TEST

Serum herpes simplex antibodies

A blood test that looks for antibodies produced after infection with herpes simplex virus

WHAT IT MEASURES
IgG antibodies to herpes simplex virus types 1 and 2

SAMPLE
Blood

FASTING NEEDED?
No

HOW LONG IT TAKES
About five minutes

RESULTS IN
Usually several days; timing differs by laboratory

USED FOR
Supporting diagnosis when infection history is uncertain

MAIN LIMITATION
Low-positive HSV-2 results can be false positives

Overview

Serum herpes simplex antibody testing is a blood test for antibodies to herpes simplex virus, usually called HSV. Serum is the liquid part of blood.

Antibodies are proteins made by your immune system after exposure to an infection. This test usually looks separately for IgG antibodies to HSV type 1 and HSV type 2.

HSV-1 often causes oral herpes, including cold sores, but it can also cause genital herpes. HSV-2 usually causes genital infection. A blood result cannot show where HSV entered the body, when exposure occurred, or whether the virus is currently active.

The test does not look directly for the virus. If you have a fresh blister, ulcer, or sore, a swab tested with a method called nucleic acid amplification testing, often referred to as PCR, is usually better for finding an active infection.

HSV IgM antibody testing is generally not recommended. IgM tests may not reliably distinguish HSV-1 from HSV-2 and can become positive during both new and recurring infections.

Why the test is ordered

A clinician may order type-specific HSV antibody testing when your history suggests possible genital herpes but there is no suitable sore to swab.

It may also be considered when:

The test is not normally used to investigate a current blister when a direct swab is available. It also cannot tell whether symptoms happening today are caused by HSV.

- You have had recurring or unusual genital symptoms, but swab tests were negative
- You were previously told you had genital herpes without laboratory confirmation
- A current or recent sexual partner has genital herpes
- Knowing your HSV status may help guide a specific discussion about sexual health

Who should have the test

Testing can be useful when there is a particular clinical reason and the result is likely to affect your care or decisions.

Routine blood screening of people without symptoms is not recommended in the general population. One reason is that false-positive HSV-2 results can cause harm or confusion, particularly when the initial result is only just above the laboratory cutoff.

Routine HSV-2 blood screening is also not recommended during pregnancy. Testing may still be discussed in selected circumstances, such as when a sexual partner has genital herpes. If you are pregnant and develop new genital sores or think you may have had a recent exposure, contact your maternity care team promptly rather than relying on a blood test alone.

Antibody testing is not reliable for diagnosing HSV in newborn babies because antibodies can pass from the pregnant parent through the placenta.

How to prepare

You do not need to fast. You can eat, drink water, and have coffee before the blood draw.

Food, ordinary exercise, and the time of day do not meaningfully affect HSV antibody levels. Take your usual medicines unless the clinician who ordered the test gives you different instructions.

Tell the clinician or laboratory about medicines that suppress the immune system, recent immunoglobulin treatment, or blood products containing plasma. These can sometimes affect

antibody test interpretation. Do not stop any medicine or supplement solely for this test unless you have been told to do so.

What happens during the test

A healthcare professional places a band around your upper arm and cleans a small area of skin. A needle is inserted into a vein, usually inside the elbow, and a small tube of blood is collected.

The needle is then removed and pressure is placed over the area. The blood draw itself usually takes about five minutes.

The laboratory separates the serum and tests it for type-specific HSV antibodies. Some laboratories test for both HSV-1 and HSV-2, while others test only for the type requested.

Understanding your results

Results are commonly reported as positive, negative, or equivocal. Equivocal means the result is too close to the test cutoff to classify clearly.

A negative result means antibodies were not detected. This may mean there has been no previous infection. It can also happen when testing is done too soon after exposure, before the immune system has produced enough antibodies. If recent exposure is a concern, repeat testing may be suggested after an appropriate interval.

A positive HSV-1 result means HSV-1 antibodies were found. It does not show whether the infection is oral or genital, when it was acquired, or whether it is causing current symptoms. Many HSV-1 infections are acquired without a recognized outbreak.

A positive HSV-2 result usually suggests anogenital infection. However, results near the positive cutoff can be false positives and may need confirmation with a different method.

An equivocal or low-positive result may lead to repeat testing or a confirmatory test, such as the Biokit assay or HSV Western blot, where available.

Laboratories use different tests and reporting systems, so there is no single universal antibody range. Interpretation varies by laboratory, age, sex, pregnancy status, medicines, and clinical context. Your symptoms, exposure timing, and previous test results matter alongside the number.

What affects the results

The main influences are the timing of testing and the method used.

Testing soon after infection can produce a negative result because antibodies take time to develop. The Centers for Disease Control and Prevention notes that repeat testing about 12 weeks after a suspected recent HSV-2 exposure may be appropriate.

Low HSV-2 index values are more likely to be false positives than strongly positive results. Cross-reactions with other antibodies and differences between testing platforms can also affect the result.

Other factors include:

Pregnancy does not usually make an adult HSV antibody result positive or negative by itself. Food, coffee, exercise, and collection time have little effect. If an unexpected result does not fit your history, confirmation is usually more useful than repeating the same test immediately.

- Immune-suppressing illnesses or medicines, which may weaken or delay antibody production
- Immunoglobulin treatment, which can temporarily introduce antibodies from donors
- Recent plasma-containing blood products, which may occasionally complicate interpretation
- Maternal antibodies in babies, making infant antibody testing unreliable
- High-dose biotin supplements, which may interfere with some laboratory platforms

Accuracy and limitations

Type-specific HSV-2 antibody tests identify roughly 80% to 98% of established infections, depending on the assay and population studied. In plain terms, some infections are missed, especially when testing occurs early.

The test can also say HSV-2 antibodies are present when they are not. This is particularly important for results just above the positive cutoff and when testing people with no symptoms or known exposure. There is no single false-positive rate that applies to every test or population.

Confirmation with a different testing method can help determine whether a low-positive HSV-2 result is genuine. Simply repeating the same assay may reproduce the same misleading result.

HSV-1 blood testing has additional limits. It can miss some infections and cannot distinguish oral infection from genital infection. A positive result also cannot confirm that HSV-1 caused a particular sore.

For an active blister or ulcer, a properly collected PCR or similar direct viral test is generally better. Antibody testing cannot establish the timing of infection, identify the source, or determine whether transmission can occur on a particular day.

Risks and complications

The risks are those of an ordinary blood draw. You may have brief discomfort, a small bruise, or feel faint; serious complications are uncommon.

What happens next

A negative result after a recent possible exposure may be followed by repeat testing once enough time has passed for antibodies to develop. If you have a new sore, arranging a prompt swab may be more helpful than waiting for antibodies.

A low-positive or unexpected HSV-2 result may need confirmation before it is treated as established infection. This is routine follow-up rather than an emergency.

If a result is confirmed, a clinician can explain what the type means, discuss symptoms and transmission, and decide whether any further care is useful. A positive antibody result alone does not always mean medicine is needed.

Seek prompt medical advice for new genital sores during pregnancy or for a painful red eye, light sensitivity, or changes in vision. Seek emergency care for severe headache with fever, confusion, a seizure, marked drowsiness, or a stiff neck. Blood antibody testing should not delay assessment of these symptoms.

Common questions

Can I drink coffee before the test?

Yes. Coffee does not affect HSV antibody testing, and fasting is not required.

Does the time of day matter?

No. HSV IgG antibody levels are not interpreted according to morning or evening collection times.

Can I exercise beforehand?

Yes. Ordinary exercise does not meaningfully change the result. If blood draws make you feel faint, arrive rested and tell the person taking your blood.

How soon after exposure will the test work?

Antibodies may not be detectable during the first weeks after infection. When recent HSV-2 exposure is suspected, repeat testing around 12 weeks after exposure may be considered.

Can this test tell when I caught herpes?

No. Antibodies can remain present long term, so the result cannot date the infection or identify who it came from.

Can it tell whether herpes is oral or genital?

Not reliably. HSV-1 antibodies cannot show the infected body site. HSV-2 antibodies usually indicate anogenital infection, but low-positive results may need confirmation.

Sources

- Centers for Disease Control and Prevention. Genital Herpes, Sexually Transmitted Infections Treatment Guidelines
- US Preventive Services Task Force. Genital Herpes Infection: Serologic Screening, 2023
- US Food and Drug Administration. HSV-2 Tests for Genital Herpes Can Produce False Reactive Results, 2023
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- Gartlehner G, et al. Serologic Screening for Genital Herpes: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force. JAMA. 2023;329(6):510-520