Lyme Disease Surveillance in Canada Highlights 2009–2019

Data from the Canadian Notifiable Disease Surveillance System and the Lyme Disease Enhanced Surveillance System of the Public Health Agency of Canada

WHAT is LYME DISEASE?

LYME DISEASE is the most reported tick-borne zoonoses in Canada. It is caused by the bacteria ***Borrelia burgdorferi*** and transmitted by western blacklegged ticks (*Ixodes pacificus*) in British Columbia and blacklegged ticks (*Ixodes scapularis*) in centra and eastern Canada.

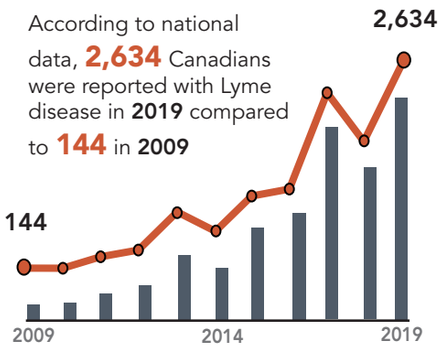
It is a **multisystem infection** that can affect the **skin**, **heart**, **joints** and **nervous system**. Most people bitten by a *Borrelia burgdorferi-infected* tick will develop a skin rash (erythema migrans), which may be accompanied by flu-like symptoms. **If left untreated**, the bacteria can spread through the blood and cause multiple secondary skin lesions, cardiac symptoms (carditis, atrioventricular heart block, arrhythmia and palpitations) and neurologic symptoms (Bell's palsy and meningitis). **Months to years post-infection**, late disseminated Lyme disease can manifest with single or recurrent joint arthritis episode(s).

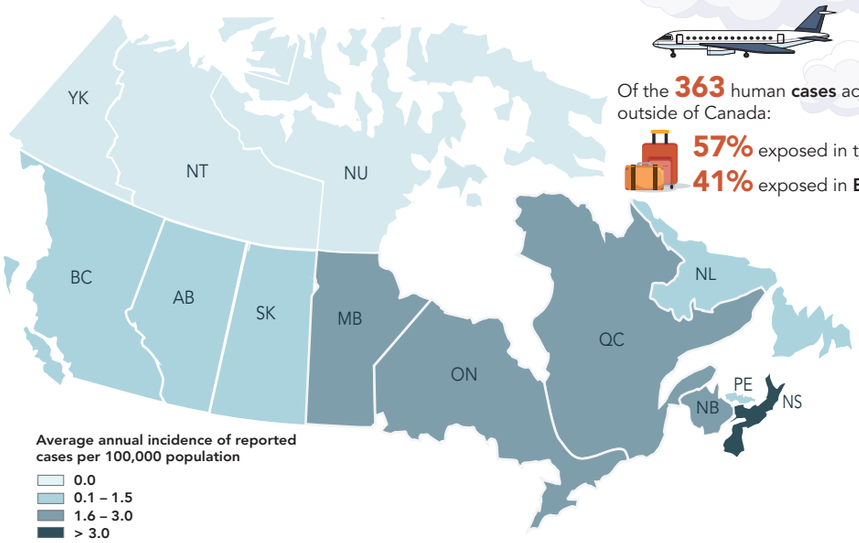
WHAT are the TRENDS?

10,150
reported human cases of Lyme disease (2009–2019)

- **71%** Confirmed cases
- **29%** Probable cases

According to national data, **2,634** Canadians were reported with Lyme disease in **2019** compared to **144** in **2009**





Of the **363** human **cases** acquired outside of Canada:

- **57%** exposed in the **USA**
- **41%** exposed in **Europe**

SEASONALITY

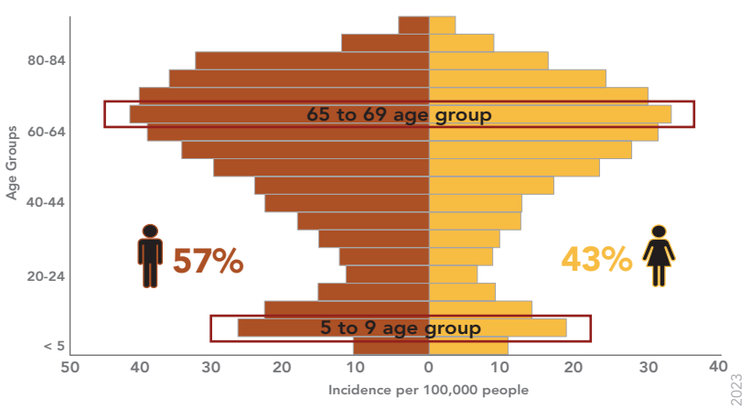
Higher number of acquired cases in summer months

- June **20%** of cases
- July **35%** of cases
- August **19%** of cases

DEMOGRAPHIC CHARACTERISTICS

AGE GROUPS at HIGHER RISK:

- Incidences (cases per 100,000 population) were **higher** in **children** aged **5–9 years** (45.0) and in **adults** aged **65–69 years** (74.3)
- **57%** of all reported cases occurred among adults aged **50–84** years



WHAT are the REPORTED LYME DISEASE SYMPTOMS for LOCALLY-ACQUIRED CASES?

Early localized stage

75% single erythema migrans skin rash

Early disseminated stage

4% cardiac symptoms (carditis, atrioventricular heart block, arrhythmia, and palpitations)

8% Bell's palsy (facial paralysis)

19% other neurologic symptoms

Late disseminated stage

34% single or recurrent joint arthritis episode(s)

RELATED LINKS:

1. Surveillance for Lyme disease in Canada: 2009–2019
2. Visit Canada.ca for the Lyme disease case defintion
3. Visit Canada.ca for information about at-risk areas
4. Lyme disease web pages at Canada.ca
5. https://www.etick.ca/

SOCIAL MEDIA:

Healthy Canadians

@GovCanHealth

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