Patient information from BMJ

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Lyme disease

Lyme disease is an infection that you can get from the bite of a tiny creature called a tick. It can be serious, but most people recover completely with treatment.

You can use our information to talk to your doctor and decide which treatments are best for you.

What is Lyme disease?

Lyme disease is an illness that's spread by ticks. Ticks are tiny creatures that live on the skin of other animals and feed on their blood. But they also sometimes bite and feed on people. They look a bit like tiny spiders.

Ticks can carry the bacteria that cause Lyme disease and, if they bite you, the bacteria can get into your body and make you ill.

Not all ticks carry the Lyme disease bacteria (called *Borrelia*). And a tick usually has to stay attached to your skin for a long time (at least one or two days) for there to be much risk of it making you ill.

If you spot a tick on your skin, you need to remove it. Grip the tick with fine-tipped tweezers as close to your skin as you can. Pull the tick gently but firmly off your skin, then wash the area with soap and water.

What are the symptoms?

The most common symptom of Lyme disease is a pink or red rash. It will probably appear one to two weeks after you were bitten, spreading out from the bite. Some people get a bull's-eye pattern, with no red in the centre.

But not everyone gets a rash. You might get flu-like symptoms, such as:

- a headache
- a high temperature (fever), or
- muscle pains.

After a few weeks or months the infection, if untreated, can spread to your nerves and joints. You might lose control of some of the muscles in your face. This is called **neurological Lyme disease**.

If this happens you might get pain or numbness, or have difficulties moving parts of your body.

If you're not treated you could get swollen, painful joints. This is called **Lyme arthritis**.

A few people with Lyme disease get **meningitis**. Meningitis means that the tissue covering your brain has become inflamed.

Lyme disease can also sometimes cause **heart problems**. These can be treated but you might need to have treatment in hospital.

Doctors often diagnose Lyme disease based on people's symptoms and on whether they might have been exposed to ticks carrying Lyme disease. A blood test is also sometimes used. But it isn't effective until two to six weeks after a tick bite, so it isn't helpful for diagnosing early infections.

What treatments are available?

Preventing tick bites

If you're spending time in places where ticks are common, such as grassy or wooded areas, you can:

- wear long-sleeved tops and long trousers tucked into your socks
- use an insect repellent called DEET on any exposed skin and your clothes
- spray your clothes, and any tents and camping gear, with a repellent called permethrin
- wear light-coloured clothing to make it easier to find and remove ticks.

If you've been in an area where there might be ticks, brush off or wash your clothes as soon as you can. Check your body for ticks, especially in skin folds and hairy areas.

Young ticks are about the size of a poppy seed, so they're hard to spot. Adult ticks are bigger (about the size of a sesame seed) and might reach the size of a coffee bean if they are full of blood. If you find a tick, carefully remove it straight away.

Treating Lyme disease

If you have Lyme disease you'll be treated with **antibiotics**. Antibiotics are drugs that kill bacteria. If you take them soon after getting bitten you're very likely to make a complete recovery.

Antibiotics might also help to prevent Lyme disease. If you are in an area with Lyme disease and you've had a tick attached to your skin for at least 36 hours, your doctor might prescribe an antibiotic. But you would need to have treatment within three days of removing the tick.

Antibiotics are also used to treat more serious symptoms of Lyme disease, such as arthritis, and nerve and heart problems. You might need to be given antibiotics as a drip (an intravenous infusion, or IV for short).

To relieve joint pain your doctor might recommend taking a **non-steroidal anti-inflammatory drug** (NSAID), such as diclofenac or ibuprofen.

Lyme disease#n pregnancy

It is possible, but rare, for pregnant women with Lyme disease to pass it onto their babies.

There is some evidence that untreated Lyme disease can cause problems during pregnancy, as well as birth defects. But women who get treatment should not have problems. If you are concerned about Lyme disease in pregnancy, talk to your doctor.

What to expect in the future?

If Lyme disease is treated early you're very likely to recover completely. If you get a rash or flu-like illness and think you could have been bitten by a tick (even if you didn't notice a bite), see your doctor as soon as you can.

Getting treatment early helps prevent you from getting later-stage Lyme disease, which can be more serious. If you don't have treatment, your early symptoms (such as the rash) might clear up. But you have a strong chance of then getting later-stage problems, such as joint problems and nerve damage.

Some people do have lasting pain and tiredness even after they've been treated for Lyme disease. This is sometimes called 'post-Lyme syndrome'. People with this syndrome usually get better with time. But it can take months to feel completely better.