

Herpes simplex virus

Genital | Neonatal | Encephalitis | and other HSV infections

Protect your patients from the consequences of untreated herpes infections

Herpes simplex virus infections are common and range from mild to severe disease. Those who are infected with HSV types 1 and 2 (HSV-1 and HSV-2) often have few or no symptoms.¹⁻³ In addition to oral and genital herpes, HSV can also cause more severe disease. Herpes infection can also increase a person's risk of becoming infected with HIV.^{2,3}

Genital Herpes

Genital herpes affects more than 1 in 6 Americans age 14 to 49.² Many of those infected are asymptomatic and unaware of their seropositive status, allowing for unknowing transmission.¹⁻³ A diagnosis based on medical history and physical examination may be inaccurate and should thus be confirmed by laboratory testing.³ LabCorp's test options include HSV1/2 testing off the ThinPrep® and SurePath™ Pap vials, as well as the APTIMA® Unisex swab (blue shaft).

Neonatal Herpes

Approximately 22% of pregnant women are infected with HSV-2, but as many as 90% of them are undiagnosed because they have few or no symptoms.⁴ Transmission from mother-to-newborn can occur during vaginal delivery, whether the mother is experiencing primary infection or a recurrence.¹ The mortality rate is greater than 70% for untreated neonates with disseminated disease.¹ PCR technology allows for early diagnosis and intervention that can substantially reduce associated morbidity and mortality.

Encephalitis

HSV is the most common cause of sporadic viral encephalitis in the United States and is often fatal when not treated promptly.^{1,6} Thus, a timely, accurate diagnosis is critical. Polymerase chain reaction (PCR) amplifies the genome of HSV from cerebrospinal fluid (CSF) and is recognized as the diagnostic test of choice for rapid HSV identification.¹

Other HSV Infections

Aseptic (viral) meningitis—While rarely fatal, patients suffer severe headaches, neck stiffness, nausea, and fever. Unlike bacterial meningitis, a skin rash is not usually present.

Ocular herpes—HSV is the most common cause of corneal infection in the United States.¹ Most infections are superficial, but they can cause scarring and opacification of the cornea.¹



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Herpes Simplex Virus Test Options

	Test Name	Number	Clinical Use	Methodology
Polymerase Chain Reaction (PCR) Tests	Herpes Simplex Virus (HSV) types 1/2, NAA	188056	Detects HSV1/2 infections with active viral shedding; differentiates HSV-1 from HSV-2; test requires endocervical cells in an APTIMA® unisex swab transport or Cytec® ThinPrep® or TriPath® SurePath™ liquid cytology vial	Nucleic acid amplification
	Herpes Simplex Virus (HSV) Types 1/2, DNA by PCR	138651	Detects HSV-1 and HSV-2 DNA; when performed on cerebrospinal fluid, supports a diagnosis of herpes simplex encephalitis and herpes simplex meningitis; whole blood, serum, or plasma specimen types are indicated for testing neonates or immune-compromised individuals.	Polymerase chain reaction real-time technology
	Herpes Simplex Virus (HSV) Types 1/2, Amniotic Fluid, DNA by PCR	138594	Detects HSV-1 and HSV-2 DNA; differentiates HSV-1 from HSV-2	Polymerase chain reaction real-time technology
Direct Antigen Detection	Herpes Simplex Virus Types 1/2 By Immunohistochemistry	550001	Detection of HSV-1 and/or HSV-2 in tissue specimens. This procedure may be considered by Medicare and other carriers as investigational and, therefore, may not be payable as a covered benefit for patients.	Immunohistochemistry
	Virus, Direct Detection by DFA, Herpes Simplex Virus	008508	Rapid diagnosis of HSV by direct microscopic examination (nonculture) of virus-infected cells.	Direct fluorescent antibody
Serology	Herpes Simplex Virus (HSV) Types 1- and 2 specific Antibodies, IgG	164905	Detect IgG antibodies specific to HSV-1 and/or HSV-2 infection; confirm or rule out possible infection with herpes simplex types 1 and/or 2 virus in prenatal patients in whom HSV infection can cause serious prenatal disease; identify those who are subclinical carriers of HSV-1 and/or HSV-2. These assays are based on purified recombinant glycoprotein G-1 (HSV-1) or G-2 (HSV-2) antigens.	Enzyme immunoassay
	Herpes Simplex Virus (HSV) Types 1/2, IgG	163014	Detect IgG antibodies to either HSV-1 and/or HSV-2. Does not differentiate HSV-1 from HSV-2 infection due to the extensive homology of viral antigens.	Chemiluminescence
	Herpes Simplex Virus (HSV) Types 1/2, IgG Evaluation With Reflex to Herpes 1 and 2, Type-specific, IgG	164913	Detect IgG antibodies to either HSV-1 and/or HSV-2. If the initial result is positive, determination of possible infection with HSV-1 and/or HSV-2 is made using individual type-specific assays.	HSV-1/HSV-2: Chemiluminescence HSV-1-specific/HSV-2-specific: Enzyme immunoassay
	Herpes Simplex Virus (HSV), Types 1/2, IgM, By EIA	164806	IgM levels can provide useful information about an acute event.	Enzyme-linked immunosorbent assay
	Herpes Simplex Virus (HSV), Type-specific Immunoblot	138487	Useful for the differentiation of HSV types 1 and 2 IgG antibodies. Aids in the diagnosis of HSV-1/HSV-2 infection.	Immunoblot
HSV Cultures	Herpes Simplex Virus (HSV) Culture and Typing	008250	Identification and typing of herpes simplex virus.	Enzyme-linked virus-inducible system
	Herpes Simplex Virus (HSV) Culture Without Typing	186072	Identification of herpes simplex virus.	Enzyme-linked virus-inducible system
	Viral Culture, Rapid, Lesion (Herpes Simplex Virus and Varicella-Zoster Virus)	186056	Identification and typing of herpes simplex virus. Shell vials or equivalent multiwell plate culture with fluorescent antibody staining for varicella-zoster.	Enzyme-linked virus-inducible system

For HSV tests in combination with other sexually transmitted diseases, or for out-of-the-vial Pap test options that include HSV, please visit the online test menu at www.LabCorp.com.

References

1. Jerome KR, Ashley RL. Herpes simplex viruses and herpes B virus. In: Murray PR, Baron EJ, Jorgensen JH, Pfaller MA, Tenover FC, Tenover FC, eds. *Manual of Clinical Microbiology*. Vol 2. 8th ed. Washington, DC: ASM Press; 2003:1291-1303.
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3. Centers for Disease Control and Prevention. *Sexually Transmitted Diseases Treatment Guidelines 2002*. Available at: <http://www.cdc.gov/STD/treatment/TOC2002TG.htm>. Accessed July 27, 2006.
4. Brown ZA, Gardella C, Wald A, Morrow RA, Corey L. Genital herpes complicating pregnancy. *Obstet Gynecol*. 2005 Oct; 106(4):845-856.
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6. Tyler KL. Update on herpes simplex encephalitis. *Rev Neurol Dis*. 2004 Fall; 1(4):169-178.

