

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai

Approved by Pharmacy Council of India, New Delhi.

Coimbatore -641035



COURSE NAME: HUMAN ANATOMY AND PHYSIOLOGY (ER20-14T)

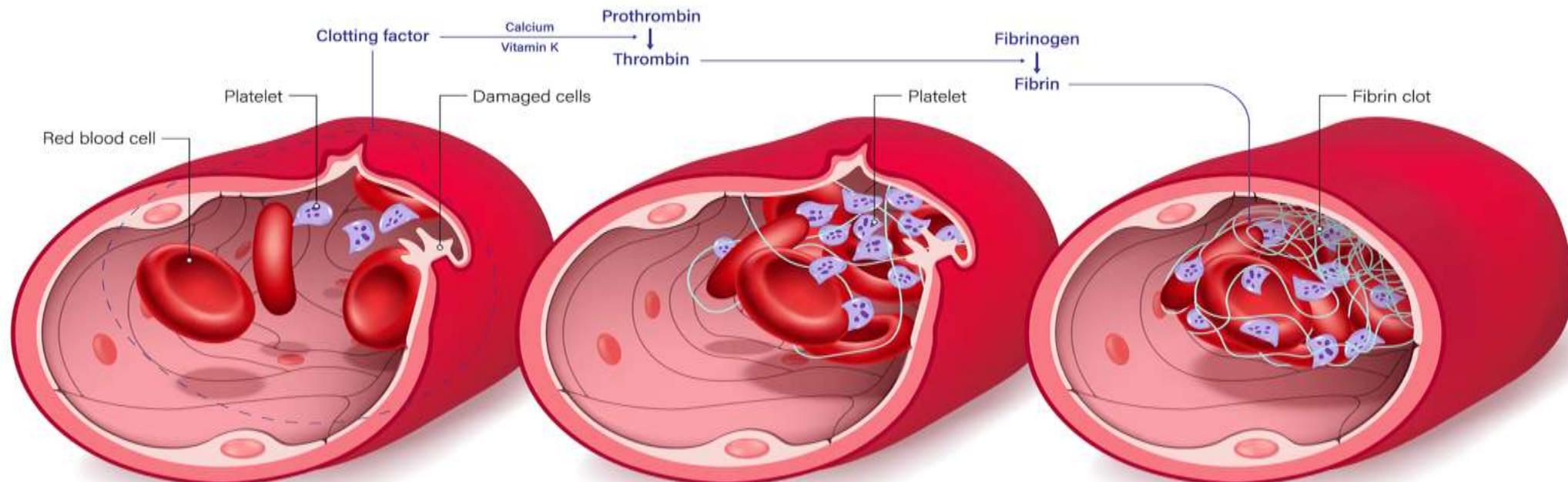
I D. PHARM

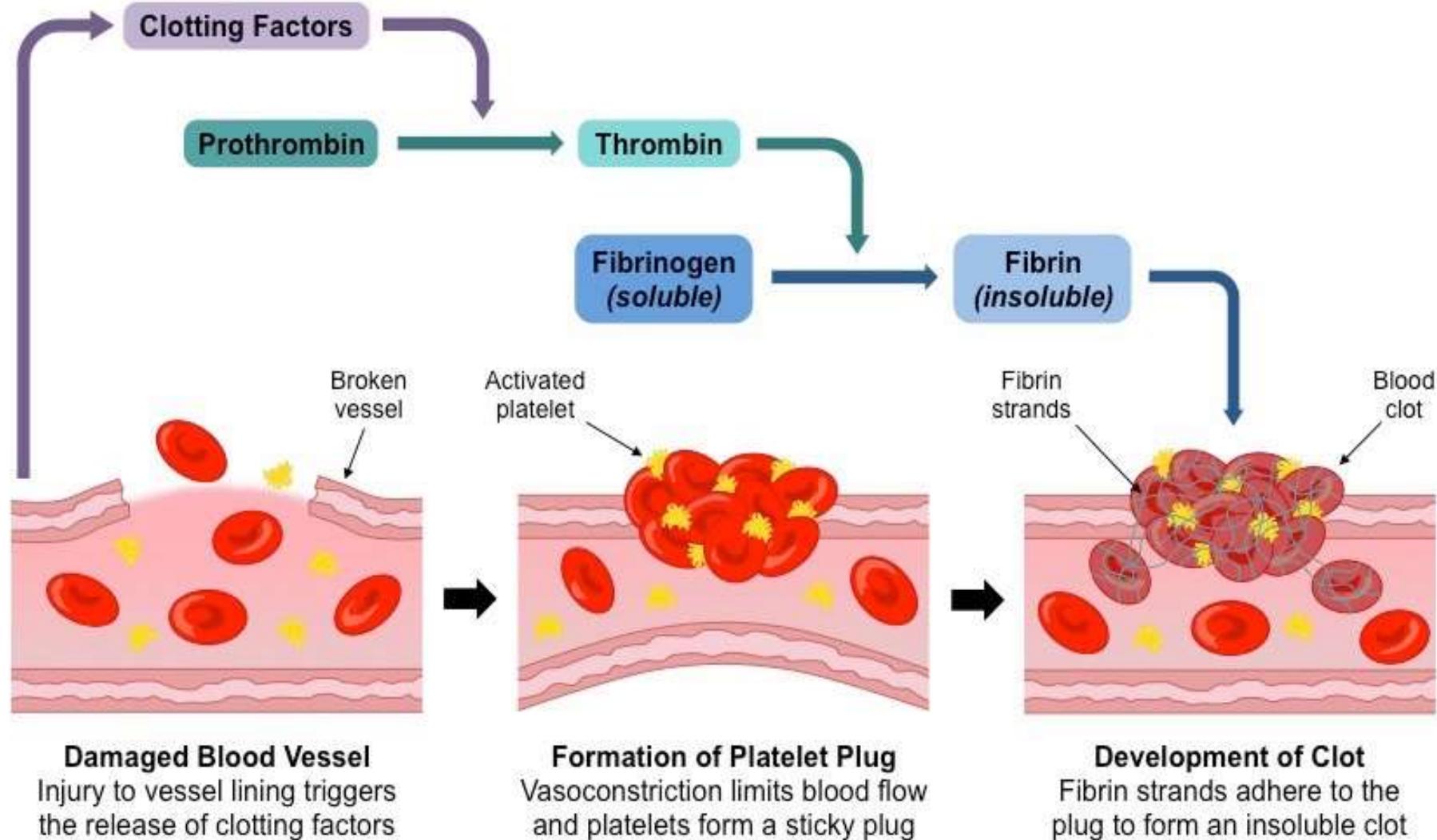
TOPIC : BLOOD CLOTTING

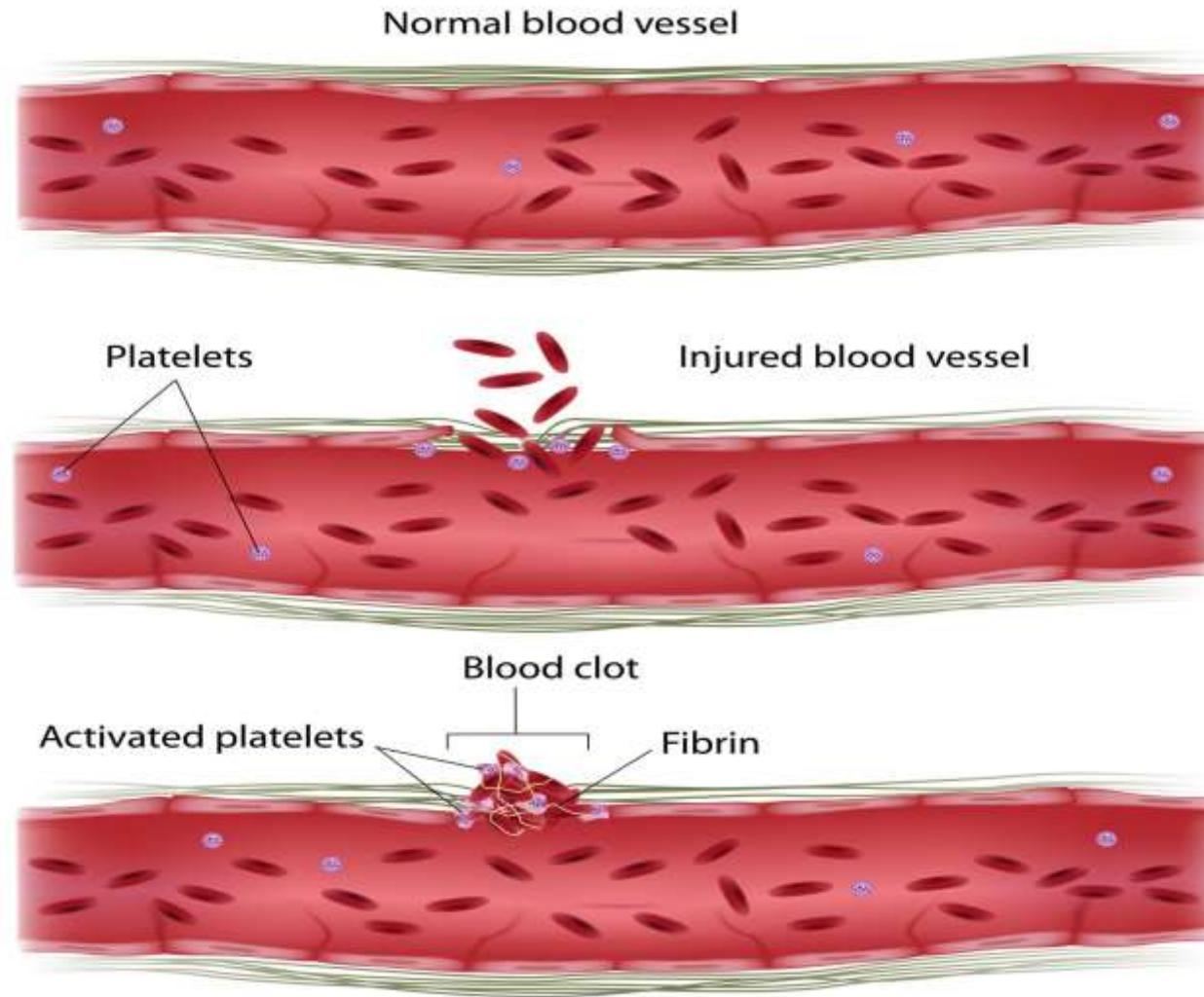
MINDMAP



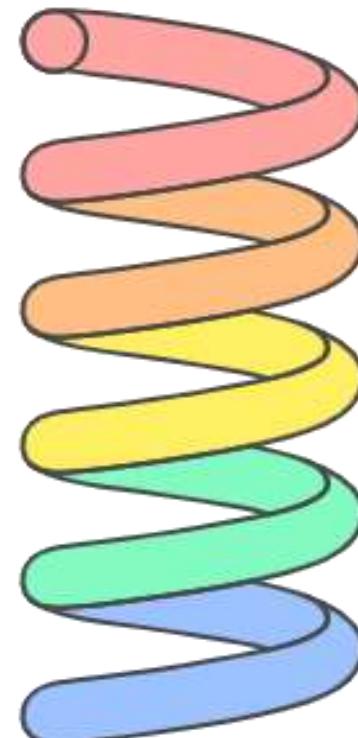
Blood Clotting







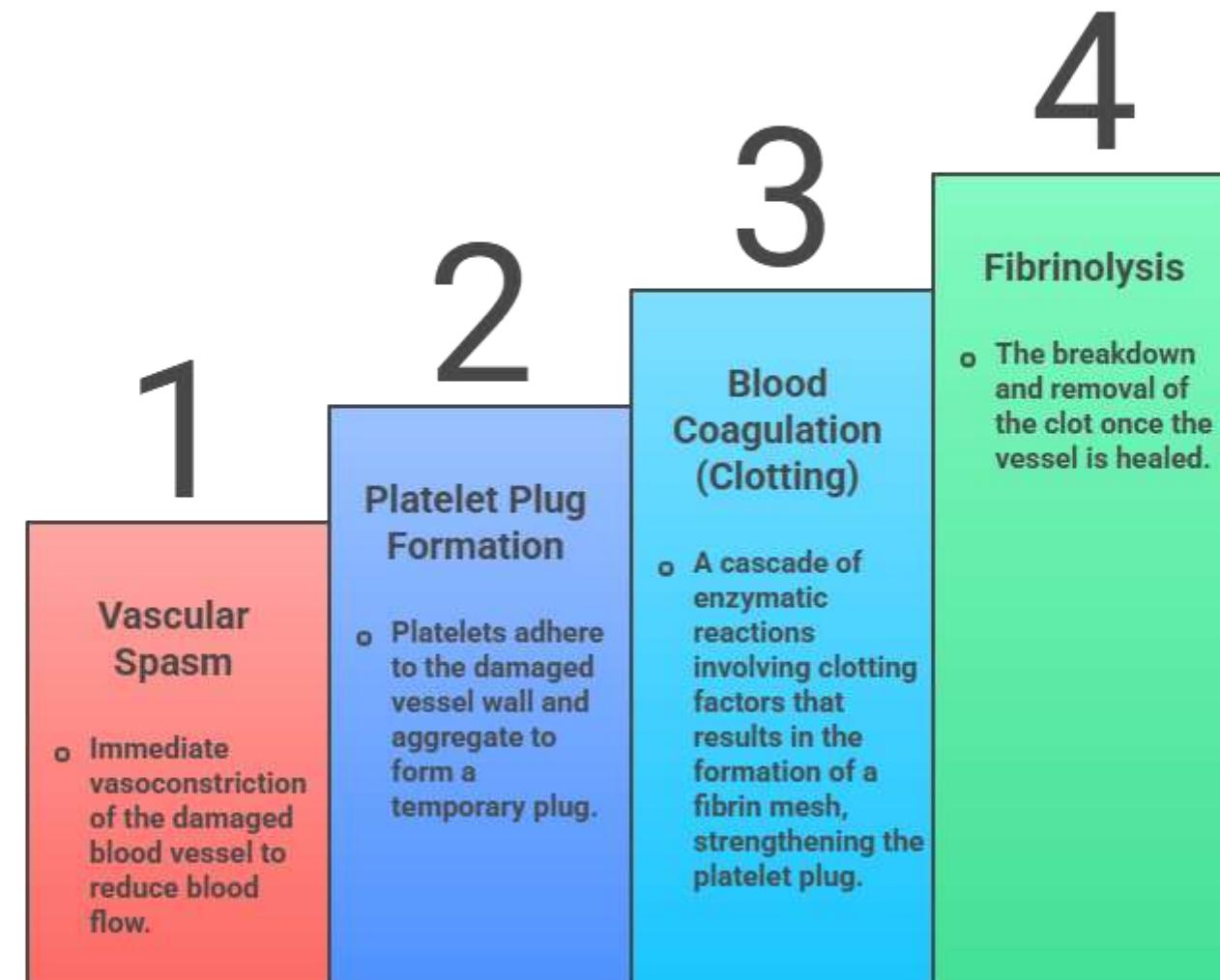
Hemostasis Process



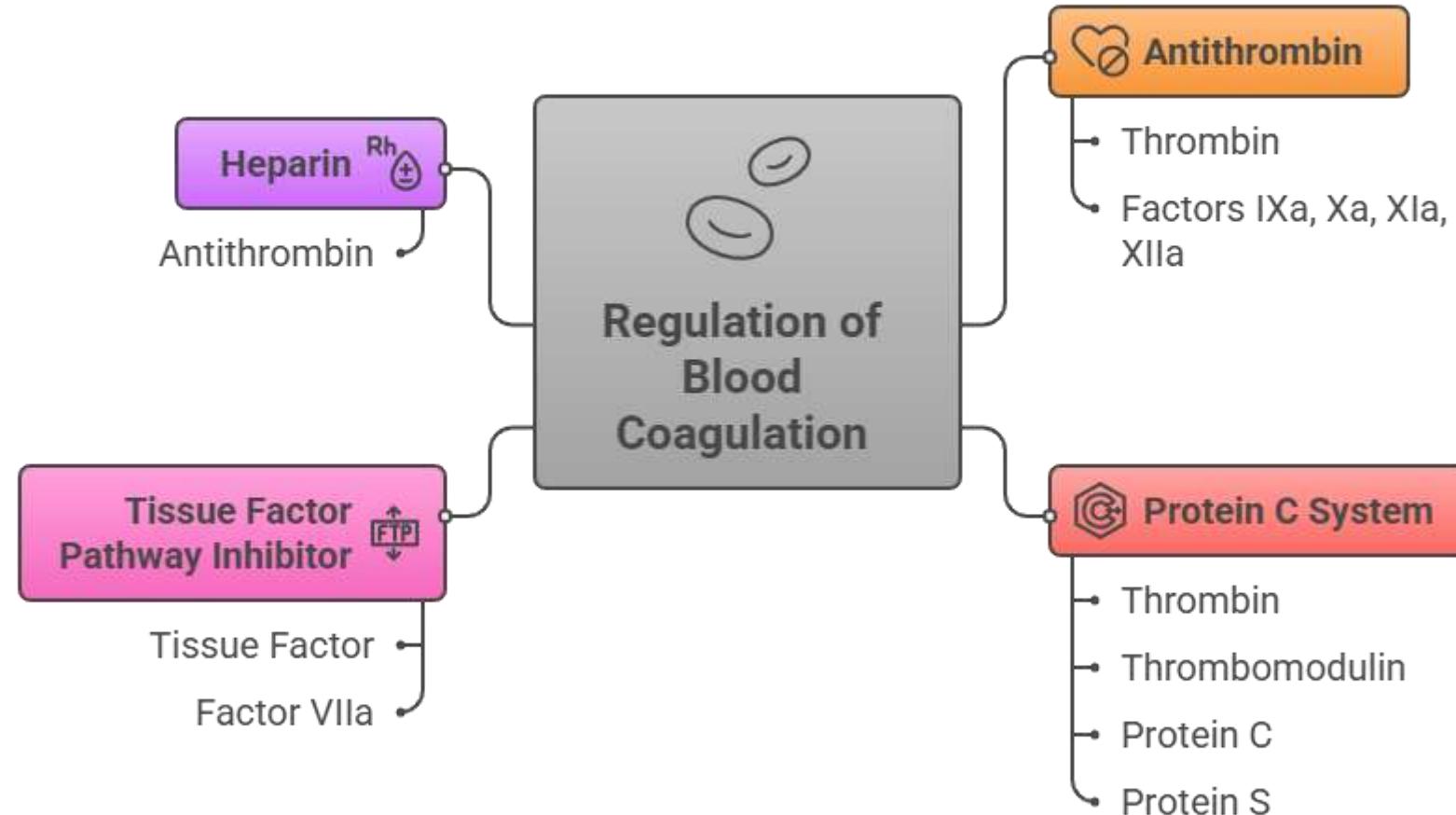
-  Vascular Spasm
-  Platelet Plug Formation
-  Blood Coagulation
-  Clot Stabilization
-  Tissue Repair

Made with  Napkin

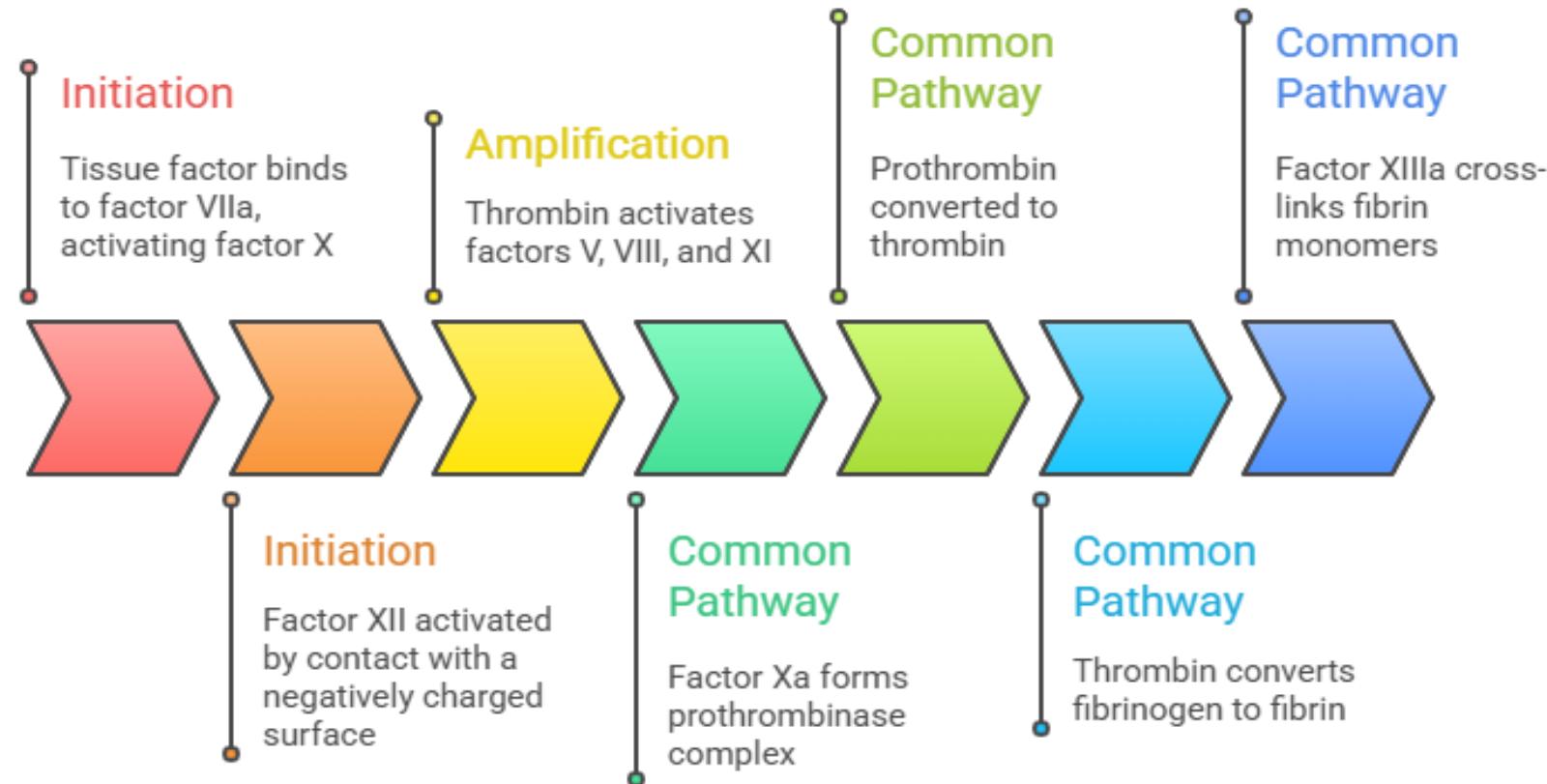
Hemostasis Process



Regulation of Blood Coagulation



The Blood Clotting Cascade: A Step-by-Step Journey



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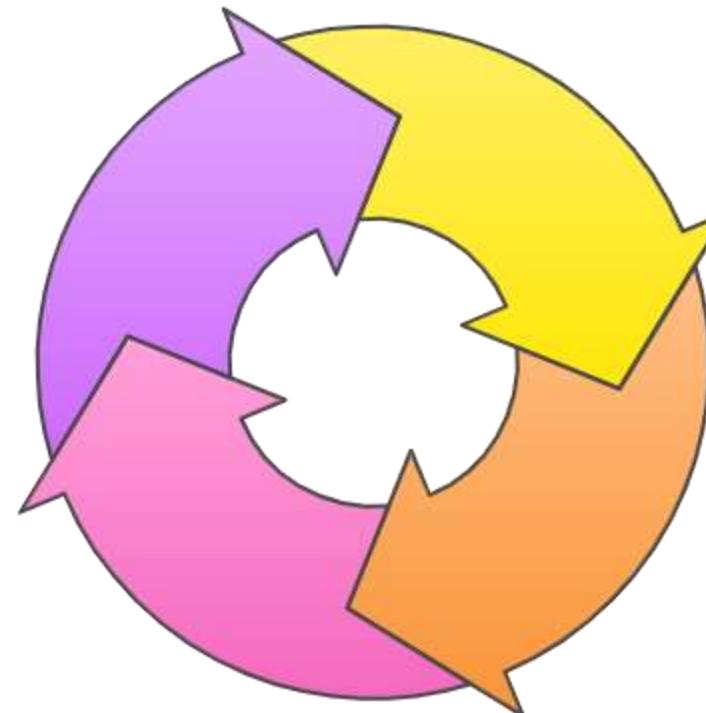
Blood Coagulation Cycle



Stable fibrin clot is formed.



Factors are activated sequentially.



Synthesis of Clotting Factors

Liver produces inactive clotting factors.

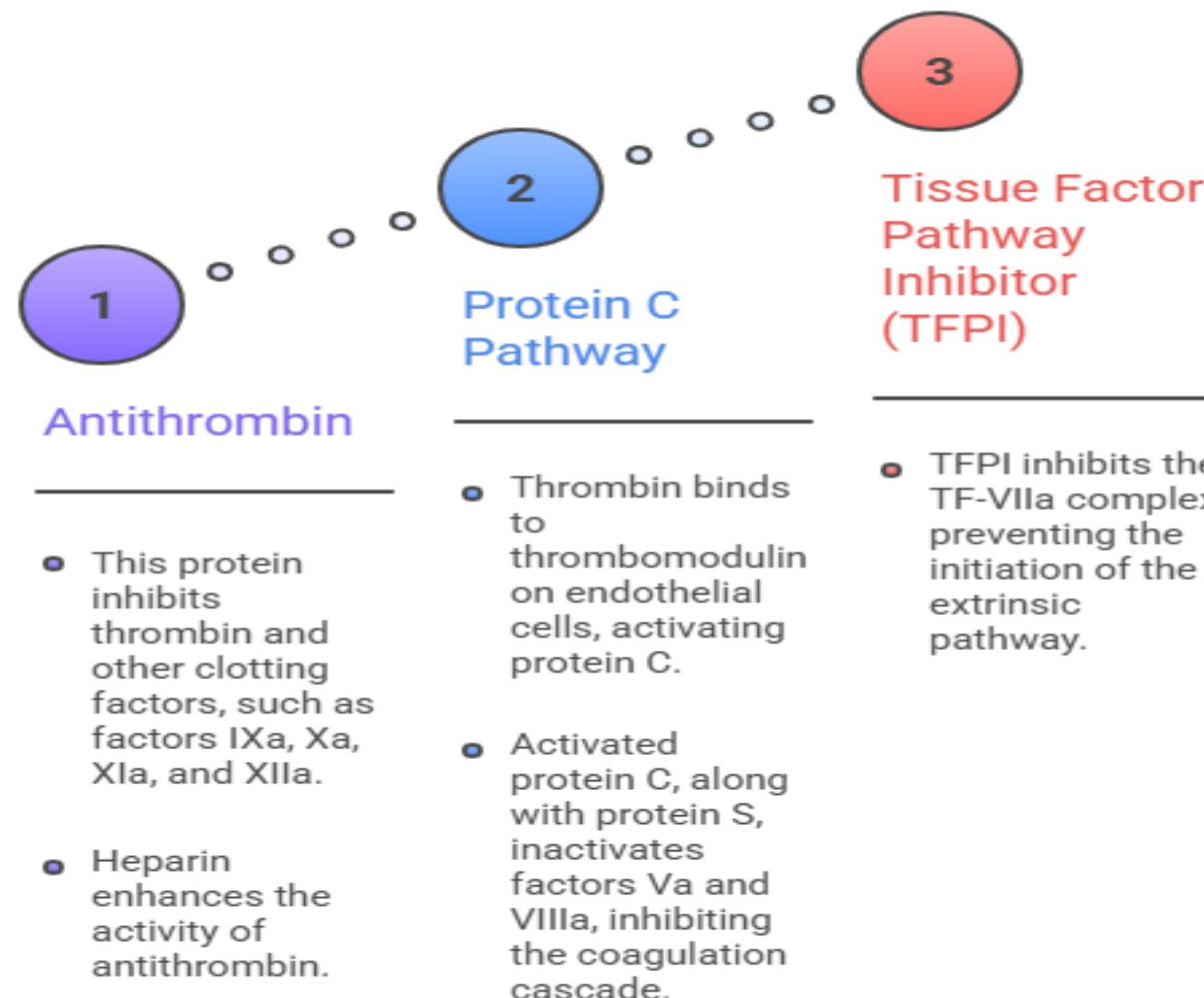


Circulation in Blood

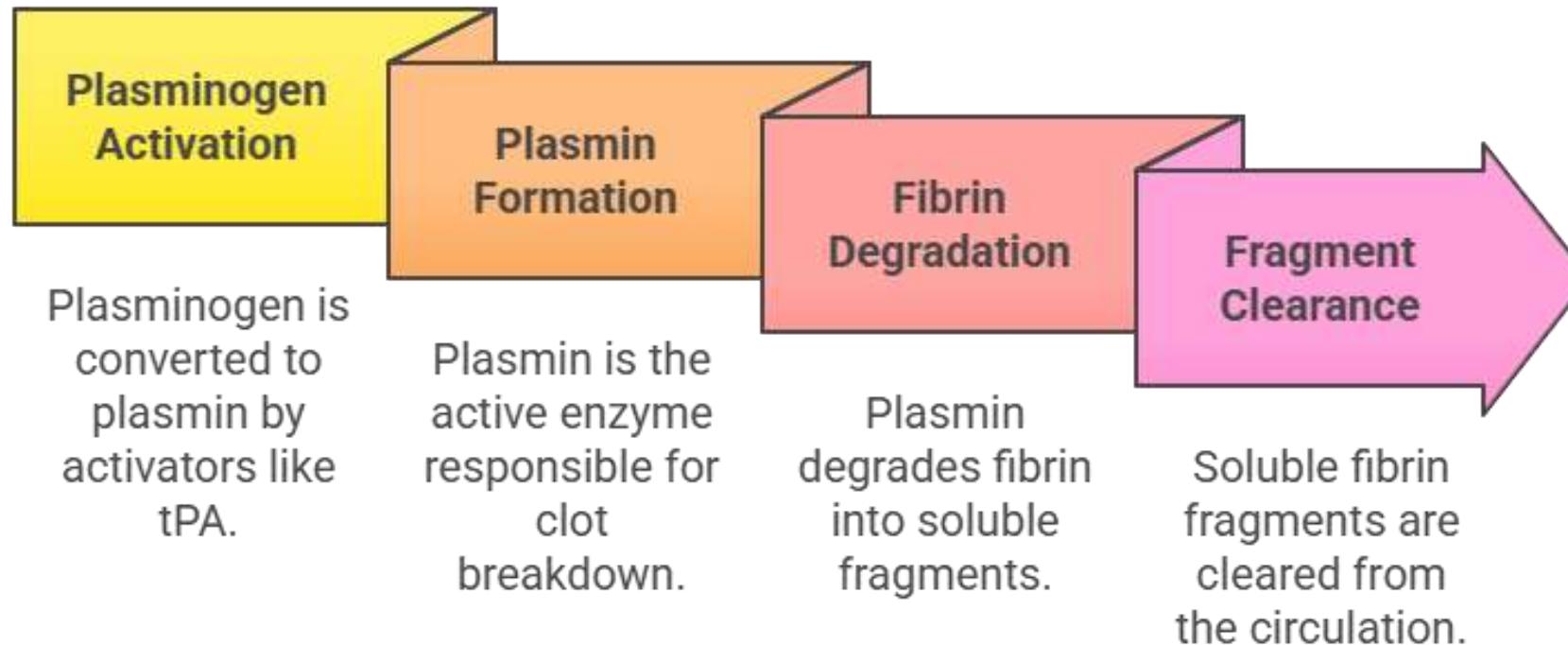
Inactive factors circulate in the bloodstream.

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Coagulation Inhibitors

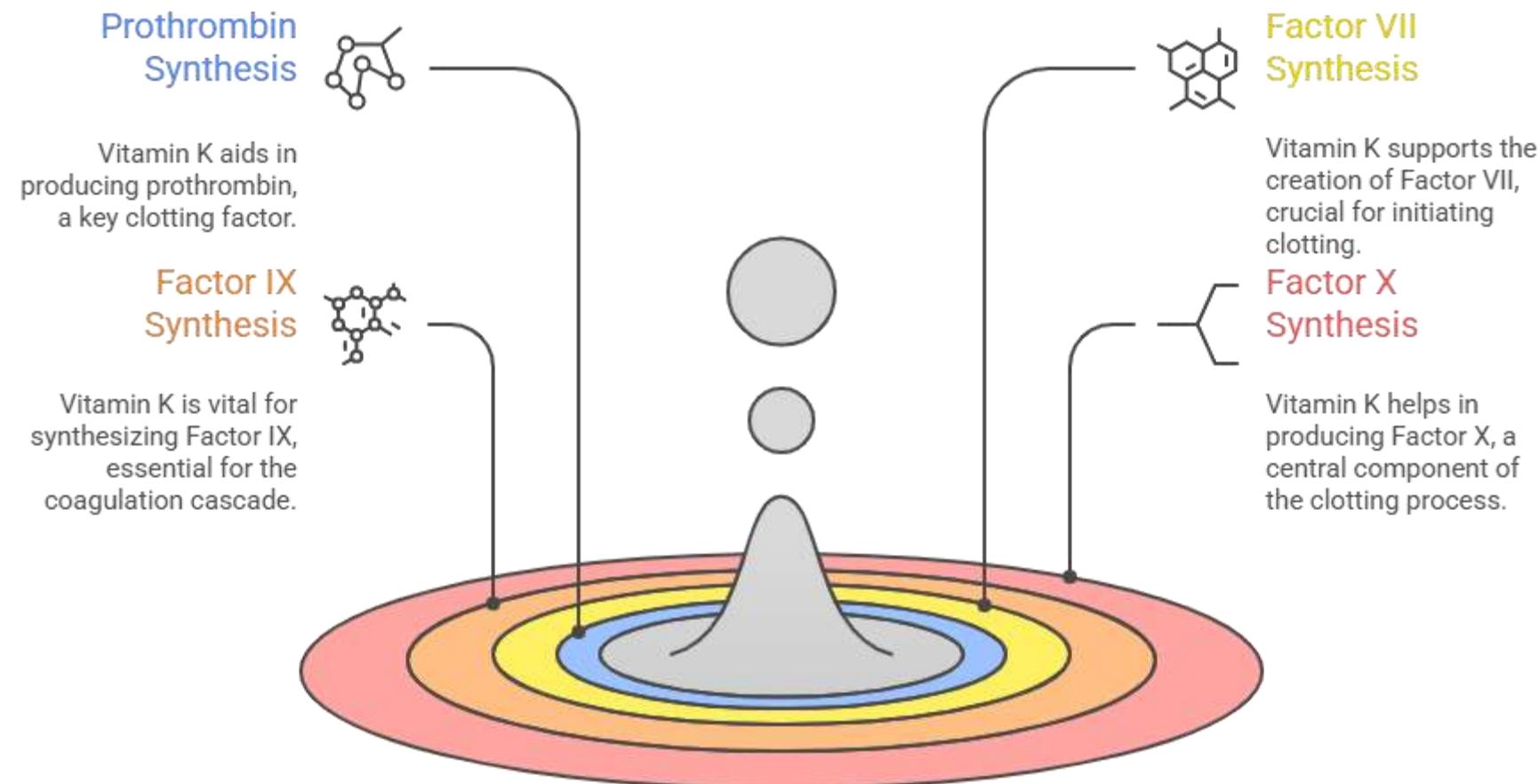


Fibrinolysis Process



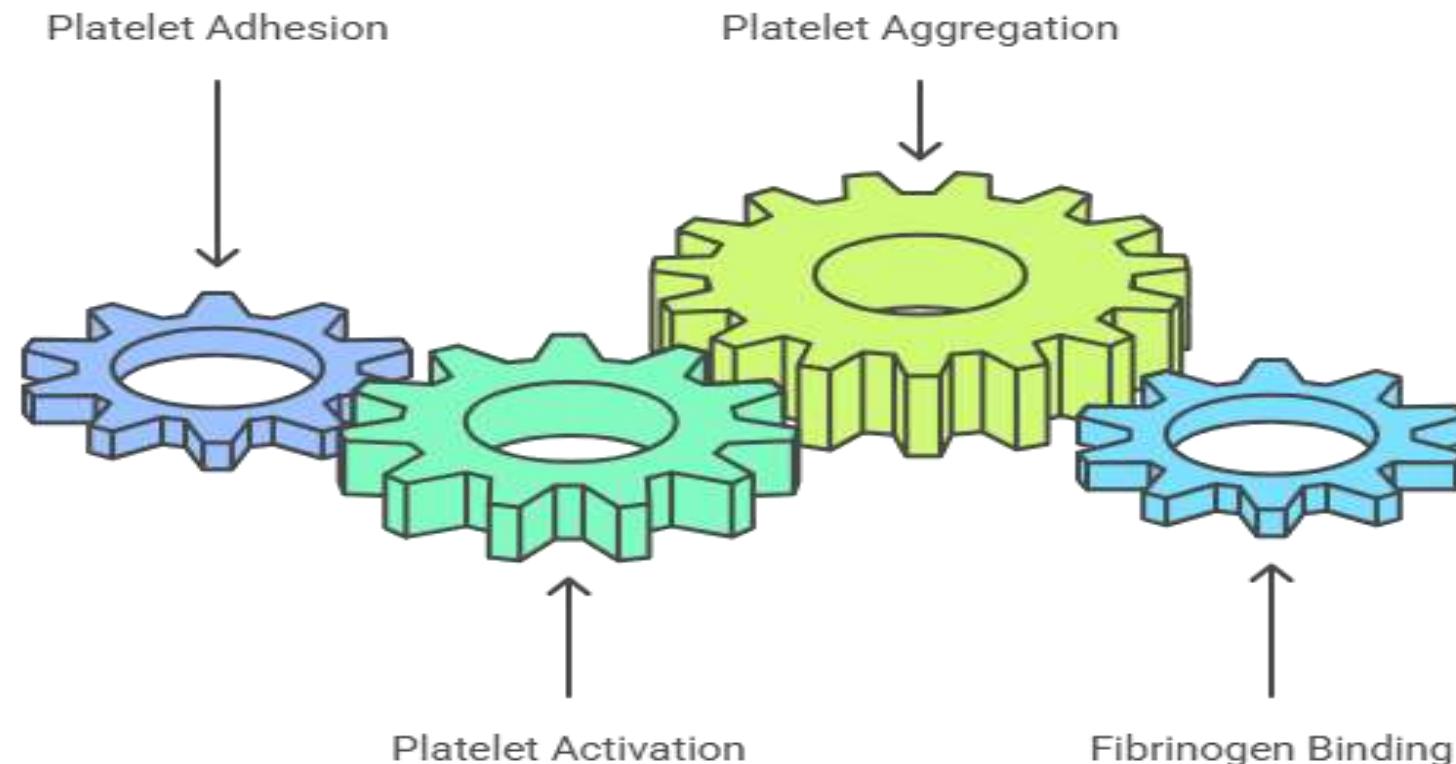
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Vitamin K's Role in Blood Clotting



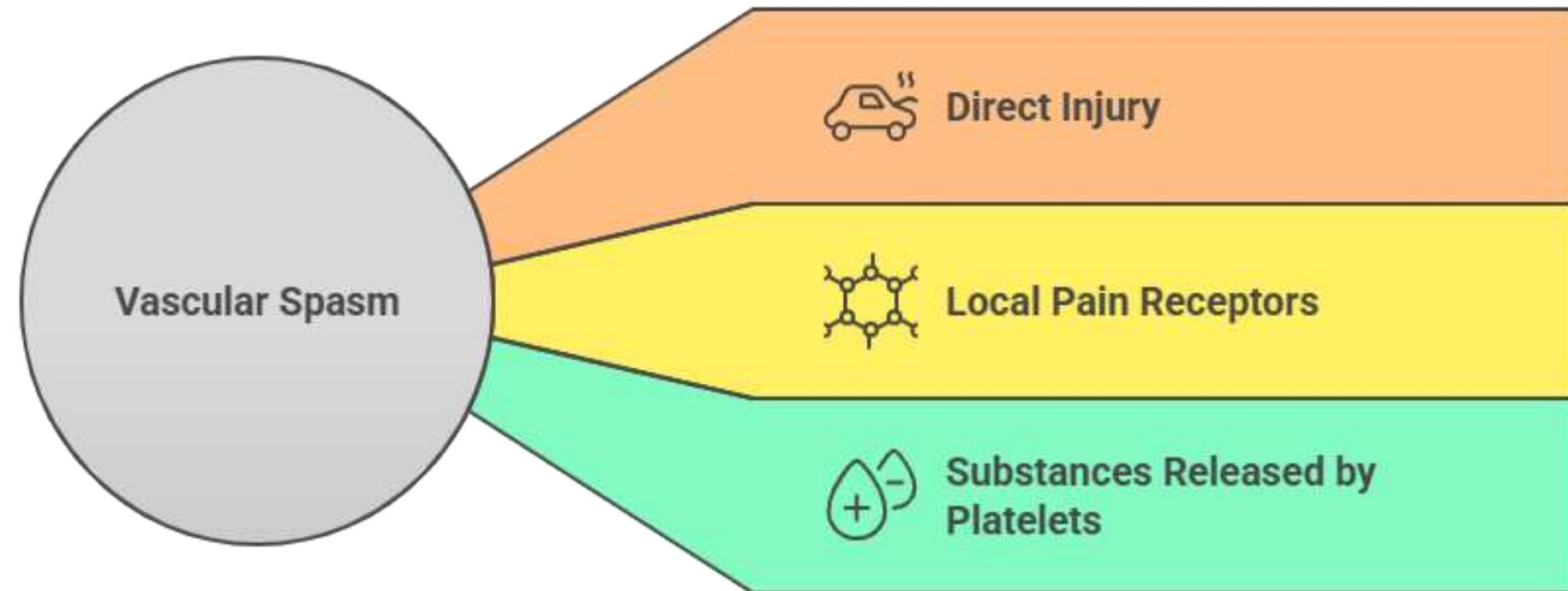
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Platelet Plug Formation Process



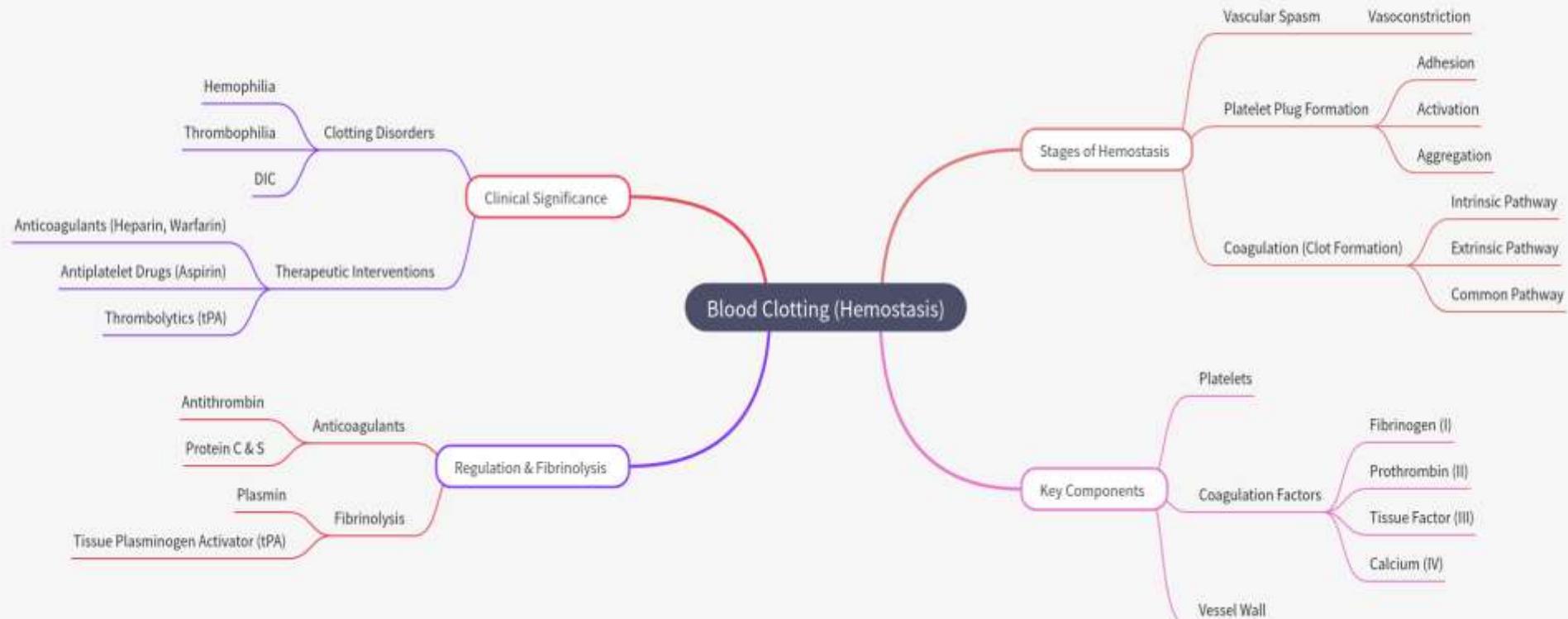
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Unveiling the Triggers of Vascular Spasm



Made with Napkin

SUMMARY

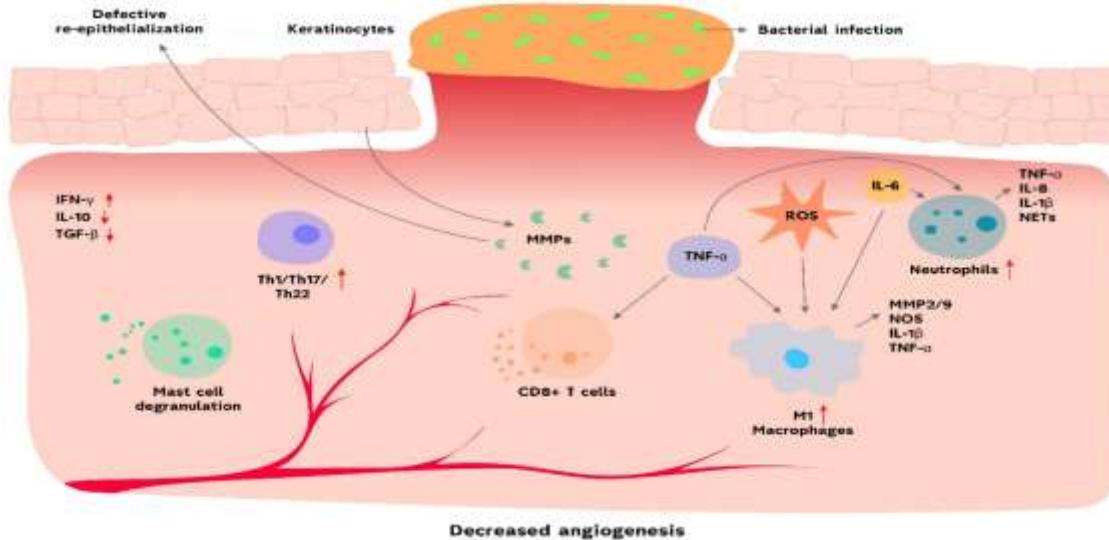


CLASS ASSESSMENTS



1. Tissue plasmin activator _____

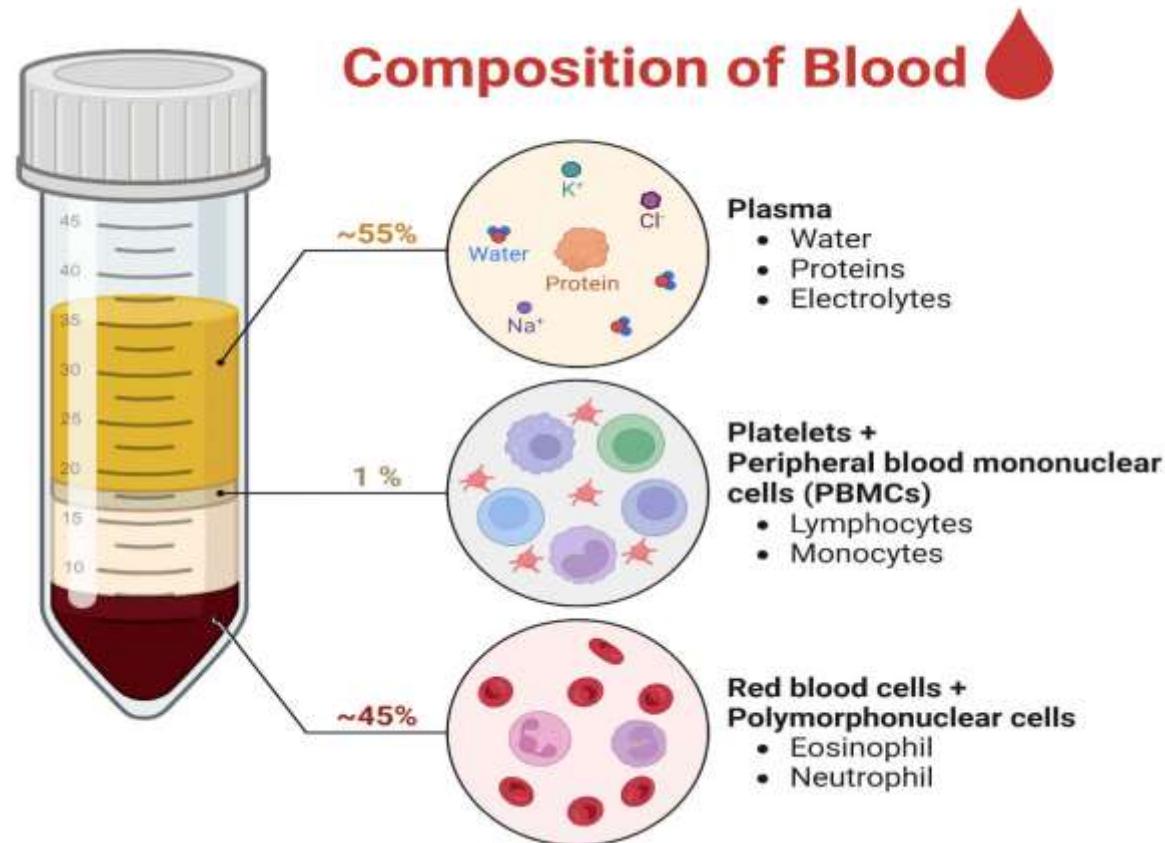
- a) Helps in wound healing
- b) Allergy response
- c) Immunity
- d) Dissolves clot in blood vessels





2. Which of the following will not coagulate when placed separately on four slides?

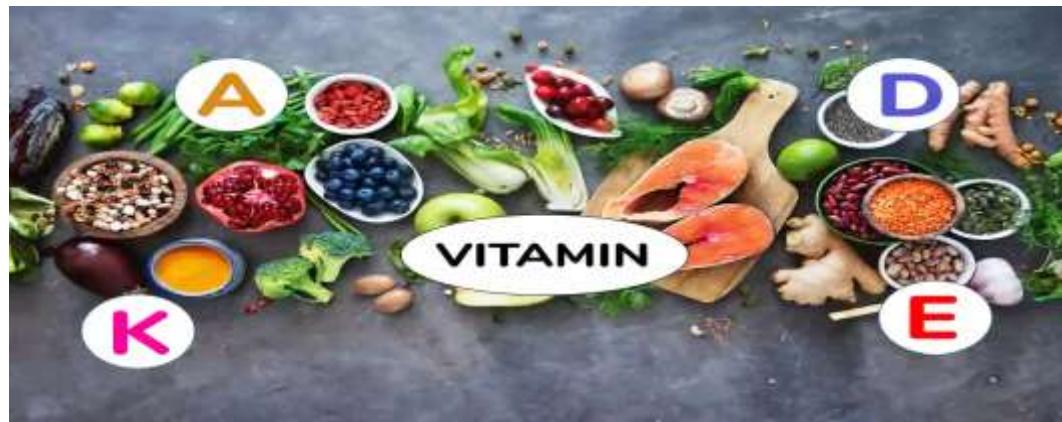
- a) Blood serum
- b) Blood plasma
- c) Blood from pulmonary vein
- d) Blood from lymphatic tissue





3. The vitamin essential for blood clotting is _____

- a) Vitamin A
- b) Vitamin B
- c) Vitamin C
- d) Vitamin K



REFERENCES

1. Hoffman M, Monroe DM. A cell-based model of hemostasis. *Thromb Haemost*. 2001;85(6):958–965.
2. Davie EW, Fujikawa K, Kisiel W. The coagulation cascade: initiation, maintenance, and regulation. *Biochemistry*. 1991;30(43):10363–10370.
3. Furie B, Furie BC. Mechanisms of thrombus formation. *N Engl J Med*. 2008;359(9):938–949. doi:10.1056/NEJMra0801082.
4. Hoffman R, Benz EJ, Silberstein LE, Heslop HE, Weitz JI, Anastasi J, editors. *Hematology: Basic Principles and Practice*. 7th ed. Philadelphia: Elsevier; 2018. p. 1821–1840.
5. Guyton AC, Hall JE. *Textbook of Medical Physiology*. 14th ed. Philadelphia: Elsevier; 2021. p. 459–472.
6. Mackman N. Triggers, targets and treatments for thrombosis. *Nature*. 2008;451(7181):914–918. doi:10.1038/nature06797.

Thank
you!