	Jan - Jul	Total	Jan - Jul	Overall ('08-'11)
Chickenpox (varicella)	24 hrs	8	59	41	82	71	95	88	146	112	236	71	120.5
Diphtheria	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	3	9	8	15	4	7	5	11	1	6	5	9
Hepatitis A	24 hrs	1	2	4	8	2	3	2	6	9	11	2	7
Hepatitis B	7 days	0	3	0	0	1	4	5	8	2	3	2	3.5
Hepatitis B (carriers)	7 days	7	59	60	113	63	108	68	127	80	128	63	120
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	0	0	1	0	0	0	0
Influenza ICU admissions	24 hrs	0	8	24	24	0	3	NR	NR	NR	NR	8	13.5
Measles (rubeola)	24 hrs	0	0	0	0	0	0	1	1	14	14	0	0.5
Mumps	24 hrs	0	1	2	4	0	2	2	2	2	2	2	2
Neisseria meningitidis, invasive	24 hrs	0	0	1	2	1	1	3	6	1	4	1	3
Pertussis (whooping cough)	24 hrs	14	143	111	268	23	92	11	26	4	13	23	59
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
Streptococcus pneumoniae, invasive disease, in those < 5 yrs old	7 days	1	3	9	13	4	8	6	8	1	6	4	8
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Other Communicable Diseases													
Anaplasmosis ²	7 days	0	1	2	3	0	0	0	0	0	0	0	0
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
Cholera	24 hrs	0	0	0	0	0	0	0	0	1	1	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	2	0	0	0	0	0	0	0	0
Cryptosporidiosis	7 days	1	2	3	5	2	5	3	5	1	1	2	5
Cyclosporiasis	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Dengue fever ³	7 days	1	1	1	1	2	4	0	4	0	0	1	2.5
Ehrlichiosis ²	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Enteric E. coli infections ⁴	24 hrs	1	8	16	22	12	18	7	12	12	21	12	19.5
Giardiasis	7 days	3	22	22	44	29	49	20	40	33	53	22	46.5
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	1	1	1	1	0	0	0	0	1	1	1	0.5
Hepatitis C (cases & carriers)	7 days	7	96	105	189	116	187	132	213	153	246	116	201
Hepatitis D	7 days	0	0	1	0	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	0	2	0	1	2	2	1	2	3	6	2	2
Influenza A, novel virus	3 hrs	0	0	0	0	11	11	48	181	0	0	0	5.5
Legionellosis	7 days	2	8	4	14	7	11	6	13	1	5	6	12
Leprosy	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Leptospirosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	7 days	1	1	2	2	2	6	2	3	0	1	2	2.5
Lyme disease ²	7 days	9	21	21	32	12	19	14	17	13	16	14	18
Malaria	7 days	1	2	1	7	1	4	3	4	4	4	2	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 ⁶	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	13	31	16	30	24	54	12	15	20	45	20	37.5
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	0	0	0	0	0
Salmonellosis	7 days	8	57	60	95	83	136	51	89	65	105	60	100
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	0	8	9	22	261	277	5	12	15	24	9	23
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	3	2	3	5	6	4	6	0	3	3	4.5
Staphylococcus aureus, methicillin resistant (MRSA), community cluster ⁷	24 hrs	0	1	0	0	1	1	0	1	1	4	1	1
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	0	1	1	1	0	0	0	0	0	0.5
Streptococcal infections, group A invasive disease ⁸	24 hrs	2	15	20	30	12	20	10	14	10	16	12	18
Toxic shock syndrome ⁹	7 days	0	0	1	1	0	0	0	0	1	1	0	0.5
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis ¹⁰	7 days	2	12	14	23	18	26	18	29	24	43	18	27.5
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	1	3	3	2	3	3	5	1	3	2	3
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	1	2	0	3	0	1	1	2	0	0	0	1.5
West Nile disease ³	7 days	2	2	0	2	0	17	0	0	1	1	0	1.5
Yersiniosis	7 days	0	3	2	3	0	0	3	5	0	1	2	2
STDs, HIV and AIDS													
AIDS ¹¹ (July - October)	7 days	--	9	7	16	17	26	8	19	6	22	4.5	20.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia ¹²	7 days	78	907	884	1599	908	1539	940	1555	906	1587	907	1571
Gonorrhea ¹²	7 days	15	121	130	241	136	223	124	225	157	268	130	233
HIV infection ¹¹ (July - October)	7 days	--	10	11	24	21	27	20	40	6	23	8.5	25.5
Syphilis	7 days	0	7	18	24	14	25	18	33	11	18	14	24.5

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 Q fever case in 2004 not related to any suspected bioterrorism threat or event

⁷ Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period

⁸ Includes streptococcal toxic shock syndrome and necrotizing fasciitis

⁹ Due to *Staphylococcus aureus*

¹⁰ Provisional cases, based on count date per IDPH

¹¹ HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis

¹² Provisional cases, based on date of test

NR = Not reported

** = Count of less than 5 cases

Websites

CDC:
www.cdc.gov

IDPH:
www.idph.state.il.us

DuPage:
www.dupagehealth.org

Archived issues of CD Review are available at:

www.dupagehealth.org/publications