

# Childhood Lyme disease (LD)

## CANADIAN PAEDIATRIC SURVEILLANCE PROGRAM

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## REPORTING INFORMATION

(To be completed by CPSP staff)

Report number: \_\_\_\_\_

Month of reporting: \_\_\_\_\_

Province: \_\_\_\_\_

Today's date: \_\_\_\_\_

Please complete the following sections for the case identified above.  
Strict confidentiality of information will be assured.

### CASE DEFINITION FOR CHILDHOOD LYME DISEASE

Report a patient less than 16 years of age with Lyme disease, meeting the following criteria:

**Confirmed Lyme disease** – Patient fulfills one of two conditions:

1. Clinical evidence of illness with laboratory confirmation
  - a. isolation of *Borrelia burgdorferi* from an appropriate clinical specimen
  - OR
  - b. detection of *B burgdorferi* DNA by PCR in appropriate tissues
2. Clinical evidence of illness with a history of residence in, or visit to, an endemic area\* and with laboratory evidence of infection
  - positive serologic test using the two-tiered serological approach (i.e., ELISA followed by Western blot assays)

**Probable Lyme disease** – Patient fulfills one of two conditions:

1. Clinical evidence of illness without a history of residence in, or visit to, an endemic area\* and with laboratory evidence of infection
  - positive serologic test using the two-tiered serological approach (i.e., ELISA followed by Western blot assays)
2. Clinician-observed erythema migrans without laboratory evidence but with history of residence in, or visit to, an endemic area\*.

#### Exclusion criteria

Confirmation of infection with a non-tick-borne disease, which fully explains symptoms. Cases diagnosed by methods and/or laboratories not recommended by the Public Health Agency of Canada or the US Centers for Disease Control and Prevention will be excluded.

\* An endemic area is defined as a locality in which reproducing populations of *Ixodes scapularis* or *Ixodes pacificus* tick vectors are present and transmission of *B burgdorferi* occurs at the location.

Month first seen: \_\_\_\_\_

### SECTION 1 – DEMOGRAPHIC INFORMATION

1.1 Date of birth: \_\_\_\_/\_\_\_\_/\_\_\_\_ 1.2 Sex: Male\_\_\_ Female\_\_\_  
DD MM YYYY

1.3 Province/territory of permanent residence: \_\_\_\_\_

1.4 Province/territory of diagnosis: \_\_\_\_\_

1.5 Postal code – First three digits only: \_\_\_ \_\_\_ \_\_\_

### SECTION 2 – CLINICAL HISTORY

2.1 Date of onset of first symptoms: \_\_\_\_/\_\_\_\_/\_\_\_\_  
DD MM YYYY

2.2 Date of clinical diagnosis confirmed: \_\_\_\_/\_\_\_\_/\_\_\_\_  
DD MM YYYY

2.3 Main presenting symptoms (check all that apply and indicate with a cross in the right-hand column those you considered most important in reaching the diagnosis):

Presentation	Yes	No	Duration of the symptoms prior to diagnosis (days)	Symptoms important in diagnosis
Single erythema migrans (EM) (at least 5 cm in diameter)				
Multiple EM				
Recurrent brief joint swelling				
Single joint arthritis				

**SECTION 2 – CLINICAL PRESENTATION (cont'd)**

Presentation	Yes	No	Duration of the symptoms prior to diagnosis (days)	Symptoms important in diagnosis
Polyarthritis				
Arthralgia				
Bell's palsy (facial paralysis)				
Other cranial neuropathy				
Radiculoneuropathy				
Meningitis/Lymphocytic meningitis				
Encephalitis/Encephalomyelitis				
Lyme carditis				
A-V heart block				
Palpitations/Arrhythmia				
Headache				
Fever				
Other relevant signs? (Please describe)				

**SECTION 3 – LABORATORY DATA**

3.1 Was the diagnosis made based only on clinical presentation (e.g., EM) without laboratory testing?

Yes\_\_\_ No\_\_\_ Unknown\_\_\_ **If yes, skip to Section 4**

3.2 Laboratory testing (check and complete all that apply)

3.2.1 Serological testing (enter all tests completed, including repeat tests – see options below table)

Serological Test	Date DD / MM / YYYY	Positive/ reactive	Negative/ non-reactive	Borderline/ weakly reactive	Unreadable	Not completed
Other:						

Test options: ELISA, IFA, C6, Western Blot IgM, Western Blot IgG, CSF serology

3.2.2 Name(s) of the laboratory(ies) that completed sample testing: \_\_\_\_\_

3.2.3 PCR

Sample one: Tissue biopsy\_\_\_ Synovial fluid\_\_\_ CSF\_\_\_ Other, specify: \_\_\_\_\_

Result: Positive\_\_\_ Negative\_\_\_ Indeterminate\_\_\_

Sample two: Tissue biopsy\_\_\_ Synovial fluid\_\_\_ CSF\_\_\_ Other, specify: \_\_\_\_\_

Result: Positive\_\_\_ Negative\_\_\_ Indeterminate\_\_\_

Where was PCR completed? \_\_\_\_\_

3.2.4 Culture

Sample one: Tissue biopsy\_\_\_ Synovial fluid\_\_\_ CSF\_\_\_ Other, specify: \_\_\_\_\_

Result: Positive\_\_\_ Negative\_\_\_ Indeterminate\_\_\_

Sample two: Tissue biopsy\_\_\_ Synovial fluid\_\_\_ CSF\_\_\_ Other, specify: \_\_\_\_\_

Result: Positive\_\_\_ Negative\_\_\_ Indeterminate\_\_\_

**SECTION 3 – LABORATORY DATA (cont'd)**

- 3.3 Was any diagnostic testing conducted outside of Canada? Yes\_\_\_ No\_\_\_ Unknown\_\_\_  
**If yes**, indicate: Laboratory used \_\_\_\_\_  
 Tests \_\_\_\_\_  
 Results \_\_\_\_\_
- 3.4 Case meets the following Lyme disease surveillance definition criteria:  
 Confirmed\_\_\_ Probable 1\_\_\_ Probable 2\_\_\_

**SECTION 4 – TREATMENT**

**Yes No Unknown**

- 4.1 Did the patient have a history of a tick bite? \_\_\_ \_\_\_ \_\_\_
- 4.2 Did the patient receive care in an Emergency room? \_\_\_ \_\_\_ \_\_\_  
**If yes**, the visit was for: a tick bite\_\_\_ or Lyme disease symptoms\_\_\_
- 4.3 If the patient had a history of a tick bite, did he/she receive a prophylactic treatment? \_\_\_ \_\_\_ \_\_\_  
**If yes**, specify antibiotic: \_\_\_\_\_  
 Treatment is: Complete\_\_\_ Ongoing\_\_\_ Duration of treatment \_\_\_\_\_
- 4.4 Was patient hospitalized for treatment? \_\_\_ \_\_\_ \_\_\_  
**If yes**, duration of hospitalization \_\_\_\_\_
- 4.5 List of medications used in empiric or definitive treatment (does not include prophylaxis):

Medication	Yes	No	Dose (per kg body weight)	Frequency (per day)	Duration (days) (actual or planned)
Amoxicillin					
Doxycycline					
Ceftriaxone					
Anti-inflammatory medication – Other:					

**SECTION 5 – TREATMENT OUTCOME (completion of this section may require follow-up. If treatment outcome is not yet known, please leave all entries blank.)**

- 5.1 Did the patient have persistent or recurrent symptoms after a recommended course of oral or IV antibiotics? **Yes No Unknown**  
\_\_\_ \_\_\_ \_\_\_  
**If yes**, specify antibiotic: \_\_\_\_\_  
**If no**, specify symptoms: \_\_\_\_\_
- 5.2 Did the patient show improvement with a subsequent course of antibiotics? \_\_\_ \_\_\_ \_\_\_  
**If yes**, specify antibiotic and route: \_\_\_\_\_  
**If no**, specify symptoms: \_\_\_\_\_ Duration: \_\_\_\_\_

**SECTION 6 – ENVIRONMENTAL EXPOSURE HISTORY**

- 6.1 Did the patient reside in or visit a Lyme disease endemic or risk\* **area in Canada** within 30 days of the onset of the symptoms? Yes\_\_\_ No\_\_\_ Unknown\_\_\_  
 \* *Known endemic and risk areas in Canada include parts of southern Ontario, Quebec, Nova Scotia, New Brunswick, Manitoba and southern British Columbia (please see provided map)*  
**If yes**: date: \_\_\_ / \_\_\_  
                   MM    YYYY  
                   Province \_\_\_\_\_ / County \_\_\_\_\_ / Town or City \_\_\_\_\_ / Park \_\_\_\_\_
- 6.2 Did the patient reside in or visit a Lyme disease endemic area **outside of Canada** within 30 days of the onset of the symptoms? Yes\_\_\_ No\_\_\_ Unknown\_\_\_  
**If yes**: date: \_\_\_ / \_\_\_  
                   MM    YYYY  
                   USA\_\_\_ Europe\_\_\_ Asia\_\_\_  
                   State \_\_\_\_\_ / Town or City \_\_\_\_\_ / Park \_\_\_\_\_

**SECTION 6 – ENVIRONMENTAL EXPOSURE HISTORY (cont'd)**

6.3 Did the patient have a history of a tick bite within 30 days of the onset of the symptoms?

Yes\_\_\_ No\_\_\_ Unknown\_\_\_ **If no or unknown, go to question 6.4**

**If yes:** Province\_\_\_\_\_ / County\_\_\_\_\_ / Town or City\_\_\_\_\_ / Park\_\_\_\_\_

6.4 In what type of environment was the patient when bitten by the tick(s)? (Check all that apply)

Forest\_\_\_ National or provincial park\_\_\_ Private or public garden\_\_\_ Municipal park\_\_\_

Farmland/Meadow\_\_\_ Unknown\_\_\_ Other, specify: \_\_\_\_\_

6.5 Describe the activities that the patient was engaged in when they were exposed to the tick(s)? (Check all that apply)

Playing\_\_\_ Dog walking\_\_\_ Picnic\_\_\_ Hiking\_\_\_ Gardening\_\_\_ Camping\_\_\_ Sports\_\_\_

Hunting/fishing\_\_\_ Unknown\_\_\_ Other, specify: \_\_\_\_\_

\_\_\_ **I agree to be contacted by the CPSP for further information on this questionnaire, especially about section 5, if not completed at the time of submission.**

\_\_\_ **I do not wish to be contacted by the CPSP for further information.**

**SECTION 7 – REPORTING PHYSICIAN**

First name\_\_\_\_\_ Surname\_\_\_\_\_

Address\_\_\_\_\_

City\_\_\_\_\_ Province\_\_\_\_\_ Postal code\_\_\_\_\_

Telephone number\_\_\_\_\_ Fax number\_\_\_\_\_

E-mail\_\_\_\_\_ Date completed\_\_\_\_\_

**Thank you for completing this questionnaire.**

