TEST

Campylobacter serology test

A blood test that looks for antibodies made in response to Campylobacter bacteria

WHAT IT MEASURES
Blood antibodies made after exposure to Campylobacter bacteria

SAMPLE
Blood

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually under 10 minutes

RESULTS IN
Several days to two weeks, depending on laboratory

USED FOR
Supporting evidence of recent or past infection

MAIN LIMITATION
Antibodies cannot reliably prove an active infection

Overview

A Campylobacter serology test is a blood test that looks for antibodies against Campylobacter . Antibodies are proteins made by your immune system after it encounters a germ.

Campylobacter bacteria can cause an intestinal infection, often with diarrhea and abdominal pain. Serology does not detect the bacteria themselves. It measures an immune response that may develop after infection starts and remain after it ends.

Laboratories may test for IgM, IgG, or IgA antibodies. IgM may appear earlier, while IgG often develops later and remains detectable longer, but these patterns cannot reliably date an infection.

Serology is not usually the first test for current diarrhea. A stool test that detects Campylobacter genetic material or grows the bacteria is generally more useful for finding an active intestinal infection.

Why the test is ordered

Campylobacter serology is used much less often than stool testing. It may provide supporting evidence when a past infection is being considered but the bacteria are no longer likely to be present in stool.

A clinician may consider it:

Campylobacter infection can sometimes be followed by reactive arthritis or Guillain-Barré syndrome. A positive antibody result may support evidence of earlier exposure, but it cannot diagnose either condition.

Serology is not generally used to screen people without symptoms, confirm that someone is no longer contagious, or replace stool testing during active diarrhea.

- After the original intestinal illness has resolved
- During an assessment of a possible complication following infection
- When stool testing was not done during the acute illness
- For selected specialist, public health, or research investigations

Who should have the test

You may be offered this test when a clinician has a specific reason to look for previous Campylobacter exposure. Its usefulness depends on the timing of your illness and the question being investigated.

If you currently have diarrhea, a stool test is usually more direct. Stool testing may be especially important when symptoms are severe, prolonged, bloody, linked to travel or an outbreak, or occur in someone with a weakened immune system.

The test is not suitable as a general health check. Antibodies from an earlier exposure do not necessarily mean you have a current infection.

How to prepare

You do not normally need to fast. You can eat, drink water, and take your usual medicines unless you receive different instructions because other blood tests are being collected.

Tell the clinician interpreting the result about:

Do not stop prescribed medicines unless the clinician responsible for them tells you to do so.

- When your intestinal symptoms began and ended

- Any previous positive stool test
- Medicines or conditions that weaken your immune response
- Recent immunoglobulin treatment, plasma transfusion, or other plasma-containing blood products

What happens during the test

A healthcare professional places a small needle into a vein, usually in your arm. Blood is collected into a tube and sent to a laboratory. The blood draw normally takes only a few minutes, and you can usually resume your activities immediately.

The laboratory uses an antibody-binding method, often an immunoassay, to check whether your blood reacts to Campylobacter material. Methods and the antibodies reported differ between laboratories.

Understanding your results

Your report may describe the result as negative, positive, or equivocal. Equivocal means it is near the laboratory's cutoff and cannot be clearly classified.

A negative result means the tested antibodies were not found above that cutoff. It does not completely exclude infection. Testing too early, a weak immune response, or differences between the assay and infecting strain can produce a negative result.

A positive result means Campylobacter antibodies were detected. It may reflect a current, recent, or older infection. It does not prove that live bacteria are present or that Campylobacter explains your current symptoms.

IgM may suggest a more recent response, while IgG may represent later or previous exposure. However, IgM can persist or cross-react with antibodies to other germs, and IgG can remain after recovery. Results must be interpreted with your symptoms, dates, and stool tests.

A later blood sample is sometimes compared with the first. A clear rise in antibody levels can strengthen evidence of a recent response but does not show that bacteria remain in the intestine.

Cutoffs and interpretation vary by assay and clinical context. Use the interpretation on your own report rather than a range found online.

What affects the results

Timing is the biggest influence. Antibodies may not yet be detectable early in the illness and can remain after infection clears.

Other influences include:

Food, coffee, time of day, and ordinary exercise do not usually have a meaningful effect.

- Previous exposure: The test may not distinguish a recent episode from an older infection
- Cross-reactions: Antibodies to another bacterium may cause a positive result
- Reduced immune response: Immune disorders, cancer treatment, transplant medicines, or other immune-suppressing medicines may limit antibody production
- Immunoglobulin or plasma treatment: Donated antibodies may cause a temporary positive result
- Different laboratory methods: Assays use different Campylobacter targets and cutoffs, so results may disagree

Accuracy and limitations

There is no single accuracy figure for Campylobacter serology. Tests use different bacterial targets, antibody classes, and thresholds, and accuracy changes with sample timing.

The test can miss infection before antibodies develop, when the immune response is weak, or when the assay does not respond well to the infecting strain. It can also be positive without active infection because antibodies remain from an earlier exposure or react with related bacteria.

For current diarrhea, a stool molecular test is usually better at detecting Campylobacter directly. Stool culture can identify living bacteria, although prior antibiotics like amoxicillin or doxycycline , collection delays, and transport conditions may reduce the chance of growing them.

Serology is most useful as supporting information. It should not be used alone to diagnose an active infection or a post-infectious complication.

Risks and complications

A blood draw may cause brief discomfort, a small bruise, or minor bleeding. Some people feel light-headed or faint, but serious complications are uncommon.

What happens next

A negative result may need no further action if your symptoms have resolved and the original concern was low. If the sample was collected too early, or evidence of past infection remains important, further testing may be considered.

A positive result is reviewed alongside your symptoms, their timing, and any stool results. It does not usually mean treatment is needed or that you remain contagious.

Arrange prompt medical assessment if you have ongoing bloody diarrhea, severe abdominal pain, a high fever, cannot keep fluids down, or have signs of dehydration such as very little urine or marked dizziness.

Seek emergency care for new or rapidly worsening weakness, difficulty walking, facial weakness, trouble swallowing, or breathing difficulty. These symptoms require urgent assessment and should not wait for a serology result.

Common questions

Can I drink coffee before the test?

Yes. Fasting is not normally required. Follow different instructions if other fasting blood tests are being collected.

Does the time of day matter?

No. Campylobacter antibodies do not usually change enough during the day to require testing at a particular time.

Can I exercise beforehand?

Ordinary exercise is unlikely to affect the result. Avoid strenuous activity immediately beforehand if it makes you dehydrated or light-headed.

How long do Campylobacter antibodies stay positive?

They may remain detectable for weeks, months, or sometimes longer. A positive result cannot precisely date the infection.

Does a positive result mean I am contagious?

No. Serology detects antibodies, not live bacteria. Stool testing and your clinical situation are more useful when current infection or transmission is the concern.

Can this test diagnose Guillain-Barré syndrome?

No. Guillain-Barré syndrome is diagnosed from symptoms, a neurological examination, and

sometimes nerve or spinal-fluid tests. Campylobacter antibodies may only support evidence of an earlier infection.

Sources

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- World Health Organization. Campylobacter fact sheet
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- Nachamkin I, Allos BM, Ho T. Campylobacter Species and Guillain-Barré Syndrome. Clinical Microbiology Reviews. 1998;11(3):555-567