

Integrative Health for Herpes Simplex Virus (HSV) 1 & 2 Infections

Background

Herpes Simplex is a viral disease that can lead to painful sores on the lips and mouth (oral herpes) and anogenital area (generally referred to as herpes).¹ Historically, Herpes Virus (HSV) Type 1 was responsible for the former and Type 2 for the latter; however, oral sexual practices have made HSV-1 and HSV-2 culprits in either disease. Transmission of the infection is usually through close contact with a person who is shedding the virus—that individual may or may not have an active lesion—typically at a mucosal surface or in genital or oral secretions. Infection occurs if the virus is in contact with susceptible surfaces such as the oropharynx, cervix, conjunctiva or through small cracks (perhaps even microscopic) in the skin. Kissing and sexual activity are very common forms of transmission. HSV is easily inactivated at room temperature and by drying so transmission through the air or fomites is rare. Certain occupations that have increased likelihood of contact with oral secretions (dentists, respiratory care unit personnel, etc.) have increased risk of infection on other skin areas. Transmission of HSV can occur in infants born to mothers who are shedding the virus at delivery.² Keeping the immune system healthy may impact likelihood of infection and reactivation.

The following outlines an Integrative Health approach for preventing and managing HSV infections. The focus is on approaches not typically classed as conventional.

Surroundings

Physically, there are a number of considerations in terms of prevention of herpes infection and reactivation.¹ Maintaining the integrity of skin and mucosal barriers can decrease the vulnerability of the tissue to viral infection. Avoiding injury to the face, lips, eyes, or mouth—including chapped lips—can decrease risk of reactivation. Lip balm, especially that which contains the ingredient zinc sulfate, can be helpful. (More on zinc oxide below). Also, wind, ultraviolet light, and sunlight are triggers, so taking appropriate precautions to avoid overexposure is logical. Avoidance of tight-fitting clothes or seam lines that cause minor local trauma/irritation may help decrease risk of recurrent genital lesions.

Sexual health and intimacy are important aspects of our overall well-being. Even in nonsexual relationships, physical acts such as kissing can be important expressions of caring. As some of the major modes of transmission of the herpes virus are contact with oral mucosa and sexual activity, avoidance of these activities, especially during active outbreaks, can help prevent spread. Condom use does decrease transmission, but condoms do not completely prevent skin contact and are, therefore, not 100% protective.¹ Regular use of universal precautions for those whose jobs require close contact with infected tissue or secretions which could be shedding virus is a wise standard practice.

Nutrition

In general, a healthy diet supports a healthy immune system. An anti-inflammatory and low glycemic index diets offer many health benefits in this area.

There has been some debate in the literature as to the effectiveness of diets that limit arginine and increase lysine.¹ Studies in tissue cultures have shown decreased viral replication in environments where the arginine/lysine amino acid ratio favors lysine and increased replication when arginine is more prevalent. Foods rich in arginine, which should be avoided (within reason), include the following:

- Chocolate
- Peanuts
- Almonds
- Cashews
- Sunflower seeds
- Gelatin

Foods rich in lysine, which can be increased in the diet (within reason), include the following:

- Vegetables
- Beans
- Fish
- Turkey
- Chicken

How foods are cooked can affect the lysine content. Boiling and poaching preserve lysine, while grilling, broiling, and frying seem to destroy it.¹ If there is not enough lysine in the diet or if arginine restriction is undesirable or impossible, another option is lysine supplementation. Studies have shown that taking lysine orally at 1,000 mg daily can reduce recurrences and reduce severity and healing time of herpes labialis infections^{3,4}, although there is some evidence that 3,000 mg daily may be more effective.³ Topical preparations also have been shown to decrease duration and symptom severity of herpes lesions when applied every 2 hours.

Recharge

Sleep deprivation from poor sleep habits or lifestyle factors can increase a person's chance of herpes recurrence.¹ While direct studies aren't available, this relationship is logical in that sleep strengthens the immune response. Most immune cells' response to challenges (e.g., viral infections) peak at night.⁵ Adequate sleep appears to be about 7-8 hours per night.

Family, Friends, & Co-Workers

Stresses such as marital disruption and care-giving for a relative with Alzheimer's disease have been associated with both decreased *in vitro* function of immune cells and qualitative immune function changes such as frequency of herpes outbreaks. There is some evidence to suggest that *quality* interpersonal relationships can be protective against these types of immune changes.⁶

Mind and Emotions

Psychosocial stress is a significant risk factor for HSV recurrence. Depressive symptoms increase the risk of an outbreak and Cognitive Behavioral Therapy has been found to improve markers indicative of recurrence. It is, therefore, reasonable to employ other techniques that help with stress reduction, such as relaxation training and meditation.¹ For more information, go to the “[Mind and Emotions](#)” overview.

Dietary Supplements

Note: Supplements are not regulated with the same degree of oversight as medications, and it is important that clinicians keep this in mind. Products vary greatly in terms of accuracy of labeling, presence of adulterants, and the legitimacy of claims made by the manufacturer.

Aloe

There is fairly good evidence that applying a 0.5% aloe extract cream to HSV lesions three times daily, five days per week for up to two weeks can decrease the mean healing time from 12 to 5 days.⁷ Topical aloe is generally quite safe as long as the latex portion is not used (as is the case with leaf extracts) due to risk of allergic reaction. Of note, aloe may delay healing in deep, open wounds, such as surgical wounds.⁸

Propolis

Propolis is a resinous material from poplar and conifer buds used by bees for maintaining their hives. It is from beehives that it is usually harvested. A product containing propolis has been studied for HSV oral and genital lesions. Its brand names are Herstat or ColdSore-FX, both by Afexa. Applying this 3% propolis ointment 5 times daily at the earliest onset of symptoms has been shown to decrease sore duration by 3-44 days. There is some evidence that it may even lead to faster healing than the use of topical acyclovir. Orally, it can cause allergic reactions and acute oral mucositis from the use of propolis-containing lozenges. Adverse reactions may be more likely in those allergic to bees.⁹

Siberian Ginseng (*Eleutherococcus senticosus*)

Taking a specific Siberian ginseng extract, standardized to contain eleutheroside 0.3% (Elagen), orally can reduce the frequency, severity, and duration of HSV 2 infections. The dose used has been 400 mg per day.¹⁰

Lemon Balm

Lemon balm is an herb known for its calming properties. It is considered safe. A lip balm containing 1% lemon balm extract seems to decrease duration and symptom severity of HSV recurrences if applied at the early stages of infection.¹¹

Sage (*Salvia officinalis*) and Rhubarb (*Rheum officinale* and *Rheum palmatum*)

Evidence shows that a cream containing sage and rhubarb may be as effective as acyclovir cream in treating HSV cold sores in terms of both duration and severity of symptoms. The combination seems to be more effective than creams with sage alone.^{12,13}

Zinc

Some research indicates that topical zinc oxide (0.3%) in combination with glycine cream can reduce symptom duration and severity of HSV facial and oral lesions when applied at earliest onset of symptoms every two hours. Super Lysine Plus is a specific product containing zinc oxide and L-lysine. It has shown similar results when dosed at the same frequency of zinc oxide.¹⁴

Probiotics

A small study compared 400mg twice daily of oral acyclovir to twice daily vaginal capsules containing multistrain *Lactobacillus brevis* bacteria. Both were taken for 6 months. At the end of the study period, there were no significant differences between the two interventions in terms of resolution of outbreaks, lesion healing time, viral shedding, time to first and second recurrence after initiation of therapy, or percentage of pain. There was a relatively high drop-out rate, but a trial of vaginal lactobacillus probiotic capsules carries little to no risk in females with frequent outbreaks.¹⁵

Resource Links

- [Mind and Emotions](https://www.fammed.wisc.edu/integrative/resources/modules/mind-emotions-relaxing-healing/): <https://www.fammed.wisc.edu/integrative/resources/modules/mind-emotions-relaxing-healing/>
- [Passport to Whole Health](https://www.va.gov/WHOLEHEALTHLIBRARY/docs/Passport_to_WholeHealth_FY2020_508.pdf): https://www.va.gov/WHOLEHEALTHLIBRARY/docs/Passport_to_WholeHealth_FY2020_508.pdf

Author(s)

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References

1. Grassmann J, Wissink T. Herpes simplex virus. In: Rakel D, ed. *Integr Med*. 3rd ed. Saunders Elsevier; 2012.
2. Mandell GL, Bennett JE, Dolin R, Kelvin GV. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. Churchill Livingstone; 2010.
3. (TRC) TRC. Lysine. Accessed June 30, 2020. <https://naturalmedicines.therapeuticresearch.com/databases/food,-herbs-supplements/professional.aspx?productid=237>
4. Mailoo VJ, Rampes S. Lysine for herpes simplex prophylaxis: a review of the evidence. *Integr Med (Encinitas)*. Jun 2017;16(3):42-46.
5. Gamaldo CE, Shaikh AK, McArthur JC. The sleep-immunity relationship. *Neurol Clin*. Nov 2012;30(4):1313-43. doi:10.1016/j.ncl.2012.08.007
6. Kennedy S, Kiecolt-Glaser JK, Glaser R. Immunological consequences of acute and chronic stressors: mediating role of interpersonal relationships. *Br J Med Psychol*. Mar 1988;61 (Pt 1):77-85.



7. Furness S, Roberts H, Marjoribanks J, Lethaby A. Hormone therapy in postmenopausal women and risk of endometrial hyperplasia. *Cochrane Database Syst Rev*. 2012;8:Cd000402. doi:10.1002/14651858.CD000402.pub4
8. Johnson RL, Foster S, National Geographic Society. *National Geographic Guide to Medicinal Herbs: The World's Most Effective Healing Plants*. National Geographic; 2012.
9. Esposito K, Kastorini C-M, Panagiotakos DB, Giugliano D. Mediterranean diet and weight loss: meta-analysis of randomized controlled trials. *Metabolic syndrome and related disorders*. 2011;9(1):1-12.
10. Gagnier J. The therapeutic potential of melatonin in migraines and other headache types. *Altern Med Rev*. 2001;6(4):383-389.
11. (TRC) TRC. Lemon balm. Accessed June 30, 2020. <https://naturalmedicines.therapeuticresearch.com/databases/food,-herbs-supplements/professional.aspx?productid=437>
12. (TRC) TRC. Sage. Accessed June 30, 2020. <https://naturalmedicines.therapeuticresearch.com/databases/food,-herbs-supplements/professional.aspx?productid=504>
13. Ezzo J, Richardson MA, Vickers A, et al. Acupuncture-point stimulation for chemotherapy-induced nausea or vomiting. *Cochrane Database Syst Rev*. 2006;2
14. Therapeutic Research Center (TRC). Zinc. Accessed July 23, 2020. <https://naturalmedicines.therapeuticresearch.com/databases/food,-herbs-supplements/professional.aspx?productid=982>
15. Mohseni AH, Taghinezhad SS, Keyvani H, Ghobadi N. Comparison of acyclovir and multistrain lactobacillus brevis in women with recurrent genital herpes infections: a double-blind, randomized, controlled study. *Probiotics Antimicrob Proteins*. Dec 2018;10(4):740-747. doi:10.1007/s12602-017-9320-8