TEST

D-dimer test

A D-dimer test measures blood-clot breakdown fragments to help rule out harmful clots.

WHAT IT MEASURES
Protein fragments released as blood clots break down

SAMPLE
Blood

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually less than 10 minutes

RESULTS IN
Often same day; timing varies by laboratory

USED FOR
Diagnosis support when a blood clot is suspected

MAIN LIMITATION
Many conditions besides blood clots can raise it

Overview

A D-dimer test is a blood test used when a healthcare professional is considering an abnormal blood clot.

D-dimer is a protein fragment produced when the body breaks down fibrin, which helps hold blood clots together. Levels can rise when the body is forming and breaking down clots.

The test is mainly used to rule out venous thromboembolism when symptoms and risk factors suggest a low or intermediate chance of a clot. Venous thromboembolism includes:

A low result can make these conditions unlikely in the right clinical setting. A raised result does not prove that you have a clot because many other conditions can increase D-dimer.

- Deep vein thrombosis, or DVT, usually a clot in a deep leg vein
- Pulmonary embolism, or PE, a clot that has travelled to the lungs

Why the test is ordered

You may have this test if you have symptoms that could be caused by DVT or PE. A healthcare professional will also consider your examination findings, medical history, and clot risk factors.

Possible DVT symptoms include swelling, tenderness, warmth, or pain in one leg. Possible PE symptoms include unexplained shortness of breath, chest pain that may worsen with breathing, coughing up blood, a fast heartbeat, or fainting.

The test may also help assess disseminated intravascular coagulation, or DIC, a serious condition involving abnormal clotting throughout the body. D-dimer cannot diagnose DIC by itself and must be interpreted with other tests.

D-dimer is not usually used to screen people without symptoms because a raised result may lead to unnecessary imaging.

Who should have the test

D-dimer testing is most helpful when a clot is possible but not already considered highly likely. A clinical assessment or scoring system may be used to estimate that likelihood.

If DVT or PE is considered likely, imaging may be the better first test. A low D-dimer may not safely exclude a clot when clinical suspicion is high.

Testing can also be less useful after major surgery, during pregnancy, in hospital, or in people with cancer or severe infection because D-dimer is often raised in these situations.

Seek emergency medical help for sudden or severe shortness of breath, chest pain, coughing up blood, collapse, or fainting. Do not wait for a routine blood test appointment.

How to prepare

You do not need to fast. You can usually eat, drink water, and have coffee as normal.

Tell the healthcare professional about your medicines, particularly anticoagulants such as heparin, warfarin, apixaban, rivaroxaban, edoxaban, or dabigatran. These medicines may lower D-dimer after treatment begins.

Do not stop an anticoagulant or any other prescribed medicine unless the professional responsible for your care specifically tells you to.

No special clothing or recovery arrangements are normally needed.

What happens during the test

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

The blood draw usually takes less than 10 minutes. You can normally leave straight afterwards unless your symptoms require further assessment.

Laboratories commonly report D-dimer using fibrinogen-equivalent units, or FEU, or D-dimer units, or DDU. These systems are not interchangeable, so compare your result only with the reference limit on your report.

Understanding your results

Your report may describe the result as negative, within the laboratory limit, or elevated.

A negative result can help rule out DVT or PE when:

An elevated result means more clot-breakdown material was detected. It does not show where a clot is, its size, or whether a harmful clot is present. Imaging is usually needed if DVT or PE remains a concern.

For possible DVT, the next test may be an ultrasound of the leg veins. For possible PE, it may be a CT pulmonary angiogram using injected contrast dye or a lung ventilation-perfusion scan.

Some pathways use an age-adjusted limit for adults over 50. Do not compare your result with a single cutoff found online. Interpretation varies by laboratory method, age, pregnancy status, medicines, and clinical context.

- Your symptoms and risk factors indicate a low or intermediate chance of a clot
- A suitably sensitive D-dimer method was used
- Anticoagulant treatment has not altered the result

What affects the results

D-dimer can be raised without DVT or PE. Reasons include:

Anticoagulant treatment can lower D-dimer and may contribute to a negative result even when a clot was present. Levels may also fall as time passes after symptoms begin. Small clots may produce less D-dimer.

Results differ between laboratory methods. FEU and DDU use different calibrations and cannot be directly compared.

- Recent surgery, injury, or bleeding
- Infection or significant inflammation
- Pregnancy and the period soon after birth
- Increasing age
- Cancer or liver disease
- Hospital admission or severe illness
- Other conditions involving increased clot formation and breakdown

Accuracy and limitations

With a sensitive test, a negative result is useful for ruling out DVT or PE in someone with a low or intermediate clinical likelihood.

However, the test often produces a raised result when no harmful clot is present. Pregnancy, age, infection, surgery, injury, cancer, and inflammation can all cause this. A positive result therefore cannot confirm DVT or PE.

The test can occasionally miss a clot, particularly after anticoagulant treatment starts, when testing occurs well after symptoms began, with a small clot, or when a less-sensitive method is used.

If the likelihood of a clot is high, imaging is more reliable than D-dimer alone. No result should override concerning symptoms or a strong clinical assessment.

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

If the result is negative and your assessed chance of DVT or PE was low enough, further clot testing may not be needed. Your healthcare professional may consider other causes of your symptoms.

If the result is elevated, you may need an ultrasound or chest imaging. An elevated result alone does not mean you need anticoagulant treatment.

If imaging confirms a clot, your care team will discuss treatment and follow-up. If it does not show a clot, they may investigate other explanations.

Get urgent or emergency help if you develop sudden breathlessness, chest pain, coughing up blood, fainting, or rapidly worsening symptoms, regardless of an earlier D-dimer result. Stable questions can usually be discussed through routine follow-up.

Common questions

Can I drink coffee before a D-dimer test?

Yes. Fasting is not required unless you are also having another test that requires it.

Does the time of day matter?

Usually not. The test does not normally need to be scheduled at a particular time.

Can I exercise beforehand?

Ordinary activity is generally acceptable. Do not delay urgent assessment to rest or prepare. Mention any recent unusually strenuous exercise.

Does a high D-dimer mean I have a blood clot?

No. It means clot-breakdown material is above the limit used by the laboratory or clinical pathway. Further assessment may be needed.

Can a normal result completely rule out a clot?

Not in every situation. It is most reliable when the clinical chance of DVT or PE is low or intermediate and a sensitive test is used.

How quickly will I get the result?

Emergency departments often receive results within hours. Outpatient timing varies by laboratory and local service.

Sources

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