Haemostasis

Prof. N.M. Devanarayana

Department of Physiology

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Objectives

1. Explain the following processes
   a. Coagulation
   b. Anticoagulation
   c. Fibrinolysis

2. List the mechanisms that operate in the human body to prevent excessive blood loss and explain how these mechanisms are activated

3. Briefly describe the structure and production of platelets

4. Outline the role of platelets in relation to blood clotting

Haemostasis is

- the process of forming clots in the walls of damaged blood vessels and preventing blood loss
- while maintaining blood in a fluid state within the vascular system

Introduction to haemostasis

Helpful blood clotting

Website

https://www.youtube.com/watch?v=HFNWGCx_Eu4

- An efficient and rapid mechanism for stopping bleeding from sites of vascular injury is essential for survival

- Such mechanism has to be tightly controlled to prevent extensive clot formation and to breakdown such clots once damage is repaired

- Haemostatic system has delicate balance between the mechanisms of
  - Procoagulation (coagulation)
  - Anticoagulation and fibrinolysis

Components of haemostatic mechanism

1. Platelets
2. Coagulation factors
3. Coagulation inhibitors
4. Components of fibrinolysis
5. Blood vessels

Prevention of blood loss

Excessive blood loss is prevented by

1. Vascular spasm (vasoconstriction)

2. Formation of platelet plug

3. Formation of definitive blood clot

4. Growth of fibrous tissue in to clot

1. Vascular spasm

Mechanisms causing vascular spasm