TEST

Anti-dnase B blood test

A blood test that measures antibodies produced after some streptococcal bacterial infections.

WHAT IT MEASURES
Antibodies against DNase B produced after some streptococcal infections

SAMPLE
Blood from a vein

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually 5 to 10 minutes

RESULTS IN
Usually several days; timing differs by laboratory

USED FOR
Supporting diagnosis of complications after streptococcal infection

MAIN LIMITATION
An elevated result cannot date or locate the infection

Overview

The anti-DNase B blood test looks for antibodies against DNase B, a protein made by certain Streptococcus bacteria, especially group A streptococcus.

After a streptococcal infection, anti-DNase B levels may rise and remain elevated for weeks or months. The test therefore helps find evidence of a recent past infection. It does not directly detect bacteria, identify where the infection occurred, or show whether you are currently contagious.

Testing may be used when a healthcare professional suspects a complication following strep throat or a streptococcal skin infection. Examples include acute rheumatic fever, which can affect the heart and joints, and post-streptococcal glomerulonephritis, which causes kidney inflammation.

Why the test is ordered

The test is usually ordered to look for evidence that a streptococcal infection happened recently. By the time a complication develops, the original throat or skin infection may have cleared, and a throat swab may be negative even though antibodies remain detectable.

It may help assess:

Anti-DNase B is often considered alongside an antistreptolysin O, or ASO, test, which measures antibodies against another streptococcal protein. Anti-DNase B can be particularly useful after a skin infection because ASO levels do not always rise strongly after these infections.

The test is not normally used to diagnose a current sore throat. Rapid antigen tests, molecular tests, and throat cultures are better suited to finding an active throat infection.

- Acute rheumatic fever
- Post-streptococcal glomerulonephritis
- Another illness where evidence of recent streptococcal infection is relevant

Who should have the test

A healthcare professional may suggest testing if your symptoms or examination raise concern about an illness that can follow a recent streptococcal infection.

This may include new joint inflammation, certain heart findings, or signs of kidney inflammation such as dark urine and swelling. The result is only one part of the assessment.

The test is not generally used to screen people who feel well. It does not measure immunity or show whether you are protected from future infections.

How to prepare

You do not usually need to fast. Eat and drink normally unless other blood tests collected at the same appointment require fasting.

Continue your usual medicines unless told otherwise. Tell the healthcare professional about recent antibiotics like amoxicillin or doxycycline , medicines that suppress the immune system, intravenous immunoglobulin, or a recent blood or plasma transfusion because these may affect interpretation.

Also explain when your symptoms began and whether you recently had a sore throat, scarlet fever, impetigo, or another skin infection.

What happens during the test

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

You may feel a brief scratch or sting. The needle is removed and pressure is applied. Collection usually takes only a few minutes.

The sample is sent to a laboratory. Because anti-DNase B testing is not available at every local laboratory, it may be sent elsewhere.

Understanding your results

Your report will usually show an anti-DNase B level and the laboratory's comparison range or decision point. There is no single range that applies to every person or testing method. Use the information on your laboratory report rather than a range found online.

A raised result suggests that your immune system responded to a streptococcal infection in the recent past. It does not prove that streptococcus caused your current symptoms or show whether the infection affected your throat, skin, or another area.

A low or negative result makes recent infection less likely but does not completely rule it out. Testing may have occurred before antibodies rose, or your immune system may not have produced a measurable response.

A later sample may be compared with the first. A rising level can provide stronger evidence of recent infection than one isolated result. Depending on the reason for testing, results may also be assessed with an ASO level, throat testing, kidney tests, an electrocardiogram, imaging, or other investigations.

What affects the results

Timing is particularly important. Anti-DNase B antibodies do not appear immediately, so early testing can give a negative result despite infection. Because antibodies can remain elevated for months, a positive result may reflect an older infection rather than the illness currently being investigated.

Other influences include:

Eating, drinking, ordinary exercise, and time of day do not have a meaningful direct effect on this test.

- Site of infection: Anti-DNase B may be more useful than ASO after a streptococcal skin infection
- Previous exposure: Repeated or recent infections can keep levels raised
- Age and local exposure patterns: Baseline levels differ between populations
- Early antibiotic treatment: This may reduce the antibody response
- Immune function: Immune-suppressing illness or medicine may weaken antibody production
- Donor antibodies: Intravenous immunoglobulin or a recent plasma-containing transfusion may affect antibody tests temporarily
- Testing method: Laboratories use different assays, units, and comparison ranges

Accuracy and limitations

The test can support evidence of recent streptococcal infection, but it cannot diagnose a post-streptococcal illness by itself.

A false-negative result can occur if testing is too early, the immune response is weak, or early treatment reduced that response. Not everyone with a streptococcal infection develops a clearly elevated level.

A positive result may not explain current symptoms because antibodies can remain after an infection has resolved. Some people also have higher background levels because of previous exposure.

Test performance varies with timing, the population tested, the laboratory method, and whether ASO or repeat testing is used. For a current sore throat, rapid antigen testing, molecular testing, or throat culture is more appropriate. Suspected heart or kidney complications require additional tests to assess the affected organs.

Risks and complications

The risks are those of a routine blood draw. You may have brief discomfort, a small bruise, or feel light-headed. Serious complications are uncommon.

What happens next

A healthcare professional will interpret the result with your symptoms, examination, other test results, and the timing of any recent infection. A raised result may support further assessment. If concern remains after a negative result, repeat antibody testing or another test may be recommended.

An abnormal anti-DNase B result alone is not usually an emergency. Arrange follow-up as advised so it can be reviewed in context.

Seek urgent medical advice if you develop cola-coloured or bloody urine, noticeably reduced urination, new swelling around the eyes or legs, worsening shortness of breath, or a severe headache with swelling. Do not wait for the antibody result.

Call emergency services for severe difficulty breathing, collapse, marked confusion, or blue or grey lips or skin.

Common questions

Can I drink coffee before the test?

Yes. Fasting is not required, but follow any instructions for other tests collected at the same appointment.

Does the time of day matter?

No specific time is required.

Can I exercise beforehand?

Ordinary exercise does not meaningfully affect the result. Staying hydrated may make the blood draw easier.

Will antibiotics affect the result?

Antibiotics do not immediately remove existing antibodies, but treatment started early may reduce the later antibody rise. Do not stop or delay prescribed antibiotics for this test.

Can this test tell whether I am still contagious?

No. It measures your immune response, not live bacteria. Testing from the throat or another infection site is needed to identify a current infection.

How long can anti-DNase B stay positive?

Levels may remain elevated for several months. One positive result cannot precisely date the infection.

Sources

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