

## What Virus Infects More Than a Third of Us?

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### HSV

Most viruses that cause disease in humans are "epidemic;" that is, they infect a portion of a population over a short period of time and then fade from the picture. Influenza and cold viruses are good examples. Other viruses are "endemic;" these viruses are always around and their infection rate is more or less constant. This is the case with the herpes simplex viruses (HSV), better known as the "cold sore virus." There are actually two types of HSV. Type I causes the typical cold sore or "fever blister." It affects between 25 and 40 percent of the US population, and causes the all too familiar sore on the lips or around the mouth. Type II infects the genital area; 16 percent of the US population overall has been infected with this virus, but infection rates are much higher, perhaps up to 30 percent, in young adults. These two types of viruses are similar in their genetic make-up, but very different in their behavior. Type I infections are almost always on the face, though they occasionally can infect the skin elsewhere, especially the buttocks. The initial infection is caused by contact with another person who has the virus and is shedding it, though they may not actually have a cold sore at the time of contact. First infections are sometimes severe, and can involve the lips, the mouth and gums and even the throat, and can cause a generalized illness with fever and aches. After a few days, symptoms improve, but the virus doesn't go away. It finds its way from the skin nerves to deeper nerves and eventually to its hiding place in the nerve "ganglion," a nerve structure close to the brain, where it lies dormant for a period of time. Reactivation occurs with fever, severe stress, sun exposure, or other trauma to either the skin or the nerve ganglion. This results in the virus reactivating and travelling back down the nerve to the skin and causing the typical fever blister. The average victim has 3-4 recurrences per year. Type II HSV is always sexually transmitted. It behaves similarly, in that initial infections of the genital area are usually more severe, and in its becoming dormant in the nerves after infection. We don't yet know what causes it to reactivate. About 50 percent of men will have a recurrence within 4 months, while 50 percent of women will not have a recurrence until 8 months after first infection. Infants born to mothers with this virus can be devastatingly infected; the result is often encephalitis, resulting in brain damage or death. This all seems pretty straightforward, but HSV can throw a couple of curve balls. For one, not everybody that's infected with the viruses gets a sore. And the viruses can be transmitted from one person to another without an active sore being present. And often the virus decides to reactivate without any obvious reason. Though the frequency of recurrences is quite variable, they seem to diminish with time. A special type of infection called herpes gladiatorum occurs in wrestlers who come in direct contact with another infected wrestler. The lesions often occur in an area where skin has been broken, such as a scratch or abrasion. A number of remedies have been used to prevent recurrent HSV infections, but none have been shown by scientific studies to work. Applying ice or ether to the spot when symptoms first start, or taking lysine, an amino acid available in health food stores, have worked for some individuals. Prevention of sun exposure or use of sun block probably works well for people who get fever blisters from sun exposure. Use of condoms is only partially effective in prevention of HSV Type II. Antiviral drugs for the treatment of HSV Types I and II have been available for about 15 years. Though they aren't perfect, they provide the best chance yet of both shortening the duration of the first

episode, and preventing recurrences. Acyclovir ointment, applied to a first infection cold sore seems to work better than with recurrences. Oral acyclovir (Zovirax), famcyclovir (Famvir) and valcyclovir (Valtrex) all can prevent or shorten the duration of recurrences of both HSV Types I and II. These are generally safe but very expensive drugs and the decision as to whether to use them and other questions about HSV infection should be discussed with your doctor.