TEST

Fibrin degradation products blood test

A blood test that measures fragments produced when the body breaks down blood-clotting proteins.

WHAT IT MEASURES
Fragments formed when fibrin and fibrinogen are broken down

SAMPLE
Blood

FASTING NEEDED?
No

HOW LONG IT TAKES
About five minutes

RESULTS IN
Hours to one day, depending on the laboratory

USED FOR
Helping diagnose and monitor abnormal clotting, especially DIC

MAIN LIMITATION
Many conditions raise FDP, so results are not specific

Overview

A fibrin degradation products blood test measures fragments released when the body breaks down fibrin or fibrinogen. Fibrin helps form stable blood clots, while fibrinogen is the soluble protein from which fibrin is made.

These fragments, called FDPs , can increase when the body is making and breaking down more clotting material than usual.

The test is mainly used when there is concern about widespread activation of clotting, particularly disseminated intravascular coagulation (DIC). In DIC, many small clots form within blood vessels while clotting proteins and platelets are used up. This can cause both clotting and bleeding.

FDP testing cannot show where a clot is or identify its cause. Results are interpreted with symptoms, medical history and other laboratory tests.

FDPs and D-dimer are related but not identical. D-dimer comes specifically from the breakdown of cross-linked fibrin in a stable clot. Some FDP tests also detect fragments from

fibrinogen. Many hospitals use D-dimer more often because its clinical uses are better established.

Why the test is ordered

An FDP test may be ordered to investigate unusually active clot formation and breakdown. It may help with:

The result cannot diagnose DIC by itself. It is usually considered with a platelet count, prothrombin time, activated partial thromboplastin time, fibrinogen and D-dimer. The overall pattern and changes over time are often more useful than one FDP value.

- Assessing or monitoring possible DIC
- Investigating unexplained bleeding or abnormal clotting results
- Supporting assessment after severe infection, major trauma, surgery or pregnancy complications
- Evaluating excessive clot breakdown after clot-dissolving treatment

Who should have the test

FDP testing is not generally used to screen people who feel well. It is usually requested when symptoms, illness or other results suggest a clotting problem.

You may have the test in an emergency department or hospital if you have serious bleeding, extensive bruising, severe infection, major tissue injury or another condition associated with abnormal clotting. It may be repeated to monitor a clotting disorder.

For suspected deep vein thrombosis or pulmonary embolism, D-dimer is usually more useful. Imaging may still be needed, depending on symptoms and risk.

How to prepare

You usually do not need to fast. You can generally eat, drink water and take your usual medicines unless you have different instructions for other tests being collected.

Tell the healthcare team about medicines that affect clotting, including anticoagulants and clot-dissolving treatments. Do not stop a prescribed medicine just because you are having this test.

Also mention recent surgery, injury, pregnancy, childbirth, transfusion or treatment for a blood clot, as these may affect interpretation.

What happens during the test

A healthcare worker cleans the skin, usually inside your elbow, and inserts a small needle into a vein. Blood is collected into a tube containing an additive that prevents clotting before analysis.

You may feel a brief scratch or sting. The blood draw usually takes less than five minutes.

The tube must be filled, mixed and processed correctly. If the sample clots or is unsuitable, another sample may be needed.

Understanding your results

FDP results may be reported as a number or as negative or positive, depending on the method. There is no universal reference range, so use the range on your laboratory report.

A raised result means increased breakdown of fibrin, fibrinogen or both. It can occur with DIC but does not prove DIC is present. Other causes include a recent blood clot, surgery, trauma, severe infection, inflammation, liver disease, pregnancy and clot-dissolving treatment.

A result within the expected range makes major ongoing breakdown less likely but cannot completely rule out a clotting disorder. Levels may be lower if the test is performed too early or late, the amount of clotting is small, or treatment has already started.

Changes over time may help clinicians assess whether clotting and clot breakdown are increasing or decreasing.

What affects the results

Recent surgery, major injury, pregnancy and childbirth can activate clotting and tissue repair, leaving FDP levels raised while clotting material is cleared.

Severe infection, inflammation, cancer and liver disease may also increase FDPs. Reduced kidney function may slow the removal of breakdown products, while increasing age may be associated with higher markers of clot turnover.

Anticoagulants like warfarin or apixaban may reduce FDP production after treatment begins. Clot-dissolving medicines deliberately increase fibrin breakdown and can cause a marked rise. Timing is therefore important.

Collection problems can make results unreliable. These include an underfilled or clotted tube, contamination from an intravenous line and delayed processing. Effects from strenuous exercise, damaged red cells, high fat levels or certain antibodies depend on the test method.

Accuracy and limitations

An FDP test can show that fibrin or fibrinogen breakdown products are present, but not why. Many illnesses, treatments and normal physiological states can raise FDPs, so a positive result is not specific for DIC or a blood clot.

The test may also miss clinically important clotting if the clot burden is small, fragments have already been cleared, treatment has started or the assay does not detect the fragments well. Different laboratory methods may measure different fragments, so results may not be directly comparable.

For suspected deep vein thrombosis or pulmonary embolism, a validated D-dimer test is generally more appropriate. In selected people with low clinical risk, a negative D-dimer can help rule out these conditions. A positive result does not confirm a clot and may require imaging.

Possible DIC is assessed using FDP or D-dimer results together with platelet counts, clotting times, fibrinogen, trends and the clinical situation.

Risks and complications

The risks are those of an ordinary blood draw. You may have brief discomfort, a small bruise or feel faint. Applying pressure afterward usually limits bruising.

What happens next

If the result is within the expected range and other findings are reassuring, no specific follow-up may be needed. In hospital, testing may be repeated if your condition or other clotting results change.

A raised result leads to investigation of the cause rather than treatment of the number itself. Further tests may include repeat blood counts and clotting tests, liver and kidney tests, or imaging if a clot is suspected.

Arrange routine follow-up for an unexplained abnormal result, particularly after surgery,

infection, pregnancy-related care or treatment for a clot.

Seek urgent medical care for new or worsening unexplained bleeding, blood in vomit or stool, rapidly spreading bruising, or a painful swollen leg. Call emergency services for severe breathlessness, chest pain, coughing up blood, fainting, sudden one-sided weakness or bleeding that will not stop.

Common questions

Can I drink coffee before an FDP blood test?

Usually, yes. Fasting is not normally required. Follow separate instructions if you are having other blood tests.

Does the time of day matter?

Usually not. Timing in relation to symptoms, surgery, injury or treatment is more important.

Can I exercise beforehand?

Normal activity is generally fine. If practical, avoid unusually strenuous exercise shortly before the test and mention recent intense activity.

Will blood thinners affect the result?

They can change FDP levels after treatment starts. Do not stop them unless the prescribing clinician tells you to.

Is an FDP test the same as a D-dimer test?

No. D-dimer measures fragments from cross-linked fibrin in a formed clot. FDP tests may detect a wider group of fragments from fibrin and fibrinogen.

Does a high result mean I have a blood clot?

Not necessarily. Many conditions raise FDPs, and the test cannot locate a clot. Results must be interpreted with symptoms, examination and other tests.

Sources

- ARUP Consult: Disseminated Intravascular Coagulation
- Merck Manual Professional Edition: Disseminated Intravascular Coagulation
- MedlinePlus: D-Dimer Test



- Levi M, Toh CH, Thachil J, Watson HG. Guidelines for the diagnosis and management of disseminated intravascular coagulation. British Journal of Haematology. 2009;145:24-33
- Olson JD. D-dimer: An overview of hemostasis and fibrinolysis, assays, and clinical applications. Advances in Clinical Chemistry. 2015;69:1-46