

# Systemic Lupus Erythematosus Protocol

Clinical Protocol to Support Patients with Lupus\*



Systemic lupus erythematosus (SLE) (commonly known in its abbreviated form as merely lupus) is an autoimmune condition with an incidence in North America of an estimated 23.2 per 100,000 individuals, which is the highest worldwide.<sup>1</sup> SLE is more prevalent in women and ethnic minorities, especially African Americans.<sup>1,2</sup>

In lupus, the autoantibodies develop against nuclear and cytoplasmic antigens, so it may present with diverse clinical and immunological manifestations.<sup>3</sup> Symptoms of lupus may include chronic fatigue, weight loss, low-grade fever, muscle weakness, joint stiffness and swelling, joint pain, and rash. It may also target specific organs and systems.<sup>4,5</sup>

An interaction of genetic, biological, psychosocial, and environmental factors contribute to the development of the disease.<sup>6,7</sup> The etiology and underlying mechanisms remain under investigation and likely involve both the innate and adaptive immune system, including autoreactive T-cell and B-cell activation, interferon, and dysregulation of neutrophils.<sup>6,8,9</sup>

SLE is a multi-system disorder with significant heterogeneity that is often challenging to accurately diagnose because of the difficulty to differentiate it from other disorders.<sup>3,10</sup> The American College of Rheumatology (ACR) and the European League Against Rheumatism (EULAR) co-developed a tool that uses a positive anti-nuclear antibody (ANA) test as the entry criterion and incorporates 10 hierarchical domains.<sup>11</sup> Medication management of lupus may include glucocorticoids, antimalarial agents, NSAIDs, immunosuppressants, or B cell-targeting biologics.<sup>4,10</sup>

This protocol is designed to support patients with systemic lupus erythematosus through lifestyle techniques, diet, and specific nutrients known to support a normal immune function and healthy inflammatory process.\*

## Diagnostic Biomarkers and Clinical Indicators of Lupus

Tests incorporated in the ACR and EULAR criteria tool<sup>11</sup>

- ANA Hep-2 cells  $\geq 1.80$
- White blood cell count  $< 4,000/\text{mm}^3$
- Platelet count  $< 100,000/\text{mm}^3$
- Proteinuria  $> 0.5 \text{ g}/24 \text{ hr}$
- Direct Coombs antiglobulin test (positive)
- Anti-cardiolipin antibodies immunoglobulin (Ig)A, IgG, or IgM  $> 40 \text{ APL, GPL, or MPL}$
- Anti-beta-2 GPI antibodies (positive)
- Lupus anticoagulant (positive)

- Complement C3 and C4 (one or both low)
- Anti-dsDNA antibody (present)
- Anti-Smith antibody (present)

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- Human leukocyte antigen (HLA-DQAT) and related genes

[Designs for Health GI Spotlight™](#)

- Intestinal permeability
- Digestive function
- Inflammatory status and immune function in the gut
- sIgA

## Therapeutic Diet and Nutritional Considerations

- Advise consumption of an anti-inflammatory diet rich in colorful plant foods, including vegetables, fruit, nuts, seeds, and whole grains to support antioxidant status and a healthy inflammatory response, and to reduce the risk of cardiovascular disease, as patients with SLE have an increased risk<sup>9,12</sup>
- Recommend foods rich in lycopene, as it has been shown to potentially reduce mortality in patients with SLE likely due to its anti-inflammatory and antioxidant properties and its positive effects on cardiovascular disease risk<sup>13</sup>
  - Asparagus, guava, mangoes, papaya, persimmon, pink grapefruit, red bell peppers, red cabbage, tomatoes, watermelon
- Recommend reducing salt intake, as it may reduce the inflammatory response by influencing Th17 and Treg cells, and activating the serum/glucocorticoid regulated kinase 1 (SGK1) pathway<sup>14,15</sup>
- Counsel patients on consuming healthy fats (including omega-3 fatty acids and olive oil) for their anti-inflammatory and heart-healthy properties<sup>9,16-18</sup>
- Promote consumption of fiber and prebiotic foods to support a healthy gut microbiome, as dysbiosis is associated with SLE and altered immune function<sup>19,20</sup>

## Lifestyle Interventions

- Provide resources for smoking cessation due to a positive association between smoking and SLE development likely related to an increase in inflammation and oxidative stress, in addition to the impact of cigarette smoke on the immune system<sup>21,22</sup>
- Advise minimal to no alcohol consumption, as alcohol consumption may increase the risk of cutaneous damage<sup>23</sup>
- Recommend meditation or similar mindfulness practices, as it may reduce stress, improve quality of life, and support healthy psychological and emotional states<sup>24</sup>
- Recommend supportive exercise programs to improve fatigue and depression, and to support cardiovascular and metabolic health<sup>25-27</sup>
- Address any sleep disorders or disturbances to improve fatigue, pain, depression, and quality of life, especially in females<sup>28-30</sup>



## Supplement Protocol

Primary Support:



### ImmunoMod-A™

<b>Dose</b>	4 capsules per day	<b>Duration</b>	Ongoing as needed
<b>Formula Highlights</b>	ImmunoMod-A™ has been formulated to help balance a healthy inflammatory response, which is necessary to help maintain optimal immune function in the body. It features ParActin®, an extract of the herb <i>Andrographis paniculata</i> , which has been shown to modulate immune, inflammatory, and oxidative pathways. This product also contains the monosaccharide N-acetyl-D-glucosamine along with curcumin, a polyphenolic compound extract from the spice turmeric. Both of these compounds help to support a healthy inflammatory response.*		

### GI Revive® Powder

<b>Dose</b>	Mix 8 grams (approximately one tablespoon) into water or another liquid per day	<b>Duration</b>	Ongoing as needed
<b>Formula Highlights</b>	GI-Revive® powder provides a clinically relevant and targeted blend of gut-soothing botanicals and nutrients.* This popular formula includes L-glutamine, N-acetyl-glucosamine, methylsulfonylmethane (MSM), deglycyrrhizinated licorice (DGL), slippery elm, marshmallow, chamomile, okra extract, cat's claw, quercetin, and mucin for comprehensive support of optimal gastrointestinal health.* Prune powder and citrus pectin are also included to aid bowel regularity.*		

### Hi-Po Emulsi-A™

<b>Dose</b>	Take 4 grams (approx. 1 scoop) per day	<b>Duration</b>	Ongoing as needed
<b>Formula Highlights</b>	Hi-Po Emulsi-A™ is a high-potency formula that delivers concentrated vitamin A in a convenient liquid form with 5000 IU of vitamin A as retinol palmitate (1,500 mcg retinol activity equivalents [RAE]) per drop. Vitamin A is vitally important for optimal immune function and balance, and is well known for promoting eye health, thyroid function, and red blood cell function.*		

### Vitamin D Supreme

<b>Dose</b>	1 to 2 capsules per day based on vitamin D status	<b>Duration</b>	Ongoing as needed
<b>Formula Highlights</b>	Vitamin D Supreme provides a clinically useful serving of vitamin D3 of 5000 IU per capsule, along with vitamins K1 and K2 (as MK-4). This formula contains higher clinically relevant doses than Vitamin D Synergy™ for situations where more aggressive repletion is required. Vitamins D and K are essential for optimal bone and arterial health, and for maintaining the immune system in proper balance.*		

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---systemic-lupus-erythematosus-protocol-references>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities, appropriate monitoring, including liver function tests (LFT) is recommended.

For considerations regarding herb-drug and nutrient-drug interactions, please refer to reliable, evidence-based resources such as the Natural Medicine Database or Stargrove MB, Treasure J, McKee DL. *Herb, Nutrient, and Drug Interactions: Clinical Implications and Therapeutic Strategies*. St. Louis, MO: Mosby-Elsevier; 2008.

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\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.