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## Lupus and infections

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### Summary

- Systemic lupus erythematosus (SLE), otherwise known as lupus, is a chronic condition that results from a malfunctioning immune system.
  - People with lupus are at increased risk of developing infections.
  - 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 for a person with lupus than for the general population.
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Systemic lupus erythematosus (SLE), otherwise known as lupus, is a chronic condition that results from a malfunctioning immune system.

People with lupus are more likely to experience infection and infection-related complications. This is because their immune system is weakened by both the disease and the medication used to treat it.

The most common infections for people with lupus include those of the respiratory tract, skin and urinary system.

### Lupus and the immune system

The immune system is made up of many different types of immune cells and proteins that work to protect your body against disease and infection. When your body detects the presence of germs, such as bacteria or a virus, your immune system responds and defends your body against these invaders. Once they deal with the germs, they switch off, and everything returns to normal.

However sometimes, with conditions like lupus, the immune system malfunctions and attacks the healthy tissues it's supposed to protect, including skin, joints, kidneys and lining of the heart and lungs. Your immune system launches an attack and doesn't stop. This causes ongoing inflammation, pain and tissue damage.

Many people with lupus take immunosuppressive medication to control their immune system and to help prevent this inflammation and pain occurring.

Unfortunately, these medications affect the entire immune system. They don't target only the malfunctioning cells, but also the normal ones. In particular, the activity of white blood cells may be affected, which means that the body has a weaker response against bacterial infection.

### Lupus and common infections

People with lupus are prone to catching the same kinds of infections that affect other people. However, they're also at risk from 'opportunistic' organisms, such as fungi, that are more likely to cause infection when the immune system is weakened.

Although people with lupus are more susceptible to microorganisms, 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).

### Diagnosing an infection in someone with lupus

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It can sometimes be difficult to diagnose an infection in someone who has lupus, because the symptoms may closely mimic those of lupus. For instance, it can be 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. It is recommended that you see your doctor if you have a temperature that is higher than usual, or experience any symptoms that aren't typical for you.

Methods 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.

### **Treating an infection in someone with lupus**

The medical treatment required to treat infection in a person with lupus may be more prolonged than that needed for people who do not have lupus. 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 drugs as part of their lupus therapy.
- Fungal infections are treated with antifungal medications. They may be in the form of creams, suppositories or oral medications.
- Many viral infections (such as sinus infections, bronchitis and colds) don't respond to treatment, and shouldn't be treated with antibiotics. (Overuse of antibiotics leads to bacteria becoming resistant to antibiotics and harder to treat.) In these situations, your doctor may recommend that you use over-the-counter treatments to help you feel better for the duration of the infection (for example, pain relievers for pain, short term use of nasal sprays for a blocked or runny nose). Antiviral medication may be used in the case of some viral infections (for example, herpes zoster).

Some people with lupus will have an allergic reaction to sulfa 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 of infection if you have lupus**

Because treating infections is difficult if you have lupus, the best thing you can do is reduce your risk of infection. You can do this by:

- washing your hands thoroughly
- treating any cuts and grazes to the skin promptly
- having high standards of personal hygiene
- cleaning your house regularly and thoroughly
- avoiding use of items that commonly harbour germs such as old, soiled kitchen sponges
- avoiding contact with anyone who has an infection
- talking to your doctor about an annual influenza (flu) immunisation and pneumococcal immunisation
- eating a well-balanced and nutritious diet
- taking your temperature daily so you know what is normal for you
- consulting your doctor (who may recommend a preventative course of antibiotics) prior to any dental or surgical procedure.

### **Where to get help**

- Your **GP (doctor)**

- **Rheumatologist**
- Immunologist
- **Musculoskeletal Australia** National Help Line Tel. **1800 263 265**

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

Musculoskeletal Australia - formerly MOVE

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