



111 North County Farm Road  
Wheaton, IL 60187  
(630) 682-7400  
www.dupagehealth.org

Linda Kurzawa  
President, Board of Health

Maureen McHugh  
Executive Director

Rashmi Chugh, MD, MPH  
Medical Officer

### General Information

Communicable Disease  
and Epidemiology  
(630) 682-7979, ext. 7553

Environmental Health  
(630) 682-7400

Immunizations  
(630) 682-7400

Sexually  
Transmitted Diseases  
(630) 682-7979, ext. 7553

HIV/AIDS  
(630) 682-7979, ext. 7553

Tuberculosis  
(630) 682-7979, ext. 7522

School Health  
(630) 682-7979, ext. 7300

Travel Clinic  
(630) 682-7400

Animal Care & Control  
(630) 407-2800

Please contact  
Communicable Disease  
and Epidemiology at  
(630) 682-7979, ext. 7553 or  
ebarajas@dupagehealth.org  
to send 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.

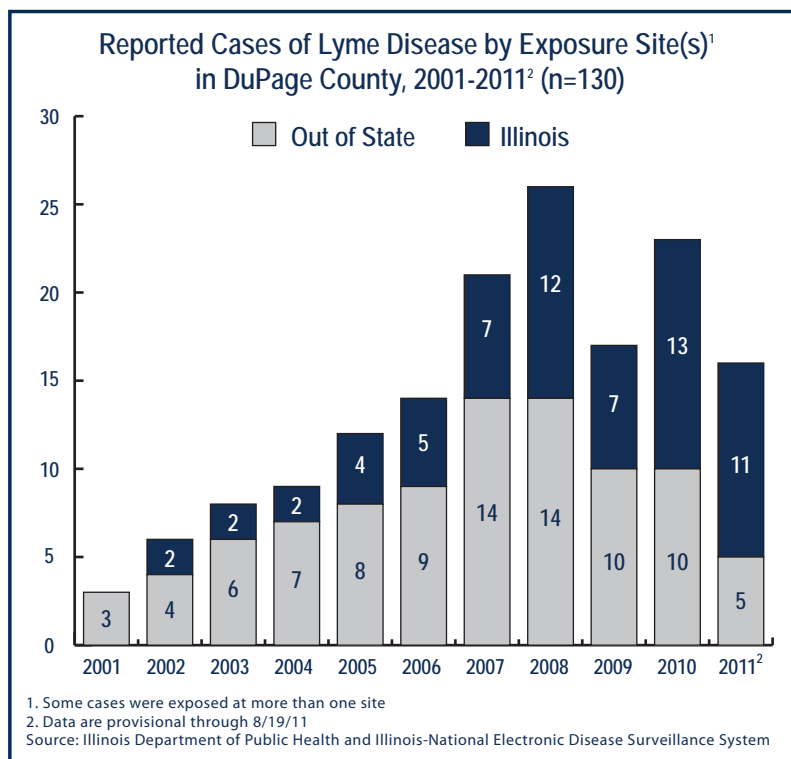


## Under the Microscope Lyme Disease

For questions or to report a suspect or known case of Lyme disease, please call the DuPage County Health Department at (630) 682-7979, ext. 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 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).<sup>1</sup>

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.<sup>1,2,3</sup> The blacklegged tick (or deer tick, *Ixodes scapularis*) spreads the disease in the northeastern, mid-Atlantic, and north-central U.S., and the western blacklegged tick (*Ixodes pacificus*) spreads the disease on the Pacific Coast.<sup>1</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>2</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 recently **acquiring the infection within Illinois** (without a history of travel to regions previously known to be endemic, e.g., Wisconsin).<sup>4</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>1,2</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>2</sup> However, positive results of recommended two-tiered serologic testing can provide confirmation of infection in patients with musculoskeletal, neurologic, or cardiac symptoms.<sup>2,5</sup> Testing methods that have not been adequately validated can be misleading and are not recommended.<sup>2</sup> Laboratory testing is not recommended for persons who do not have symptoms of Lyme disease.<sup>1</sup>

Most cases of **Lyme disease can be treated** successfully with a course of appropriate antimicrobial therapy.<sup>4,5</sup> 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.<sup>6</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/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**  
**CASES<sup>1</sup> OF REPORTABLE DISEASES\***

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

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	Report Within	2011		2010		2009		2008		2007		Median	
		Jul	Jan - Jul	Jan - Jul	Total	Jan - Jul	Total	Jan - Jul	Total	Jan - Jul	Total	Jan - Jul	Total ('07-'10)
<b>Vaccine Preventable Diseases</b>													
Chickenpox (varicella)	24 hrs	1	41	71	95	88	146	112	236	119	177	88	161.5
Diphtheria	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	0	8	4	7	5	11	1	6	3	5	4	6.5
Hepatitis A	24 hrs	0	3	2	3	2	6	9	11	12	16	3	8.5
Hepatitis B	7 days	0	1	1	4	5	8	2	3	5	9	2	6
Hepatitis B (carriers)	7 days	4	52	63	108	68	127	80	128	102	167	68	127.5
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	1	0	0	NR	NR	0	0
Measles (rubeola)	24 hrs	0	0	0	0	1	1	14	14	0	0	0	0.5
Mumps	24 hrs	0	2	0	2	2	2	2	2	10	13	2	2
Neisseria meningitidis, invasive	24 hrs	0	1	1	1	3	6	1	4	1	1	1	2.5
Pertussis (whooping cough)	24 hrs	24	110	23	92	11	26	4	13	7	9	11	19.5
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
Streptococcus pneumoniae, invasive disease, in those < 5 yrs old	7 days	0	9	4	8	6	8	1	6	6	10	6	8
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	2	0	0	0	0	0	0	NR	NR	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	1	1	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	NR	NR	0	0
Cholera	24 hrs	0	0	0	0	0	0	1	1	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	1	0	0	0	0	0	0	NR	NR	0	0
Cryptosporidiosis	7 days	1	2	2	5	3	5	1	1	2	5	2	5
Cyclosporiasis	7 days	0	0	0	0	1	1	0	0	0	0	0	0
Dengue fever <sup>3</sup>	7 days	0	1	2	4	0	4	0	0	0	1	0	2.5
Ehrlichiosis <sup>2</sup>	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Enteric E. coli infections <sup>4</sup>	24 hrs	2	12	12	18	7	12	12	21	3	6	12	15
Giardiasis	7 days	5	24	29	49	20	40	33	53	45	62	29	51
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	2	2	0	0	0	0	1	1	0	0	0	0
Hepatitis C (cases & carriers)	7 days	7	113	116	187	132	224	153	246	127	203	127	213.5
Hepatitis D	7 days	0	0	0	0	0	0	0	0	NR	NR	0	0
Histoplasmosis	7 days	0	1	2	2	1	2	3	6	2	5	2	3.5
Influenza A, ICU admissions	3 hrs	0	24	0	3	NR	NR	NR	NR	NR	NR	NR	NR
Influenza A, novel virus	3 hrs	0	0	11	11	48	181	0	0	NR	NR	5.5	11
Legionellosis	7 days	1	4	7	11	6	13	1	5	3	13	4	12
Leprosy	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Leptospirosis	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Listeriosis	7 days	1	2	2	6	2	3	0	1	1	1	2	2
Lyme disease <sup>2</sup>	7 days	3	14	12	19	14	17	13	16	13	16	13	16.5
Malaria	7 days	0	1	1	4	3	4	4	4	5	7	3	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 <sup>6</sup>	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	1	13	24	54	12	15	20	45	24	50	20	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	0	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	7 days	13	60	83	136	51	89	65	105	82	133	65	119
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	NR	NR	0	0
Shigellosis	7 days	2	9	26	27	5	12	15	23	9	14	9	18.5
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	NR	NR	0	0
St. Louis encephalitis <sup>3</sup>	7 days	0	0	0	0	0	0	0	0	NR	NR	0	0
Staphylococcus aureus, methicillin resistant (MRSA), in those < 61 days old	24 hrs	1	2	5	6	4	6	0	3	NR	NR	3	6
Staphylococcus aureus, methicillin resistant (MRSA), community cluster <sup>7</sup>	24 hrs	0	0	1	1	0	1	1	4	NR	NR	0.5	1
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	1	1	0	0	0	0	0	0	0	0
Streptococcal infections, group A invasive disease <sup>8</sup>	24 hrs	1	20	12	20	10	14	10	16	8	11	10	15
Toxic shock syndrome <sup>9</sup>	7 days	0	1	0	0	0	0	1	1	1	2	1	0.5
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	1	14	18	26	18	29	24	43	20	27	18	28
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	3	2	3	3	5	1	3	2	6	2	4
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	0	0	1	1	2	0	0	1	1	0	1
West Nile disease <sup>3</sup>	7 days	0	0	17	17	0	0	1	1	1	10	0	5.5
Yersiniosis	7 days	0	2	0	0	3	5	0	1	1	1	1	1
<b>STDs, HIV and AIDS</b>													
AIDS <sup>10</sup> (July - September)	7 days	--	6	24	31	12	19	14	22	17	20	4.5	21
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	77	796	908	1542	940	1555	906	1587	787	1522	906	1548.5
Gonorrhoea	7 days	13	123	136	223	124	225	157	268	119	251	124	238
HIV infection <sup>10</sup> (July - September)	7 days	--	9	24	29	28	40	16	23	15	22	8.5	26
Syphilis	7 days	0	18	14	25	18	33	11	18	8	18	14	21.5

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) 682-7979, ext. 7553  
24 hours: (630) 682-7400

**Tuberculosis**  
(630) 682-7979, ext. 7522

**STDs**  
(630) 682-7979, ext. 7553

**HIV/AIDS:**  
(630) 682-7979, ext. 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> Q fever case in 2004 not related to any suspected bioterrorism threat or event

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

<sup>8</sup> Includes streptococcal toxic shock syndrome and necrotizing fasciitis

<sup>9</sup> Due to *Staphylococcus aureus*

<sup>10</sup> HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis

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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