

## Lupus and medications

Systemic lupus erythematosus (SLE), otherwise known as lupus, is a chronic condition that results from a malfunctioning immune system. The immune system is designed to identify foreign bodies (such as bacteria and viruses) and attack them to keep us healthy.

However, in the case of lupus, the immune system mistakenly attacks particular tissues including the skin, joints, kidneys and lining of the heart and lungs, causing ongoing inflammation and pain. 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.

There is currently no cure for lupus. However, the medications prescribed for lupus can manage the symptoms and assist in controlling the overactive immune system response. As there is no one perfect treatment for lupus, many people take small doses of several different medications at the same time.

If you have lupus you should never alter the doses of your medications without first talking it over with your doctor. You should never take medications for other unrelated conditions unless they are prescribed by the same doctor. Other medications may not be compatible with your lupus medication.

### Medications used for lupus

The main types of medications used to control lupus include:

- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Anti-malarials
- Corticosteroids
- Immunosuppressants.

### Non-steroidal anti-inflammatory drugs (NSAIDs)

NSAIDs are used to reduce inflammation, pain and fever associated with lupus. They include over-the-counter medications such as ibuprofen (for example, Nurofen), or prescription drugs such as Voltaren, Celebrex, Oridus, and others.

To minimise side effects, NSAIDs should be taken as directed.

### Side effects of NSAIDs

The main side effects of NSAIDs occur in the gastrointestinal tract, especially the stomach and oesophagus (gullet), where they can cause indigestion, ulcers and even haemorrhages. Sometimes NSAIDs are used in combination with stomach-protecting drugs for this reason.

More recent NSAIDs such as Celebrex or Arcoxia may have a lower risk of this type of side effect. NSAIDs are also known to cause other problems for people with lupus such as increased blood pressure, fluid retention and kidney function impairment. For these reasons they are often avoided where there is presence of lupus kidney disease.

There is also some controversy about the safety of NSAIDs for people at risk of heart disease, as some studies have reported an increase in the risk of heart attack and stroke. Given that people with lupus are at higher risk of heart disease, the risks versus benefit of using NSAIDs should be carefully considered.

### Anti-malarial medications

Medications such as Plaquenil (hydroxychloroquine) are referred to as 'anti-malarials' because they were originally used for the treatment of malaria. We now know them as gentle, but very effective, controllers of unwanted immune system activity in chronic conditions such as lupus.

Usually taken as one or two tablets daily, hydroxychloroquine is effective in helping in the treatment of skin and joint problems associated with lupus. People who take hydroxychloroquine tend to be less likely to have flare-ups of their disease, so most rheumatologists recommend them to be taken by all people with lupus for the long term.

## Side effects of anti-malarial medications

Side effects are uncommon. Occasionally, they can cause a rash or stomach upsets (including diarrhoea). If the dose is too high they can cause eye damage, but this is extremely rare when the correct dose is used. However, annual eye checks are recommended.

## Corticosteroids

Corticosteroids, also known as steroids, cortisone, prednisone and prednisolone are synthetic hormones that mimic the action of cortisone, a naturally occurring hormone produced by the adrenal glands. These medications are usually taken in tablet form but may be injected in the case of a particularly severe lupus flare.

Dosage depends on the severity of symptoms and the person's general state of health, including age and weight. The main function of steroids is to treat inflammation. The flow-on effects of reduced inflammation include reduction of pain and fever. Steroids also dampen the activity of the immune system, which helps to reduce the severity of symptoms. It is very important not to cut back on the dose without your doctor's consent and supervision.

## Side effects of corticosteroids

The main problem with steroids is that they have significant side effects. It is worth remembering that all side effects are proportional to the dose taken, so you and your doctor will often use other strategies to ensure that the lowest dose possible is taken. Some of the side effects can include:

- Mood changes
- Skin thinning, resulting in easy bruising
- Weight gain due to increased appetite and decreased metabolism
- Osteoporosis – usually people with low bone density are given calcium and vitamin D supplementation to counteract this
- Risk of diabetes and high blood pressure
- Unwanted hair growth
- Cataracts, associated with long-term use only
- Increased infections due to suppression of the immune system.

While these side effects sound bad, most people using steroids to manage lupus end up using very low doses with minimal side effects, even if the initial dose is high. The difference between well-controlled lupus and lupus that is affecting your health can be a few milligrams of steroids – so avoiding them at all costs is not recommended.

## Immunosuppressants.

Lupus symptoms are triggered by the abnormal activity of the immune system, the specialised group of cells and chemicals that fight infection. Immunosuppressants such as azathioprine, cyclophosphamide and methotrexate reduce lupus symptoms by depressing the immune system.

Azathioprine is a well-established medication in the management of lupus and is also used in the management of other immune diseases and transplantation. Methotrexate is a very commonly used medication in rheumatoid arthritis where it is regarded as so safe that it is now the standard treatment. Mycophenolate is increasingly used, especially to treat lupus kidney disease.

Each of these medications has particular effects on lupus and particular side effects, so each should be used under close specialist supervision.

## Medications on the horizon

Research is currently being undertaken to investigate potential new treatments for lupus. Speak to your doctor for more information or how you might be involved in a clinical trial.

## Medications to avoid

Some lupus medications can interact dangerously with other medications. Never take medications for other unrelated conditions unless they are prescribed by the same doctor who treats your lupus. This includes over-the-counter medications and supplements that don't require a doctor's prescription.

## Managing your medications

It is important to be informed about what goes into your body, especially when it comes to medications. Studies suggest that well-informed patients actually have better outcomes in the management of their condition. Information sheets on the medications used in the management of lupus are available from the Australian Rheumatology Association (see 'Where to get help' section) or from your doctor or pharmacist.

Try to ensure you take your medications as prescribed, in the correct doses, and at the advised time of day. It is best to avoid making changes to your medications without advice from your healthcare team, including your GP and specialists, especially if you are considering stopping or increasing treatment.

## Other treatment options

In addition to medication, other treatments generally recommended for people with lupus include:

- Limited sun exposure
- Sunscreen lotions
- Regular exercise
- Annual flu vaccinations
- Regular medical check-ups
- Healthy, balanced diet
- Limited alcohol.

## Where to get help

- Your doctor
- A specialist (often a dermatologist, rheumatologist, nephrologist or immunologist)
- Arthritis Victoria Tel. (03) 8531 8000
- Australian Rheumatology Association.

## Things to remember

- Lupus (systemic lupus erythematosus or SLE) is an autoimmune disease.
- The main form of treatment for lupus is medication.
- Medications used include non-steroidal anti-inflammatory drugs, corticosteroids, anti-malarials and immunosuppressants. The type of medications used and the prescribed dosage depend on factors such as the severity of the illness and the type of symptoms.

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

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