

Lupus and infections

People with lupus (systemic lupus erythematosus, or SLE) are more likely to experience infection and infection-related complications. This is because their immune system is weakened by both the disease and the medications used to treat it. The most common infections for people with lupus include those of the respiratory tract, skin and urinary system.

Lupus is an autoimmune disease. The person develops antibodies against their own cells, resulting in tissue damage. The inflamed tissues trigger a wide range of symptoms. Lupus most commonly appears in women of childbearing age, for reasons unknown. The disease can be mild or life threatening and its cause is still a mystery.

Approximately one-third to half of all people with lupus experience infection-related complications. Although most infections are mild, a serious infection can be a life-threatening event. It is vital to seek prompt medical treatment if infection of any kind is suspected.

Medications and the immune system

The immune system is a collection of special cells and chemicals that, among other things, fights infection. People with lupus may need to take immunosuppressive medications such as steroids and cytotoxic agents that change the way the immune system works.

Unfortunately, these drugs depress the entire immune system, because they can't distinguish between normal and abnormal functioning cells. In particular, the activity of white blood cells called neutrophils may be impaired, which means that the body has a weaker response against bacterial infection. The activity of other important immune system cells, including lymphocytes and natural killer cells, is also reduced by medication.

Common infections

People with lupus are prone to catching the same kinds of infections that target the general population. However, they are also at risk from 'opportunistic' organisms, such as fungi, that are more likely to cause disease when the immune system is weakened.

Although people with lupus are more susceptible to micro-organisms, the resulting infections are usually mild. Some of the more common infections include:

- *Herpes zoster* (virus)
- *Staphylococcus aureus* (bacterium)
- *Escherichia coli* (bacterium)
- *Salmonella* (bacterium)
- *Candida albicans* (fungus).

Diagnosis can be difficult

It can be difficult to diagnose an infection, because the symptoms may closely mimic those of lupus. For instance, it is hard to tell whether joint pains and fever are caused by a lupus flare or an infection. To further complicate matters, an infection can trigger a lupus flare.

A chronic low-grade fever may be normal for someone with lupus, so it helps to take your temperature at the same time daily so you can identify an abnormal rise. Generally, you should see your doctor if you have a temperature that is higher than usual or experience any symptoms that are not typical.

Diagnostic methods

Methods that can be used to diagnose the presence of an infection may include:

- Physical examination by your doctor
- Blood tests
- Urine tests
- Chest x-ray
- Cultures of the throat, blood, urine or stool.

Treatment

The medical treatment required to treat an infection in a person with lupus may be more intense and prolonged than that needed for other people. Treatment depends on the type of infectious agent.

Bacterial infections are treated with antibiotics. This may include intravenous antibiotics and hospital admission in the case of more serious infections, particularly if the person is using immunosuppressive or cytotoxic drugs as part of their lupus therapy.

Around thirty per cent of people with lupus will have an allergic reaction to sulpha antibiotics, which may cause increased photosensitivity, skin rashes and lower white blood cell counts. This type of antibiotic should be avoided wherever possible.

Reducing the risk

It will help to reduce your risk of infection if you:

- Wash your hands before preparing food or eating and after going to the toilet or touching other people or animals.
- Treat any cuts and grazes to the skin promptly.
- Ensure high standards of personal hygiene.
- Clean your house regularly and thoroughly.
- Avoid using items that commonly harbour germs, such as old soiled kitchen sponges.
- Avoid contact with anyone who has an infection.
- Talk to your doctor about an annual influenza (flu) vaccination and pneumococcal vaccination
- Eat a well-balanced and nutritious diet.
- Take your temperature daily so you know what is normal for you.

Your doctor may recommend a preventative course of antibiotics prior to any dental or surgical procedure.

Where to get help

- Your doctor
- Rheumatologist
- Immunologist
- Arthritis Victoria Tel. (03) 8531 8000 or 1800 011 041

Things to remember

- Lupus (systemic lupus erythematosus, or SLE) is an autoimmune disease.
- Approximately one-third to half of all people with lupus experience infection-related complications.
- The immune system of a person with lupus is weakened by both the disease and the medication used to treat it, which allows infection.
- The most common infections for people with lupus include those of the respiratory tract, skin and urinary system. Medical treatment for infection may be longer and more intense for a person with lupus than for the general population.

This page has been produced in consultation with, and approved by:

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