Insect and Waterborne Diseases

Wherever children play there is the chance of exposure to tics and to disease causing bacteria carried by wild or domestic animals, whether that be in the back garden, the local park or woodland, therefore it is a good idea to be aware of the risks and know the precautions that can be taken to reduce the risks and to be able to recognise symptoms which might indicate a problem.

Leptospirosis is a type of bacterial infection spread by animals
(Bacteria that can in rare cases lead to Weil's disease)
In 90% of cases, leptospirosis only causes mild flu-like symptoms which usually develop suddenly around 7 to 14 days after exposure to the leptospira bacteria. However, it is possible for symptoms to develop from between 2 and 30 days after exposure.

The Symptoms:

- a high temperature (fever) that is usually between 38C and 40C (100.4-104-F)
- chills
- sudden headaches
- nausea and vomiting
- loss of appetite
- muscle pain, particularly affecting the muscles in the calves and lower back
- conjunctivitis (irritation and redness of the eyes)
- cough
- a short-lived rash

Symptoms usually resolve within 5 to 7 days. However, in about 10% of cases people go on to experience more serious symptoms, a severe form of leptospirosis known as **Weil's disease.**

Many different animals can carry the bacteria, but it is most commonly associated with rats and mice, farm animals and dogs. You can become infected with the leptospira bacteria if contaminated water or soil comes into contact with your eyes, mouth, nose, or any open cuts in the skin. Leptospirosis is found throughout the world, including Europe, but is more common in tropical and subtropical areas; **rates of leptospirosis are very low in the UK.** Most cases of leptospirosis are mild and are treated with a five to seven-day course of antibiotic tablets.

Precautions:

- Cover any new cuts and grazes with a waterproof dressing or waterproof gloves before mud or water play
- Wash hands after playing in mud or water
- Wash hands before eating
- Remind children not to put their hands in their mouths

If you are aware that your children have unhealed cuts and grazes before they attend a forest school session please cover them with a a waterproof plaster.

Ticks Bites and Lyme disease

Ticks are tiny spider-like creatures found in woodland and heath areas. They feed on the blood of birds and mammals, including humans. Ticks that carry the bacteria responsible for Lyme disease are found throughout the UK and in other parts of Europe and North America. Lyme disease can often be treated effectively if it's detected early on. But if it's not treated or treatment is delayed, there's a risk you could develop severe and long-lasting symptoms.

Tick bites aren't usually painful and sometimes only cause a red lump to develop where you were bitten. However, in some cases they may cause swelling, itchiness, blistering and bruising.

Early symptoms

Many people with early-stage Lyme disease develop a circular rash at the site of the bite, usually around 3 to 30 days after being bitten. The rash is often described as a bull's-eye rash. The affected area of skin will be red and the edges may feel slightly raised.

The size of the rash can vary and it may expand over several days or weeks. Typically it's around 15cm across, but it can be larger or smaller. Some people develop several rashes in different parts of their body. However, around 1 in 3 people with Lyme disease won't develop this rash.

Some people with Lyme disease also experience flu-like symptoms in the early stages, such as tiredness, muscle pain, joint pain, headaches, a high temperature, chills and neck stiffness.

Later symptoms

More serious symptoms may develop several weeks, months or even years later if Lyme disease is left untreated or is not treated early on. These can include:

- pain and swelling in the joints (inflammatory arthritis)
- problems affecting the nervous system – such as numbness and pain in your limbs, paralysis of your facial muscles, memory problems and difficulty concentrating
- heart problems – such as inflammation of the heart muscle (myocarditis) or sac surrounding the heart (pericarditis), heart block and heart failure
- inflammation of the membranes surrounding the brain and spinal cord (meningitis) – which can cause a severe headache, a stiff neck and increased sensitivity to light Some of these problems will get better slowly with treatment, although they can persist if treatment is started late.

You should see your GP if you develop any of the symptoms above after being bitten by a tick, or if you think you may have been bitten. Let your GP know if you've spent time in woodland or heath areas where ticks are known to live.

How you get Lyme disease: Ticks can transfer the Lyme disease bacteria to a human by biting them. Ticks can be found in any areas with deep or overgrown vegetation where they have access to animals to feed on. They're more common in woodland and heath areas, but can also be found in gardens or parks.

Ticks climb on to your clothes or skin if you brush against vegetation they're on. They then bite into the skin to feed on your blood. You're more likely to become infected if the tick remains attached to your skin for more than 24 hours. Ticks are very small and their bites are not painful, so you may not realise you have one attached to your skin.

Who is at risk and where are ticks found? People who spend time in woodland or heath areas in the UK and parts of Europe or North America are most at risk of developing Lyme disease.

Cases of Lyme disease have been reported throughout the UK, but areas known to have a particularly high population of ticks include: Exmoor, The New Forest and other rural areas of Hampshire, South Downs, parts of Wiltshire and Berkshire parts of Surrey and West Sussex, Thetford Forest, Lake District, North York Moors and Scottish Highlands. It's thought only a small proportion of ticks carry the bacteria that cause Lyme disease, so being bitten doesn't mean you'll definitely be infected.

Treating Lyme disease: If you develop symptoms of Lyme disease, you will normally be given a course of antibiotic tablets, capsules or liquid.

Preventing Lyme disease: There is currently no vaccine available to prevent Lyme disease. The best way to prevent the condition is to be aware of the risks when you visit areas where ticks are found and to take sensible precautions.

How to reduce the risk of infection by:

- wear appropriate clothing - a long-sleeved shirt, tucked into trousers and trousers tucked into socks
- wear light-coloured fabrics that may help you spot a tick on your clothes
- use tick repellent on exposed skin - but be aware that these are not 100% effective
- inspect yours/your child's skin for ticks, particularly at the end of the day, including your head, neck and skin folds (armpits, groin, and waistband) – remove any ticks you find promptly using a tic removal tool
- check your children's head and neck areas, including their scalp
- make sure ticks are not brought home on your clothes
- check that pets do not bring ticks into your home in their fur

How to remove a tick: If you find a tick remove it gently gripping it as close to the skin as possible, preferably using fine-toothed tweezers. Pull steadily away from the skin without twisting or crushing the tick. Wash skin with water and soap afterwards, and apply an antiseptic cream to the skin around the bite.

Don't burn the tick or use substances such as alcohol or Vaseline to force the tick out. You can buy inexpensive tick removal devices, which may be useful if you frequently spend time in areas where there are ticks. A tick can be as small as a poppy seed so it is important to check thoroughly.

Most insect bites are uncomfortable but are not harmful in the long term. Bacteria found in the soil and the natural environment is on the whole beneficial to our health and important for training our immune systems to function correctly. So whilst the information above may sound worrying, it is good to be aware of what might cause harm. Please keep in mind that the chances of serious illness are low and that the benefits of playing outside in the natural environment are numerous.