



The Pathophysiology of Herpes Simplex Virus

Herpes simplex virus (HSV) constitutes two of the most prevalent human viruses globally: herpes complex virus type 1 (HSV-1) and type 2 (HSV-2). According to the CDC, in the U.S. between 2015 and 2016 the prevalence of HSV-1 was 47.8% and of HSV-2 was 11.9% among those between 14 to 49 years old.¹ Both viruses primarily affect the skin and mucus membranes of the host and can differ clinically and in severity from person to person.²

A distinctive feature of HSV is its period of latency and reactivation. The first exposure of HSV leads to viral activation of epithelial cells and intracellular replication at the site of primary exposure. Following that, HSV travels through the periaxonal sheath of sensory nerves to the sacral ganglia of the host's nervous system. In the sacral ganglia, the virus can replicate and persist in a dormant state, evading the host's immune system through several mechanisms. The sacral ganglia also serve as the reservoir for future outbreaks and subclinical genital shedding. Subsequent outbreaks caused by a reactivation of the latent virus are usually milder than the first exposure. Various stimuli may trigger the reactivation of HSV, such as local injury to the tissues, systematic physical or emotional stress, fever, microbial infections, UV exposure, and hormonal imbalances. Both HSV types are lifelong and have no cure.²

This clinical protocol is designed to promote immune health through evidence-based lifestyle, dietary, and nutrient interventions to support individuals with HSV.*

Diagnostic Biomarkers and Clinical Indicators of Herpes Simplex Virus

- HSV-1 commonly causes orolabial herpes (cold sores), herpetic stomatitis, and keratitis.³ HSV-2 commonly leads to genital lesions, genital itching, and irritation.⁴
- The clinical diagnosis of HSV-1 or HSV-2 should be confirmed through type-specific virology or serology tests or polymerase chain reaction (PCR).³
- Screen for sexually transmitted diseases (STIs). Those infected with HSV-2 have a threefold risk of acquiring HIV.²
- The initial infection of HSV can be severe, presenting with “painful genital ulcers, dysuria, fever, tender local inguinal lymphadenopathy, and headache.”² HSV-1 infections tend to be less severe than HSV-2 infections. Patients with HSV-2 generally experience more outbreaks, occurring 4 to 5 times annually, compared to a maximum of 1 occurrence annually for HSV-1.²
- Symptoms vary between the initial infection and subsequent outbreaks, with the number of outbreaks decreasing over time.²
- Monitor for herpes encephalitis, a severe and typically fatal infection caused by HSV-1.³

Therapeutic Diet and Nutritional Considerations

- Recommend a foundational prophylactic dietary plan emphasizing polyphenols, antioxidants, and micronutrients essential for optimal immune system function, including omega-3 fatty acids, bioflavonoids, zinc, selenium, copper, and vitamins A, C, E, and D.⁵⁻⁸
- Encourage consuming the recommended daily fiber intake, avoiding highly refined carbohydrates, and pairing protein and fat with meals to promote blood sugar balance. Research suggests that HSV may be associated with impaired glucose metabolism.^{9,10}
- Guide patients to reduce or eliminate alcohol intake. Alcohol consumption has been associated with the occurrence of oral lesions in HSV-1.¹¹

Lifestyle Interventions

- Educate patients on safe sex practices. HSV-2 (and less commonly, HSV-1) is transmitted primarily by direct sexual contact when the transmitting partner is actively shedding the virus, which can often be asymptomatic.²
- In the case of orolabial herpes (HSV-1), advise patients to prevent spreading the virus by avoiding shared drinkware, cosmetics, or mouth-to-mouth contact.³
- Check pregnancy status. Neonates may acquire HSV in utero or during intrapartum or postpartum stages.²
- Limit excessive UV light exposure, as it is associated with potential reactivation of HSV.²
- Encourage patients to implement stress management practices. Psychosocial stress is associated with HSV-1 reactivation.¹¹



Supplement Protocol

Primary Support:



L-Lysine

| | | | |
|---------------------------|---|-----------------|---------|
| Dose | 2 capsules twice per day with meals (4 in total) | Duration | Ongoing |
| Formula Highlights | Lysine is an essential amino acid necessary for growth and tissue repair, and it serves a role in the normal production of antibodies, hormones, and enzymes.* Lysine is also a precursor of L-carnitine, an amino acid derivative needed for the normal metabolism of fatty acids for energy production in the body.* Lysine may be clinically beneficial to individuals with herpes simplex virus. ¹²⁻¹⁴ | | |

Silvercillin™ Liquid

| | | | |
|---------------------------|--|-----------------|---------|
| Dose | 2 Tbsp three times per day | Duration | Ongoing |
| Formula Highlights | Silvercillin™ is an effective preparation of pure silver complexed with purified water, which exhibits antimicrobial properties.* Silvercillin™ contains 15 ppm of purified silver per serving. This is a potent, non-toxic form of silver, which will not build up in the body, so it does not cause argyria (also known as “blue man syndrome”). | | |

Monolaurin-Avail™

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|---------------------------|---|-----------------|---------|
| Dose | 1 capsule three times per day | Duration | Ongoing |
| Formula Highlights | Monolaurin-Avail™ is an encapsulated formula of monolaurin (as glycerol monolaurate) to support immune health and promote healthy microbial environments and inflammatory responses in the body.* It contains vitamin C for added immune support and sunflower lecithin to enhance the absorption of the monolaurin.* | | |

Immunitone Plus™

| | | | |
|---------------------------|---|-----------------|---------|
| Dose | 2 capsules twice per day with meals (4 in total) | Duration | Ongoing |
| Formula Highlights | Immunitone Plus™ is an herbal formula designed to support a healthy immune system.* It contains herbs that help support normal natural killer (NK) cell activity and the balance of cytokines, which are the regulatory proteins released by immune cells as part of a normal immune system response.* The standardized herbs in this formula contain optimal and consistent amounts of the most active ingredients. It is understood that the interaction between HSV and the health and balance of the host’s immune system may influence the outcome of infection. ¹⁵ | | |

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

<https://www.designsforhealth.com/api/library-assets/literature-reference---herpes-support-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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