

lupus **FACT SHEET**

LUPUS MEDICATIONS

Most people with systemic lupus erythematosus (SLE) will need to take medication – often a combination of drugs – as part of their treatment at least some of the time. There are several drugs that are known to reduce and help control lupus symptoms. It may take a few weeks or months to determine the right combination for you.

This fact sheet will provide an overview of the different types of drugs used to treat lupus. First, here are tips on how to manage and get the most from your treatment.

- When taking any medication, make sure you follow the directions. Some drugs should be taken at certain times of the day, to help reduce side effects. Some drugs must be taken on an empty stomach for improved absorption, and some with food to prevent stomach upset. If directions are unclear or you haven't been advised of any possible side effects or given any instructions, ask your doctor or pharmacist.
- Try to take your medication at the same time(s) each day. Ask what you should do if you miss a dose.
- Ask which side effects are considered serious enough to require immediate medical attention.
- Do not adjust dosages without the input of a physician. Do not stop taking your medication because you are feeling better – this is very dangerous. If your doctor is increasing or tapering your medication, ask him or her to write out a schedule.
- Use a days-of-the-week pill container to organize your medication. It will help you notice when you've missed a dose. Transfer your

medications into a portable pillbox on a day when you're eating out or traveling.

- Do not take any new medications, over-the-counter, naturopathic or otherwise, until you've consulted your rheumatologist. Certain drugs containing sulfonamides (sulfa drugs), which include some antibiotics, can mimic a lupus flare by causing fever, arthritis, skin rashes, sun sensitivity and other problems. Some drugs can also interfere with your other medications.
- Always inform every doctor you see about your lupus and all of the medications you're taking. It's a good idea to wear a Medic Alert bracelet and/or carry a card that identifies your medical conditions and lists your drugs. Remember to make updates as necessary.
- Medications are not the only way to help manage lupus symptoms and improve your quality of life. Avoid triggers that can cause flares, such as excessive sun exposure without proper protection, and other lifestyle habits that can put stress on the body, such as smoking, street drugs and excessive alcohol consumption. Eating a healthy diet, getting regular exercise and maintaining a positive attitude are all ways to enhance your ongoing treatment for lupus.
- Keep your drugs away from children and pets, and store them in a cool, dry place (not the bathroom medicine cabinet). Do not take expired medication – return it to your pharmacy for safe disposal. The following is a list of commonly prescribed medications for people living with lupus and their side effects. Please note that you are unlikely to experience all of the possible side effects.

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Antimalarials

Antimalarial drugs, such as chloroquine (Aralen), hydroxychloroquine (Plaquenil) or quinacrine, commonly used to treat malaria, have also been involved in the treatment of lupus since the 1950s. Although they have proven to effectively treat skin rashes and arthritis, they are slow-acting drugs and it may take months for them to demonstrate a beneficial effect. However, their effectiveness in treating rashes can usually be seen within a few weeks. They can also help against hair loss, fatigue, nose and mouth ulcers and serositis (inflammation of the lungs and heart lining). And because antimalarials help prevent lupus flares and rarely cause any side effects, they are often prescribed to people with lupus for extended periods of time. Minor short-term effects at the beginning of treatment could include loose stools, diarrhea, abdominal cramps and nausea. The most serious possible complication is damage to the eyes, although this is very uncommon. Nevertheless, patients on antimalarial drugs must see an eye doctor (ophthalmologist) once every six months to 12 months for a checkup.

Corticosteroids

Corticosteroids, such as prednisone, are extremely effective in controlling lupus symptoms. They are used to reduce inflammation and suppress activity of the immune system. But because they can cause a variety of side effects, some of which are quite serious, the dose must be regulated to maximize the beneficial effects while minimizing the negative ones.

Side effects occur more frequently when high doses of steroids are taken over a long period of time. The goal is to gradually taper the dosage of these drugs to the minimum dose that controls the disease as soon as it can be done safely. Tapering off steroids too quickly can cause a flare. Short-term conditions include weight gain, a round face (“chipmunk cheeks” or “moon face”), acne, excess facial hair, mood swings, easy bruising, high blood pressure, high blood sugar, increased risk of infection, stomach ulcers, hyperactivity, water retention and an increase of appetite. Long-term effects include “thinning” of the bones (osteoporosis), glaucoma and cataracts, osteonecrosis (damage to the bones caused by impaired blood flow), skin changes, heart disease and stroke. Ask your doctor about preventative measures that can greatly reduce the chance of several long-term side effects, such as taking calcium supplements to help guard against osteoporosis.

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

NSAIDs, such as ibuprofen (Motrin, Advil), naproxen (Naprosyn), Celecoxib (Celebrex), diclofenac (Voltaren), and indomethacin (Indocin), among many others, are prescribed for a variety of rheumatic diseases including systemic lupus. These drugs are usually prescribed for joint and muscle pain and arthritis. However, they can also upset the stomach, causing stomach ulcers or bleeding from the gastrointestinal tract. These effects can be minimized by taking NSAIDs with meals, milk and/or other medications to help protect the stomach, such as omeprazole (Losec), misoprostil (Cytotec), or ranitidine (Zantac). Excessive NSAID use can also affect kidney

function or worsen blood pressure control. Speak to your doctor if you are taking these drugs, especially if you have high blood pressure, heart problems, a history of ulcer, easy bleeding or kidney problems. Generally, with the use of blood-thinners such as coumadin (warfarin) NSAIDs are relatively contra-indicated, because of the risk of bleeding from the gastrointestinal tract.

Steroid-Sparing Drugs

Steroid-sparing drugs (sometimes called immunomodulating drugs) are immunosuppressive (or cytotoxic) agents that help treat severe systemic lupus. They include mycophenolate mofetil (Cellcept), azathioprine (Imuran), cyclophosphamide (Cytoxan) and methotrexate (Rheumatrex, Trexall), among others. They are similar to corticosteroids in that they suppress inflammation and the body's immune system. Because they allow people with lupus to lessen their dependence on corticosteroids while helping to bring the disease under control and into remission, they are called "steroid-sparing." However, they are often given in combination with corticosteroid drugs because steroid-sparing agents are slow-acting.

Like all drugs, these have potentially serious side effects. Steroid-sparing drugs may suppress the bone marrow's ability to produce blood cells, which can lead to anemia, low white blood cell count, and increased risk of infection. They may also predispose an individual to developing cancer, although these cancers are extremely uncommon. Because of this risk, your doctor will carefully monitor your dosage and duration of immunosuppressive drug treatment.

Mycophenolate mofetil (MMF) has been used since the early 1990s to help prevent acute

rejection of transplanted organs such as kidneys or the heart. Since 2000, it has gained popularity as a steroid-sparing drug in the treatment of people with lupus nephritis (inflammation of the kidneys). Although it is not totally devoid of potentially serious side effects, MMF is thought to be a safer drug than cyclophosphamide. For example, unlike cyclophosphamide, MMF is not associated with bleeding from the bladder (hemorrhagic cystitis) or with infertility due to ovarian failure. Diarrhea and a decrease in white blood cell count are the most commonly noted side effects of MMF.

Azathioprine is a useful immunosuppressive drug in the treatment of more severe cases of lupus. Since azathioprine is often well tolerated, it is commonly used over long periods to maintain remission in previously severe lupus. Bone marrow toxicity and liver enzymes need to be closely monitored to prevent serious blood cell and liver toxicity.

Cyclophosphamide is one of the most potent immunosuppressive therapies. It is also used to treat serious lupus manifestations such as nephritis. Although MMF is also used for lupus nephritis, intravenous cyclophosphamide remains an important option in lupus when prompt control of the underlying disease is needed to limit the extent and severity of the damage.

To decrease the chance of bladder-related problems, including hemorrhagic cystitis, when taking oral cyclophosphamide, increase your intake of fluids, especially at bedtime, so that you will wake up during the night to empty your bladder and flush out the chemicals. Bone marrow toxicity should also be monitored closely by blood test. Nausea and hair loss are other possible side effects, as is increased risk of bladder cancer,

which can be treated successfully if caught early. Therefore, people taking this drug should have regular urine tests for the rest of their lives. Risk of skin cancer may also increase slightly when you take this drug, so avoid sun exposure and report any skin conditions to your doctor. Also, cyclophosphamide can lead to infertility due to ovarian failure, as it can cause the ovaries to reduce its production of hormones. The younger you are when you take this medication, the lower your chance of ovarian failure. You should discuss your options with your specialists, especially if you are a young woman who plans to have a family.

Methotrexate is used for people with milder lupus manifestations that cause arthritis or pleuritis (inflammation of the lung's lining). Methotrexate is convenient in that it only needs to be taken once a week by mouth or injection. Side effects include nausea, mouth sores, blood problems, liver damage and moderate hair loss. Prolonged treatment with methotrexate may also lead to folic acid deficiency. To reduce the risk of these side effects a maximum daily dose of 5 mg of folic acid is recommended for patients taking methotrexate on a regular weekly basis (but skipped on the day methotrexate is taken). Other more serious, although rare, side effects include low blood white cell and platelet counts. Methotrexate can also affect the liver and kidneys, which will need to be monitored periodically. If liver function tests are persistently abnormal, your doctor may order a liver biopsy. Avoid drinking any alcohol while on methotrexate. Drinking alcohol while you're taking

methotrexate can cause serious liver problems.

People can also develop lung inflammation shortly after starting methotrexate treatment, but that side effect is rare. If you experience pneumonia-like symptoms such as shortness of breath, fever and coughing, seek urgent medical attention. This drug should not be taken 3 months prior to conception or during pregnancy as it can cause miscarriages and birth defects. It should be noted that if you are in your child-bearing years, you should practise birth control while on many of the steroid-sparing agents - discuss this with your rheumatologist.

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Systemic Lupus Erythematosus is an autoimmune disease that affects thousands of Canadians, mostly women in their childbearing years. Symptoms vary greatly from patient to patient and treatment is highly individualized. Patients are urged to contact their physician or health professional with any questions or concerns they might have. For more resources and information about lupus, visit the Lupus Canada website at www.lupuscanada.org.

Lupus Canada
590 Alden Road
Suite 211
Markham, Ontario
L3R 8N2
(905) 513-0004
lupuscanada@bellnet.ca
www.lupuscanada.org



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Working together to conquer lupus