

Lyme-like Illness / True or False?

- Lyme-like Illness is widespread in Australia **TRUE**
- Lyme-like Illness testing is 100% reliable **FALSE**
- A one-off course of antibiotics will 'cure' Lyme-like Illness **FALSE**
- Lyme-like Illness can be transmitted from person to person (sexually and in utero) **TRUE**
- If you don't remember a tick bite, you don't have Lyme-like Illness **FALSE**
- Chronic Lyme-like Illness does exist **TRUE**

HELP! I've Been Bitten

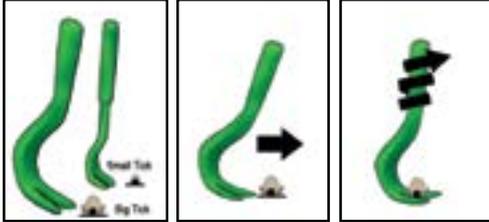
Don't panic, not all ticks carry the pathogens that make people sick.

Contact a Lyme-aware doctor for assessment.

Most doctors have not had the opportunity to have studied Lyme-like Illness. You are welcome to contact the Lyme Disease Association for support.

How to Remove a Tick

Tick Twister (purchase link: www.lymedisease.org.au/resources)



Fine Tweezers

Grasp as close to the head as possible
Don't squeeze the body!



*If you are anaphylactic to ticks, please follow the advice of your doctor

Nymphal Size Ticks

For 'pin-head' or smaller ticks please see here:
www.lymedisease.org.au/about-lyme-disease/about-ticks/

Do's & Don'ts of Tick Removal

- **DO** grasp tick heads as close to skin as possible, pull straight or twist out, **DON'T** squeeze the body of the tick
- **DON'T** apply anything (poison, repellent or chemical) to an attached tick
- **DO** place tick in plastic ziplock bag with your name, date, site of bite, how long tick was attached and freeze current testing: www.lymedisease.org.au/resources
- **DO** take photos if you develop any kind of skin reaction

About the Lyme Disease Association of Australia



The LDAA is a small yet influential health charity representing the immediate and future needs of Australians suffering from a Lyme-like illness. The LDAA is steadfastly committed to:

- The urgent recognition of an emerging and serious vector-borne illness, that in the absence of prioritised research, we describe as 'Lyme-like illness';
- Supporting the education of doctors about vector-borne illness and specifically Lyme-like illness;
- Improving the treatment of patients suffering from Lyme-like illness;
- The prioritising of research into vector borne disease, especially through tick bite; and
- The development of awareness and prevention campaigns into Lyme-like illness.

The role of the LDAA is vital for the immediate assistance of people affected by Lyme-like Illness.
INFORMATION | SUPPORT | EDUCATION | AWARENESS

How You Can Help

- **Contribute** www.lymedisease.org.au/help
- **Donate** www.giveLDAA.today
- **Lyme Awareness Saves Lives** – please pass these flyers on! Order more from our website.



Connect With Us

www.lymedisease.org.au/contact-us
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www.lymedisease.org.au

Facebook: LymeDiseaseAustralia
Twitter: @LymeDiseaseAus

LYME DISEASE in Australia

IS THIS WHAT'S MAKING YOU SICK?

LYME DISEASE
ASSOCIATION OF AUSTRALIA
For Lyme Disease Awareness & Action

What is Lyme Disease?



Lyme disease is an infectious disease caused by bacteria called *Borrelia*. It is also referred to as Lyme borreliosis and is often associated with many other infections. Lyme disease is generally acquired by humans through the bite of a tick.

Lyme disease is the fastest growing tick-borne illness in the world, but a lack of investment into the bacteria found in Australia ticks is often misinterpreted as "Australia doesn't have Lyme disease".

As such, Lyme disease in Australia is often referred to as 'Lyme-like illness'.

How is it Transmitted?

Ticks feed on hosts such as, dogs, cats, kangaroos, wallabies, deer, rodents, birds and reptiles. They may then transmit any infections the animal carries (bacterial, parasitic, viral) to humans through a bite. Other vectors like mosquitos, fleas, march flies and bed bugs are implicated in emerging research.

Symptoms

Lyme-like illness is typically categorised into early and late stage disease. Early symptoms generally include headaches, fever, swollen lymph nodes, fatigue, muscle aches & joint pains and is often assumed to be the flu. A bull's eye rash is one diagnostic marker of Lyme disease, but occurs in less than 35% of cases.

The *Borrelia* bacteria that cause Lyme-like illness are a spiral shaped (spirochete) bacteria that have the ability to penetrate the body's tissues (including muscles and joints) and organs (including the heart and brain), resulting in a multi-systemic infection. Symptoms can often mimic other conditions such as Multiple sclerosis, Parkinson's disease, Motor Neurone disease (also known as Lou Gehrig's disease or Amyotrophic lateral sclerosis), Chronic Fatigue Syndrome, Fibromyalgia, Juvenile Rheumatoid Arthritis, Lupus, Alzheimer's disease, Autism and Sarcoidosis to name a few.

There is much scientific evidence that Australian ticks and other vectors very often carry many other infections that can be transmitted at the same time as 'Lyme-like illness'. These are known as co-infections and include parasitic organisms like *Babesia* and *Theileria*; viral infections like Epstein Barr Virus (EBV), Parvovirus and Cytomegalovirus (CMV), and bacteria's like *Bartonella*, *Rickettsia*, *Ehrlichia*, *Coxiella*, *Mycoplasma* and others.

With the *Borrelia* bacteria being able to attack most parts of the body, and a high possibility of co-infections, the symptom list of Lyme-like illness can be varied, intermittent, numerous and unique for each individual.

Lyme-like illness can cause mild, moderate and severe symptoms, and if left untreated can be fatal.

For a comprehensive list of symptoms please visit: www.lymedisease.org.au



Preventing Lyme Disease

The best way to prevent infection is to prevent bites from ticks and other insects and be aware of early symptoms.

Ticks can be anywhere and tick bites can happen at any time of the year. Ticks can be soft or hard and vary greatly in size. Some ticks are so small they are the size of a pinhead.

Birds can be hosts for ticks – thus, anywhere a bird can fly, Lyme-like illness transmission is possible.

Diagnosis

Lyme-like illness is primarily a clinical diagnosis based on the patient's history, symptoms and presentation. Diagnosis can be difficult to conclude if blood tests alone are used, this is because currently the widely accepted Australian testing processes are known to be unreliable and other testing methods are very costly to the patient. For this reason, blood tests should be used to support a clinical diagnosis from a physician with knowledge about Lyme-like illness.

A bull's eye rash is diagnostic of Lyme-like illness, but occurs in less than 35% of cases. Rashes can frequently be mistaken for a spider bite or other skin conditions like ring worm.

It is important to remember that even if your blood tests are negative or you don't remember a rash, you should still ask your doctor to carefully evaluate you for Lyme-like illness, taking your symptoms and health history into full account.

Treatment

A combination of therapies is required to address the bacteria, parasites, protozoans and viruses passed through the bite of a tick. Research indicates that immediate combination treatment, with a minimum of 3-8 weeks of antibiotics can help avoid late stage infection. It is also important that treatment be repeated or extended if clinical symptoms persist. Research exploring the effectiveness of treatments in late stage illness is advancing rapidly and there is indication each patient may require an individualised approach.

Preventing Late Stage Lyme Disease

Lyme-like illness can be contracted in whatever part of Australia you live or visit and is especially prevalent in areas with a high tick population and in coastal communities.

The best way to prevent infection is to prevent bites from ticks and be aware of what to do if you are bitten. Here are some tips:

- **Be aware of ticks** in your location. Wear light colored clothing, socks over pants and use insect repellents - DEET (skin)/ permethrin (clothes) - whenever you could be exposed to ticks. Always check yourself after being outside or with pets and put clothing in a hot dryer for 10 mins. Ticks can be prevalent in highly populated areas, coastal and bush areas, and can be active in any season.
- **Know that not all medical professionals are trained** to recognise, diagnose and treat Lyme disease.
- **Understand that pathology testing is not always reliable** in the diagnosis of Lyme-like illness. False negatives are common. Lyme-like illness is diagnosed clinically by investigating symptoms and history. Internationally, some governments have legislated guidelines for physicians to inform patients that a negative blood test is not conclusive and they may still have 'Lyme disease'.
- **Be aware that in Australia, most people are misdiagnosed** with other conditions before a diagnosis of Lyme-like illness is made, this can be very detrimental as other disease treatments can further complicate Lyme-like illness.
- **Understand that the sooner you start treatment the better the outcome.** If you suspect or know you have been bitten by a tick or other insect, and you have symptoms, consult a Lyme-aware practitioner for treatment as soon as possible.
- **Practitioners** educated in treatment for Lyme-like illness understand that treatment is individualised and length of treatment time varies.
- **If you find your current doctor is not aware of Lyme-like illnesses** and fails to acknowledge your concerns or symptoms, make sure you persist in finding one who will evaluate you. *You can contact us for any assistance in finding a 'Lyme-aware' medical practitioner.*
- **Expect to get better!** Stopping treatment if you are still experiencing symptoms is not advised and active symptoms indicate an active disease. Treatment may be lengthy and diverse, but you should expect to regain your quality of life.