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August 2019 ~ Resource #350809

Systemic Lupus Erythematosus (SLE) FAQs

Systemic lupus erythematosus (SLE) is a chronic autoimmune disease.[1] It affects about 1.5 million Americans and 20,000 Canadians.[2,3] It is most common in non-Caucasian women between 15 and 44 years.[1-3] Lupus can affect multiple organ systems and can range from mild to life-threatening.[2] The goal of lupus treatment is to limit disease activity, avoid organ damage, reduce complications, reduce fatigue and pain, and improve overall quality of life.[1,4] The chart below answers questions about symptoms, triggers, and the general treatment of systemic lupus erythematosus. A detailed discussion about the management of SLE complications is beyond the scope of this document.

Question	Answer/Pertinent Information

What are the signs and symptoms of SLE?	• The clinical manifestations of lupus are broad and variable, and can include:[1,4]
	  • Skin involvement (e.g., butterfly rash, rash, sun sensitivity, alopecia).
	  • Musculoskeletal symptoms (e.g., arthralgia, synovitis).
	  • Nephritis
	  • Central nervous system symptoms (e.g., neuropsychiatric disease, seizures, psychosis, cognitive impairment).
	  • Antiphospholipid syndrome which increases the risk of thrombosis and stroke.
	  • Hematologic symptoms (e.g., anemia, thrombocytopenia).
	• Nephritis is present in about 50% of patients with lupus and is a major cause of morbidity and mortality.[1,5]
	• Symptoms such as extreme fatigue and painful joints are prevalent, and often come and go. These symptoms are sometimes confused with rheumatoid arthritis or fibromyalgia.[6]
	• Causes of hospitalization due to lupus flares vary and often include infectious, hematologic, musculoskeletal, or renal symptoms.[7,8]

What factors may contribute to the initial onset of SLE?	• Many environmental factors have been suggested as possible triggers for the initial onset of lupus. Some of these factors include ultraviolet light, smoking, infections (e.g., Epstein-Barr virus), silica, mercury, and stress.[1]
	• Drug-induced lupus is a lupus-like syndrome with a different mechanism than systemic lupus erythematosus.[6]
	  • Can present with arthralgias, arthritis, fever, rash, and pleurisy.
	  • Some common med causes include hydralazine, procainamide, minocycline, and tumor necrosis factor (TNF)-alpha inhibitors.
	  • Renal and central nervous system involvement are rare.
	  • Usually resolves when medication is stopped.

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Question	Answer/Pertinent Information

What lifestyle changes and considerations are important for patients with SLE?	• Patients should avoid known personal and general triggers of flares.[1]
	  • For example, certain medications can trigger a flare in patients with lupus (e.g., minocycline, hydrochlorothiazide, trimethoprim/sulfamethoxazole, TNF-alpha inhibitors, estrogens, etc). Note that many of these medications are also photosensitizing and should be avoided when possible in patients with lupus.
	• Patients should **avoid sun exposure** and use sun protection measures (e.g., sunscreen, long-sleeves, etc) to reduce skin flares as well as systemic symptoms.[1,4]
	• **Recommend effective contraception** and planned pregnancy in patients with lupus. Lupus can increase the risk of pregnancy complications (e.g., premature birth, preeclampsia). Some medications used to treat lupus are contraindicated in pregnancy.[13]
	  • Copper intrauterine devices (IUDs) are generally a safe and effective choice for patients with lupus.[13] Levonorgestrel-releasing IUS can also be used safely in many patients with lupus.[9,10]
	  • Progestin-only contraceptives (oral/injectable) may also be considered as an option. Consider for **women who are negative for antiphospholipid antibodies** who do not want to use an IUD or who should avoid estrogen contraceptives due to high disease activity.[9,10]
	  • Combination oral contraceptives can be considered in patients with mild, stable disease **who are negative for antiphospholipid antibodies** and do not have other risk factors for thrombosis or cardiovascular disease.[9,10]
	  • Combined hormonal contraceptives are contraindicated in women with lupus who have positive antiphospholipid antibodies.[10] Consider avoiding estrogen-containing contraceptives in most patients with high disease activity.[9]
	  • See our chart, *Contraception for Women With Chronic Medical Conditions*, for more on contraceptive options.
	• Encourage **smoking cessation**.[4]
	  • Smoking is a risk factor for lupus and can increase disease activity, especially skin symptoms.[1,11]
	  • Smoking may reduce the efficacy of hydroxychloroquine; however, studies are conflicting.[11]
	• Make sure **vaccinations** are up-to-date, including an annual influenza vaccine.[4,12]
	  • If applicable, follow immunization guidelines for patients on immunosuppressants (e.g., high-dose corticosteroids, certain doses of methotrexate, mycophenolate, etc). See our chart, *Vaccinating Immunocompromised Patients*, for more guidance.
	• **Monitor for infections** due to increased risk in patients with lupus.[4]
	• Patients should be **checked for antiphospholipid syndrome** at diagnosis.
	• **Routinely assess patients for** cardiovascular disease-related risk factors, osteoporosis, renal disease, etc.[4]

What medications are typically used in the treatment of SLE? *Continued…*	• **Hydroxychloroquine** is an immunomodulator. It is recommended to be given to all patients with lupus unless patients have a contraindication (e.g., allergy, pre-existing retinopathy [Canada]).[1,4,14,15] • Increases survival, reduces flares, prevents organ damage (e.g., cardiovascular events), prevents seizures, decreases risk of neuropsychiatric lupus, and improves skin symptoms and arthritis [Evidence level A-2].[16]

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Question	Answer/Pertinent Information
Medications, continued	• Dose is 200 to 400 mg given once daily, or divided into two daily doses, not to exceed 5 mg/kg/day (to limit retinal toxicity).[4,17] Patients should be screened for retinopathy at baseline, then annually after five years of therapy for most patients.[4] Retinopathy is seen in about 10% of patients after 20 years of hydroxychloroquine use.[17] • **Corticosteroids** can be used to provide symptom relief for patients with lupus [Evidence Level A-2].[18] • When possible, corticosteroids should be limited to short courses for acute flares, for patients who are starting or changing chronic medications, or for moderate to severe disease.[4] • Doses of prednisone can vary widely, depending on the severity of disease and the organs involved.[4,17] • If chronic corticosteroid therapy is required, use the lowest effective dose. Aim for daily dose of prednisone 6 mg to 7.5 mg or less and taper off if possible.[1,4] • Moderate to severe flares leading to hospitalization may require intravenous methylprednisolone 250 mg to 1,000 mg per day for one to three days.[4] • Topical corticosteroids can be used to treat skin rashes.[4] • **NSAIDs** can be used for joint pain associated with lupus.[4] • **Immunosuppressants** (e.g., mycophenolate, azathioprine, methotrexate) are sometimes used for patients with an inadequate response to hydroxychloroquine (alone or in combination with corticosteroids), to help reduce long-term corticosteroids, or in patients with severe disease.[4] • Cyclophosphamide is sometimes used for life-threatening or serious disease (e.g., nephritis, neuro involvement) in patients not responding to other immunosuppressants. Use with caution in both men and women of childrearing age due to gonadotoxic effects.[4] • **Belimumab** (*Benlysta*) is a biologic agent indicated for the treatment of lupus. Consider for patients with more severe disease who have had an inadequate response to other medication combinations.[4] • Consider after hydroxychloroquine, corticosteroids, and immunosuppressants for patients unable to taper corticosteroids and/or who have frequent flares.[4] • Belimumab does not appear to be as effective in patients with renal involvement, compared to other lupus symptoms.[4] • Severe adverse effects of depression, suicide ideation, and self-injury have been reported in patients with lupus taking belimumab.[19] • **Rituximab** is considered only in patients with severe refractory disease or in those with contraindications or intolerance to immunosuppressants.[4] • **Oral retinoids or dapsone** can be considered as add-on therapy for patients with severe skin involvement that is non-responsive to other treatments or for patients that require high-dose corticosteroids.[4]

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Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

Levels of Evidence

In accordance with our goal of providing Evidence-Based information, we are citing the **LEVEL OF EVIDENCE** for the clinical recommendations we publish.

Level	Definition	Study Quality
A	Good-quality patient-oriented evidence.*****	1. High-quality RCT 2. SR/Meta-analysis of RCTs with consistent findings 3. All-or-none study
B	Inconsistent or limited-quality patient-oriented evidence.*****	1. Lower-quality RCT 2. SR/Meta-analysis with low-quality clinical trials or of studies with inconsistent findings 3. Cohort study 4. Case control study
C	Consensus; usual practice; expert opinion; disease-oriented evidence (e.g., physiologic or surrogate endpoints); case series for studies of diagnosis, treatment, prevention, or screening.	

***Outcomes that matter to patients** (e.g., morbidity, mortality, symptom improvement, quality of life).
RCT = randomized controlled trial; **SR** = systematic review
[Adapted from Ebell MH, Siwek J, Weiss BD, et al. Strength of Recommendation Taxonomy (SORT): a patient-centered approach to grading evidence in the medical literature. *Am Fam Physician* 2004;69:548-56. http://www.aafp.org/afp/2004/0201/p548.pdf.]

Project Leader in preparation of this clinical resource (350809): *Annette Murray, BScPharm*

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