

## D-dimers



### **Description, significance:**

D-dimers are fragments of cross-linked fibrin that are formed when the fibrin is cleaved by plasmin (or other fibrinolytics). If increased D-dimer levels are detectable in the plasma, the coagulation system must have been active, forming cross-linked fibrin, which was then broken down by the fibrinolytic system.

Since such situations can arise from a variety of causes (see below), an elevated D-dimer level is only a sign that an illness exists, but is not proof of a thrombosis. A normal D-dimer value largely rules out thrombosis.

D-dimer levels can be used to predict the risk of recurrence of thrombosis or pulmonary embolism.

### **Reference range:**

varies depending on the test system, usually between <0.5 mg/l FEU

Fibrinogen equivalent units (FEU) refer to the concentration of fibrin degradation products that result from the degradation of 1 mg/l fibrinogen.

### **Increased values:**

Thrombosis and embolism, acute infections/inflammation, disseminated intravascular coagulopathy (DIC), shock, after operations or injuries, diabetes mellitus, malignancy, fibrinolytic therapy.

### **Decreased values:**

largely rule out thrombotic events

### **Preanalytics:**

D-dimers are determined immunologically from citrated plasma. Care must be taken to collect blood accurately, avoid contamination, fill the blood tube correctly and mix well with the citrate.

### **References:**

Thomas L, Laboratory and Diagnosis, 2023, Release 5: <https://www.labor-und-diagnose.de/index.html>

Parameter catalog of the Clinical Institute for Laboratory Medicine, Med.Univ.Wien and AKH Vienna: <https://www.akhwien.at/default.aspx?pid=3982>

List of services for clinical chemistry, Univ.Klinikum Ulm: <https://www.uniklinik-ulm.de/zentrale-einrichtung-klinische-chemie/leistungskatalog.html>