

Hemostasis Pathways

Factor VII
Proconvertin, Stable Factor

Biosynthesis: Liver, Vitamin K dependent
MW: 55,000 daltons
Plasma Concentration: 1 mg/L
In Vivo Half-Life: 5 hours
Pathology: Hypoproconvertinemia, autosomal recessive

Factor X
Stuart-Prower Factor

Biosynthesis: Liver, Vitamin K dependent
MW: 55,000 daltons
Plasma Concentration: 5 mg/L
In Vivo Half-Life: 65 hours
Pathology: Stuart disease, autosomal recessive

Tissue Factor
Factor III, Thromboplastin

Biosynthesis: Brain, lung, subendothelium
MW: 45,000 daltons

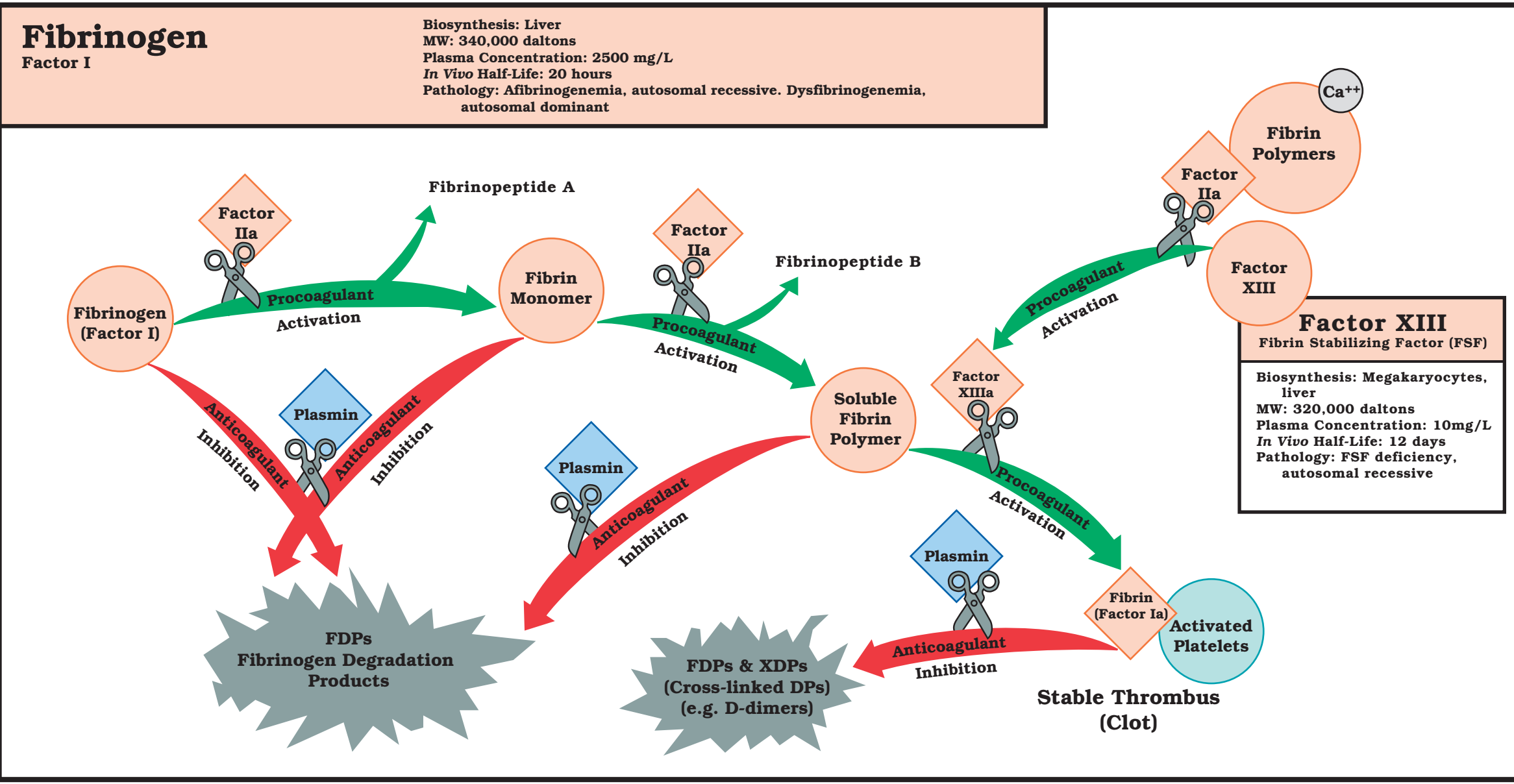
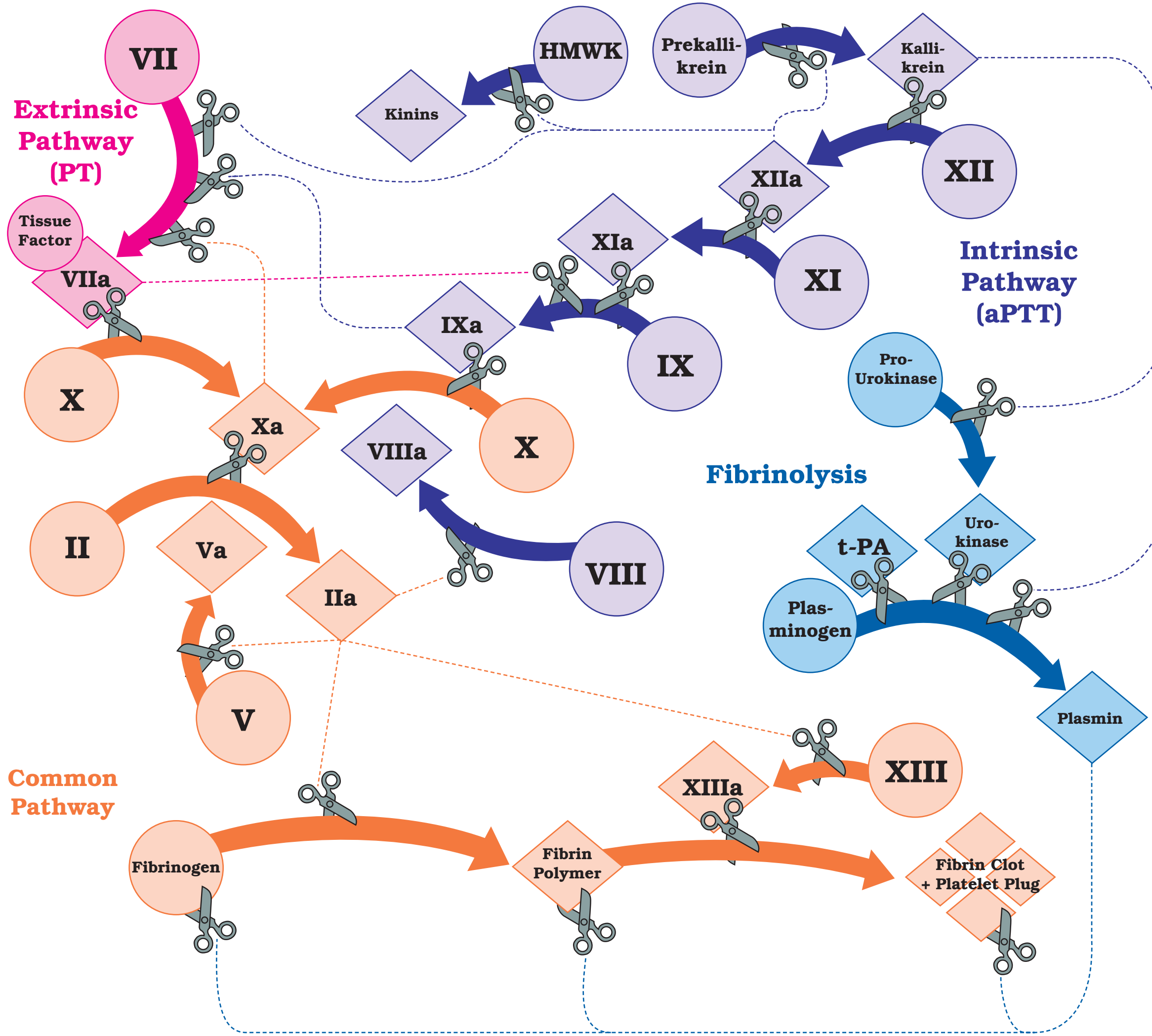
Factor II
Prothrombin

Biosynthesis: Liver, Vitamin K dependent
MW: 70,000 daltons
Plasma Concentration: 100 mg/L
In Vivo Half-Life: 100 hours
Pathology: Hypoprothrombinemia, autosomal recessive

Factor V
Proaccelerin, Labile Factor

Biosynthesis: Liver, megakaryocytes
MW: 330,000 daltons
Plasma Concentration: 5-12 mg/L
In Vivo Half-Life: 25 hours
Pathology: Parahemophilia, autosomal recessive

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Protein C

Biosynthesis: Liver, Vitamin K dependent
MW: 56,000 daltons
Plasma Concentration: 3-5 mg/L
In Vivo Half-Life: 6-7 hours
Pathology: Protein C deficiency, autosomal recessive (?)

Factor VIII
Antihemophilic Factor
vWF
von Willebrand Factor

Biosynthesis: Liver, endothelium; megakaryocyte
MW (FVIII + vWF): 1.2-2 million daltons (6-10 subunits - 200,000 daltons each)
Plasma Concentration: 7 mg/L (vWF)
In vivo Half-Life: 10 hours (Factor VIII)
Pathology: Factor VIII-Hemophilia A, x-linked recessive. vWF von Willebrand's disease, autosomal dominant

Factor IX
Christmas Factor

Biosynthesis: Liver, Vitamin K dependent
MW: 57,000 daltons
Plasma Concentration: 4 mg/L
In Vivo Half-Life: 20 hours
Pathology: Hemophilia B, (Christmas disease) x-linked recessive

Factor XI
Plasma Thromboplastin Antecedent

Biosynthesis: Liver
MW: 158,000 daltons
Plasma Concentration: 4 mg/L
In Vivo Half-Life: 65 hours
Pathology: Hemophilia C, autosomal recessive

An educational service of:

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