# Haemostasis

**Prof. N.M. Devanarayana**

Department of Physiology

# 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

# 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

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