

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



TOPIC : FIBRINOLYTIC AND ANTI PLATELET DRUGS

COURSE:PHARMACOLOGY II

MIND MAP:

Antiplatelet Drugs

- Mechanism: Inhibit Platelet Activation/Aggregation
- Types: Aspirin, Clopidogrel, Ticagrelor, Dipyridamole, GP IIb/IIIa Inhibitors
- Uses: ACS, PCI, Stroke Prevention
- Adverse Effects: Bleeding

Fibrinolytic Drugs

- Mechanism: Plasminogen to Plasmin
- Types: Streptokinase, Urokinase, Alteplase, Reteplase, Tenecteplase
- Uses: AMI, Stroke, PE, DVT
- Adverse Effects: Bleeding



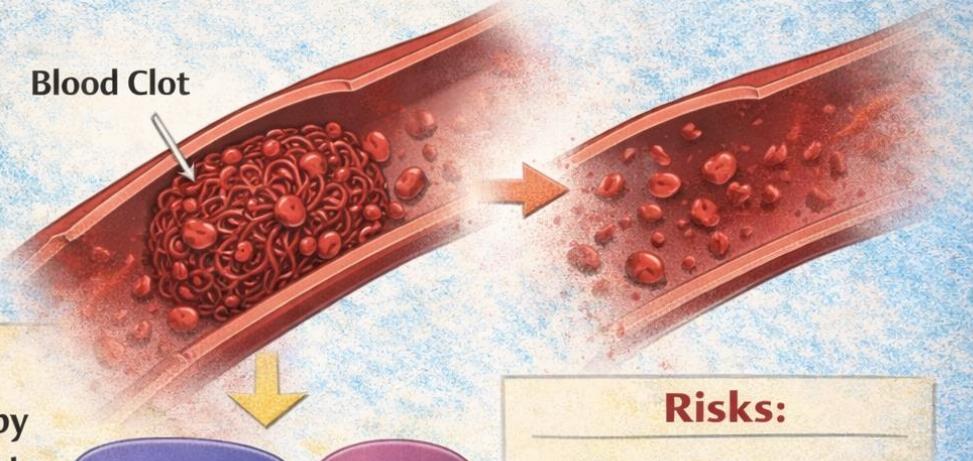
Fibrinolytic Drugs:

FIBRINOLYTIC DRUG OVERVIEW

Fibrinolytic Drugs:

- tPA (Alteplase)
- Reteplase
- Tenecteplase

Mechanism:
Breaks Down Blood Clots by
Converting Plasminogen Into
Plasmin



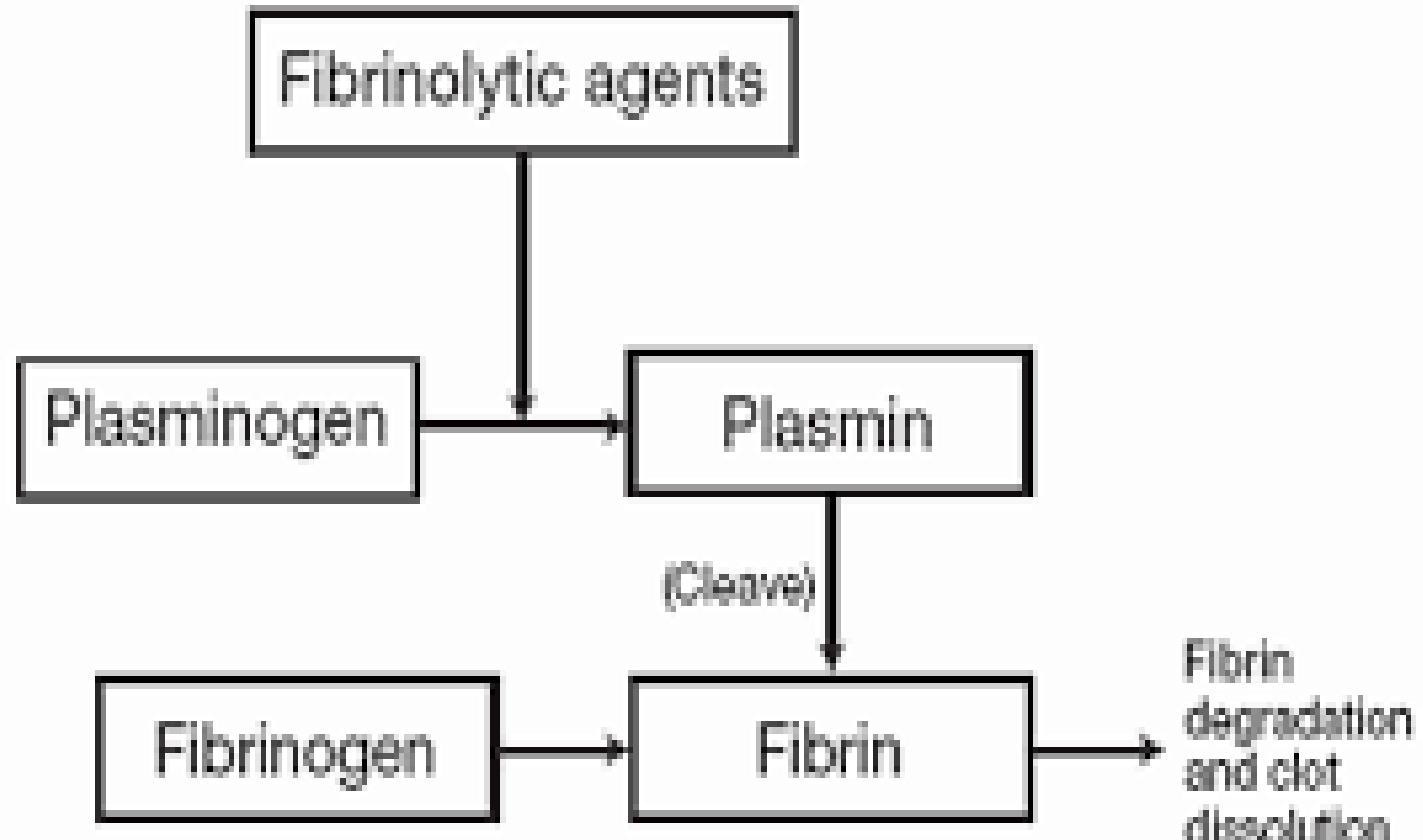
Risks:

- Bleeding
- Hemorrhagic Stroke

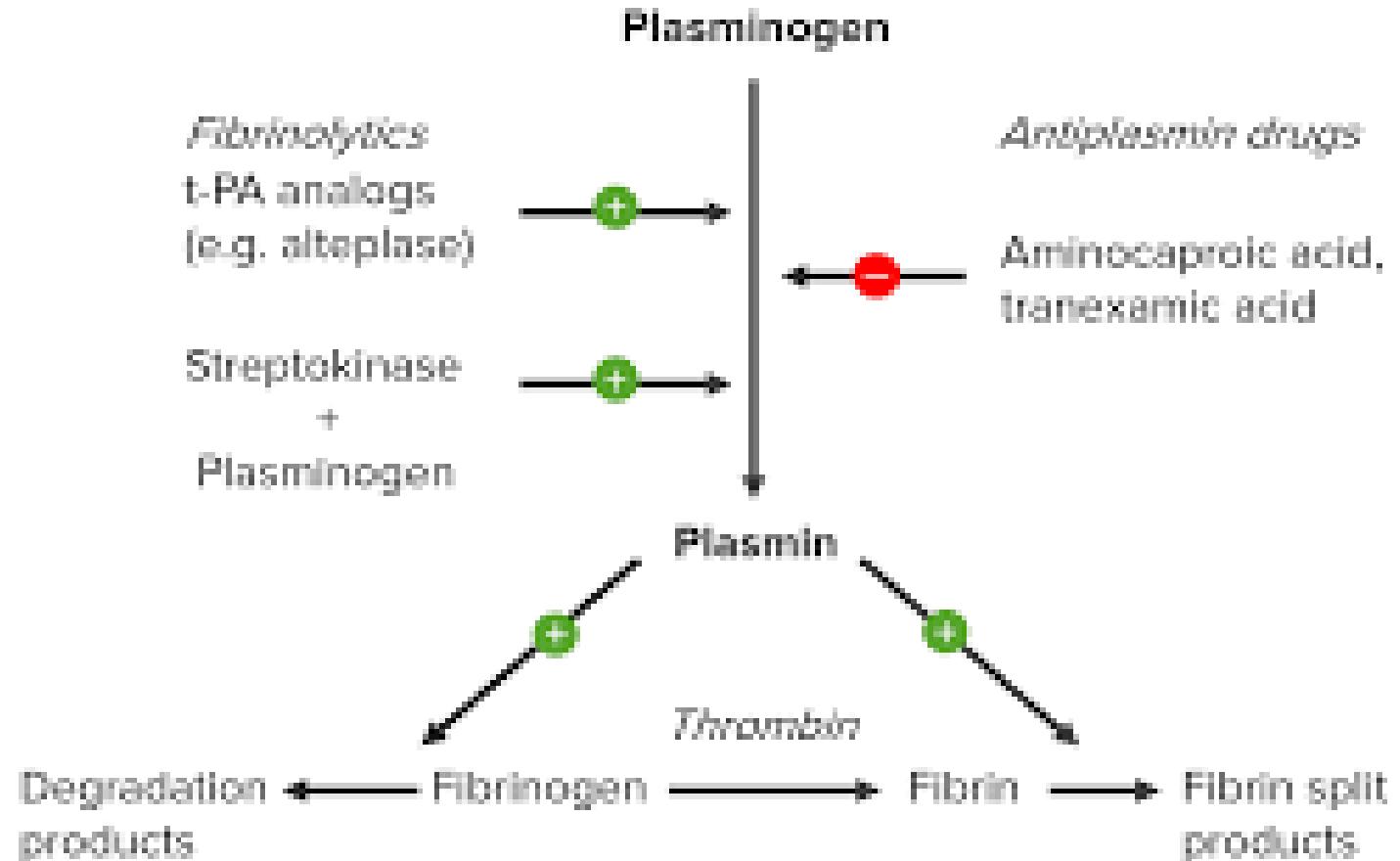
Indications:

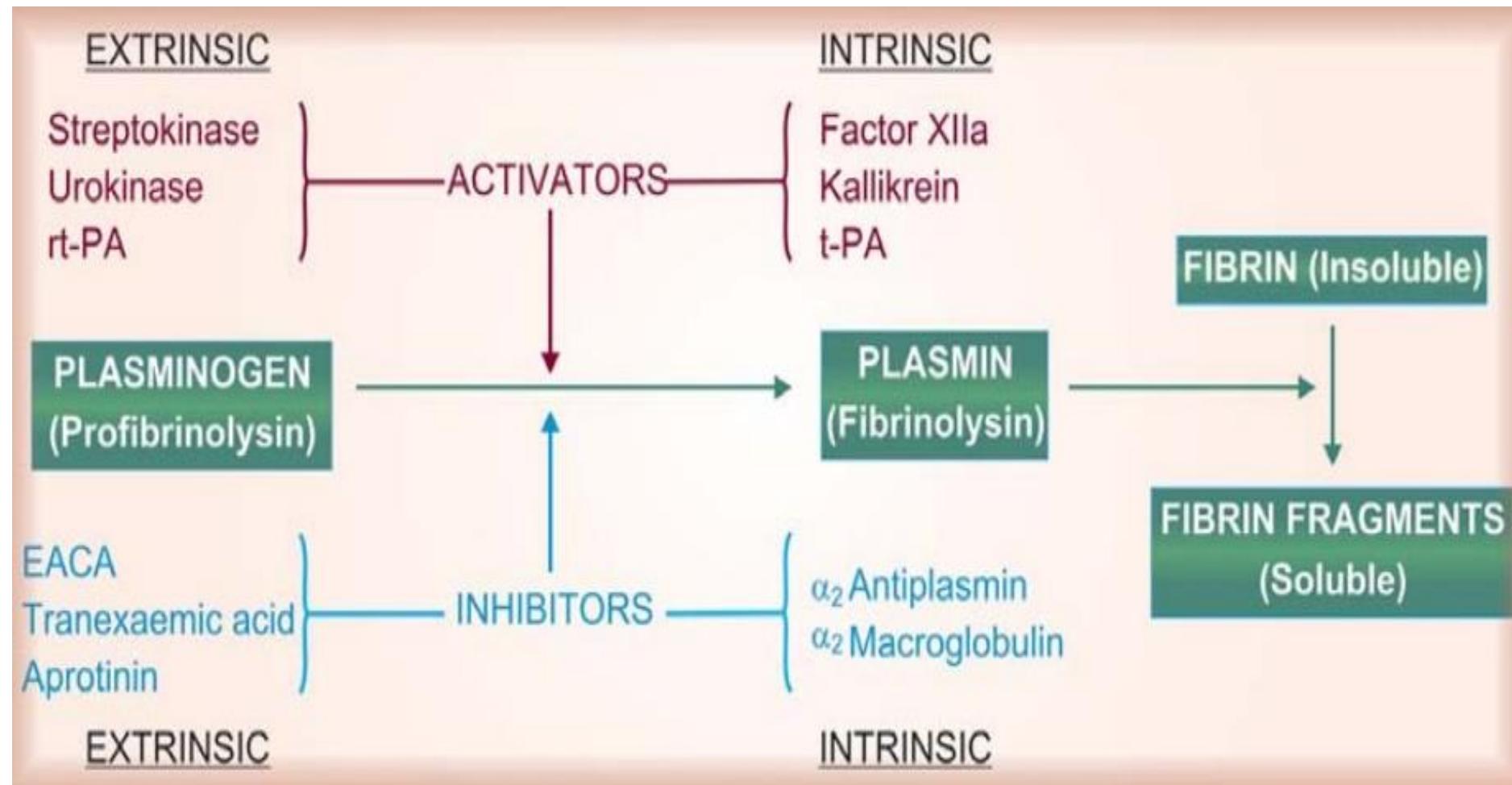
- Acute Heart Attack
- Ischemic Stroke
- Pulmonary Embolism





Mechanism of Action





CLINICAL APPLICATION OF FIBRINOLYTIC DRUGS

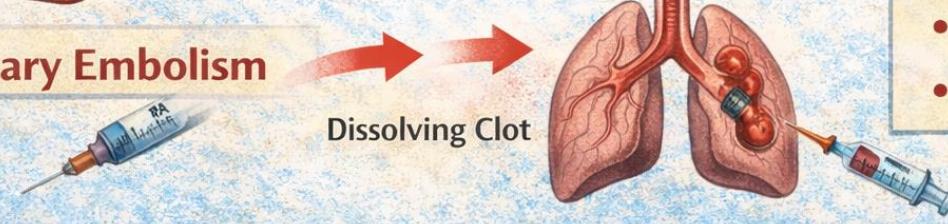
Ischemic Stroke



Acute Heart Attack



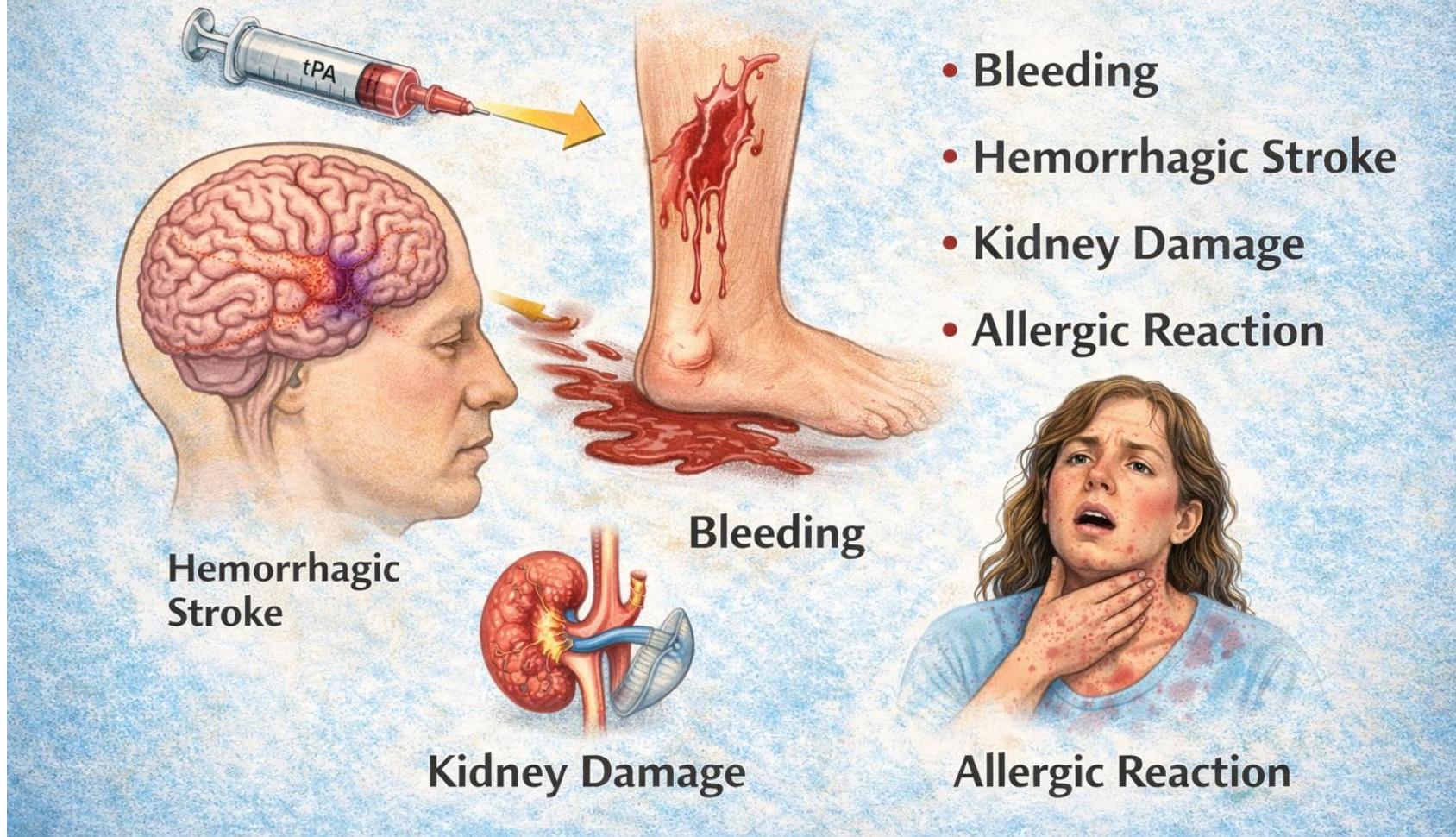
Pulmonary Embolism



Risks:

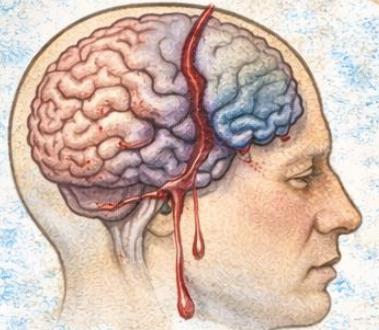
- Bleeding
- Hemorrhagic Stroke

ADVERSE EFFECTS OF FIBRINOLYTIC DRUGS



CONTRAINdications OF FIBRINOLYTIC DRUGS

Recent Bleeding or Hemorrhagic Stroke



- Active Internal Bleeding



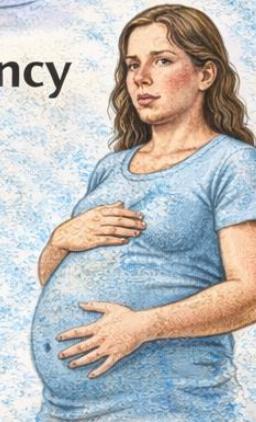
Severe
Uncontrolled Hypertension



- Recent Major Surgery / Trauma



Pregnancy



Hypertension

Antiplatelet Drugs:

ANTIPLATELET DRUG OVERVIEW

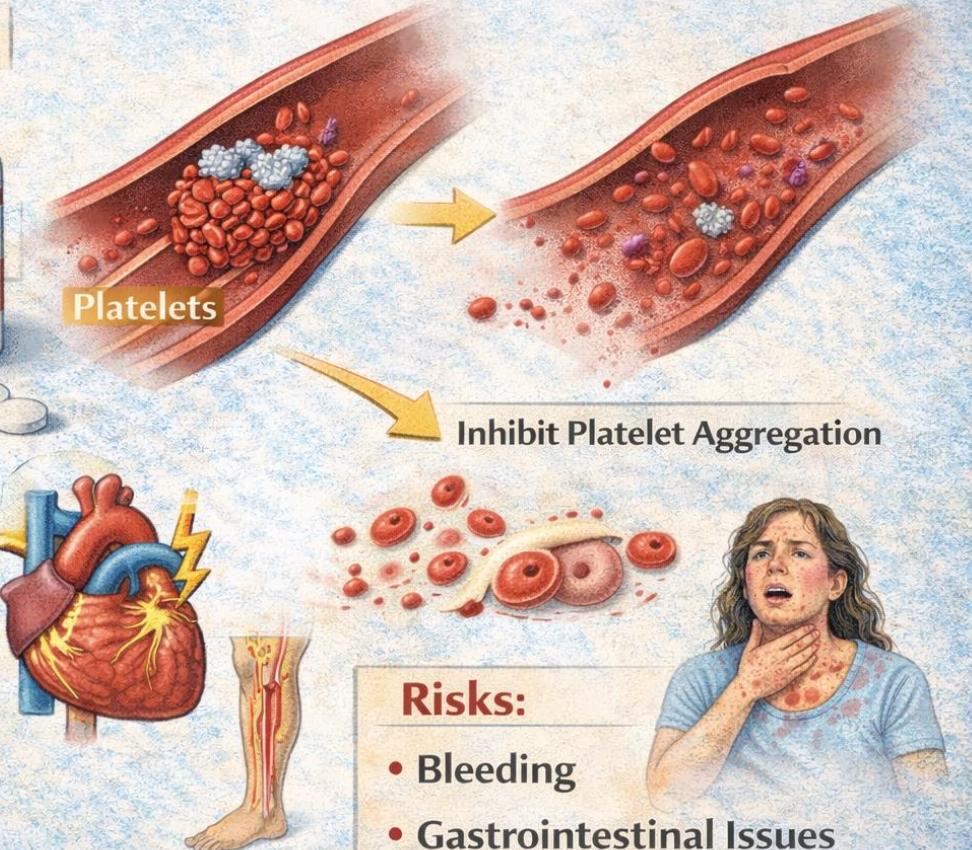
Antiplatelet Drugs:

- Aspirin
- Clopidogrel
- Ticagrelor



Indications:

- Prevent Heart Attack
- Prevent Stroke
- Peripheral Artery Disease



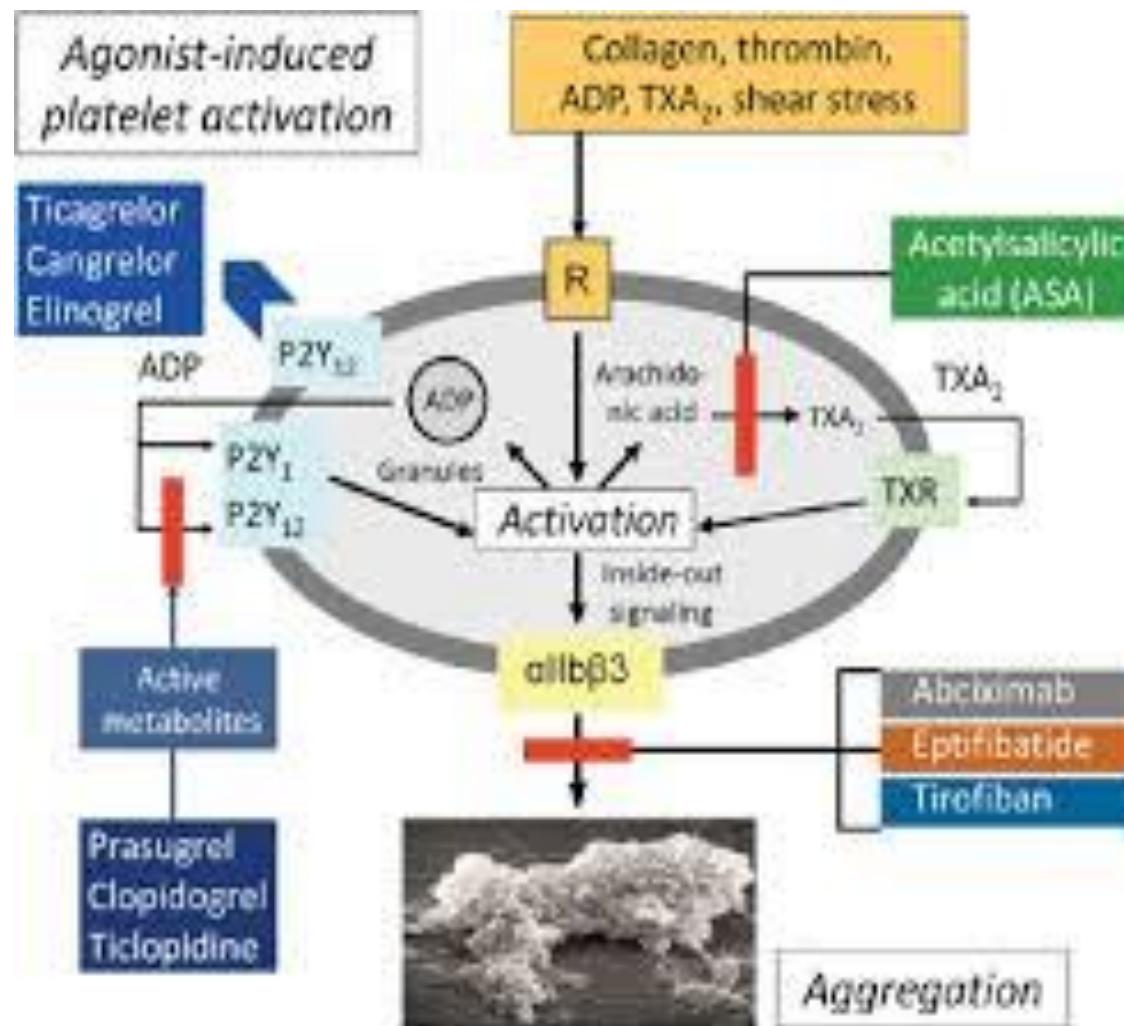
Platelets

Inhibit Platelet Aggregation

Risks:

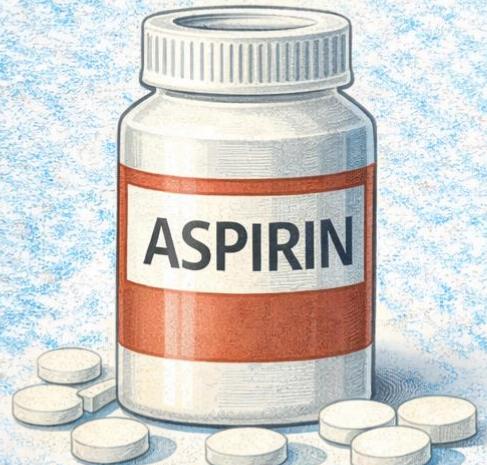
- Bleeding
- Gastrointestinal Issues

Mechanism of Action:



TYPES OF ANTIPLATELET DRUGS

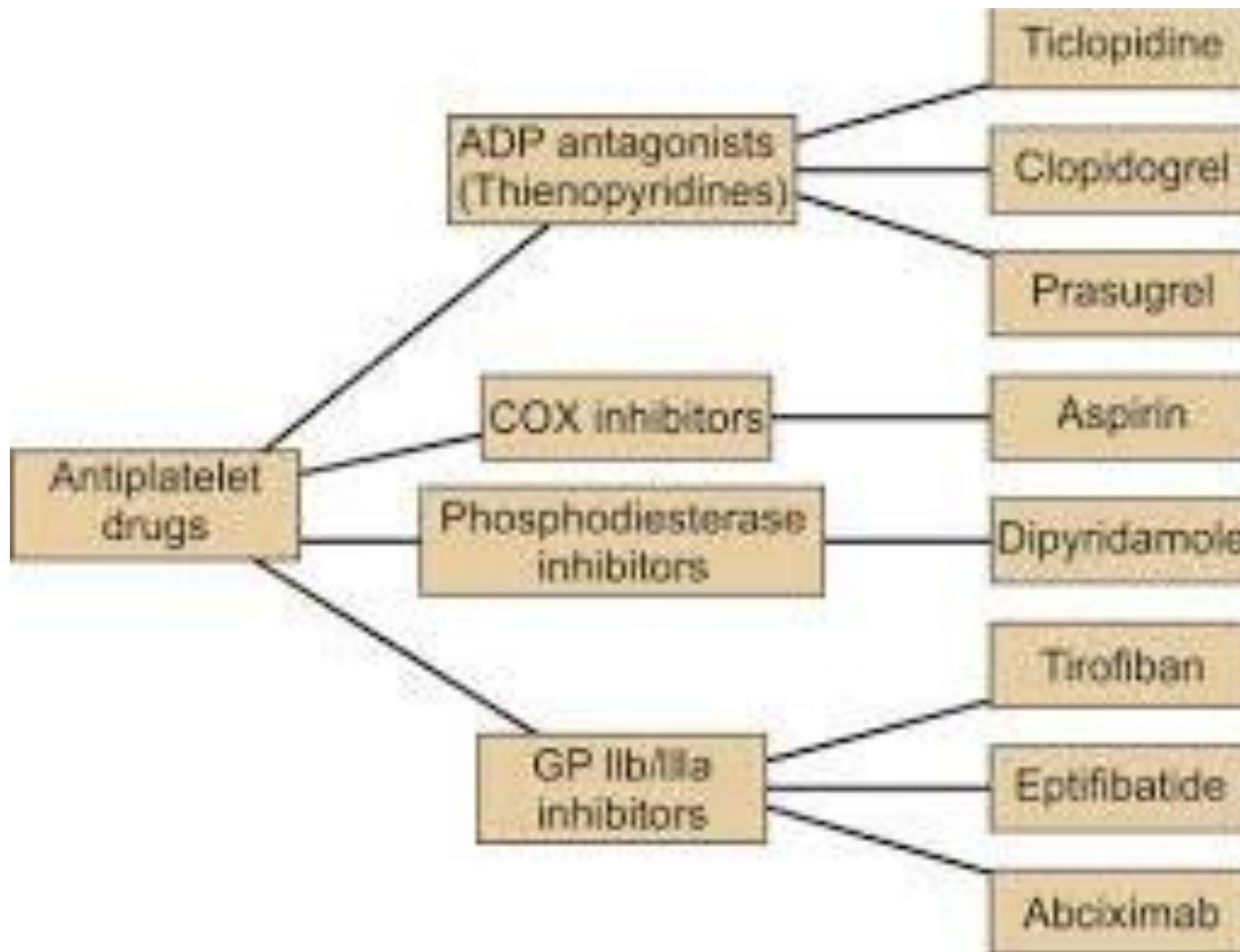
COX Inhibitors



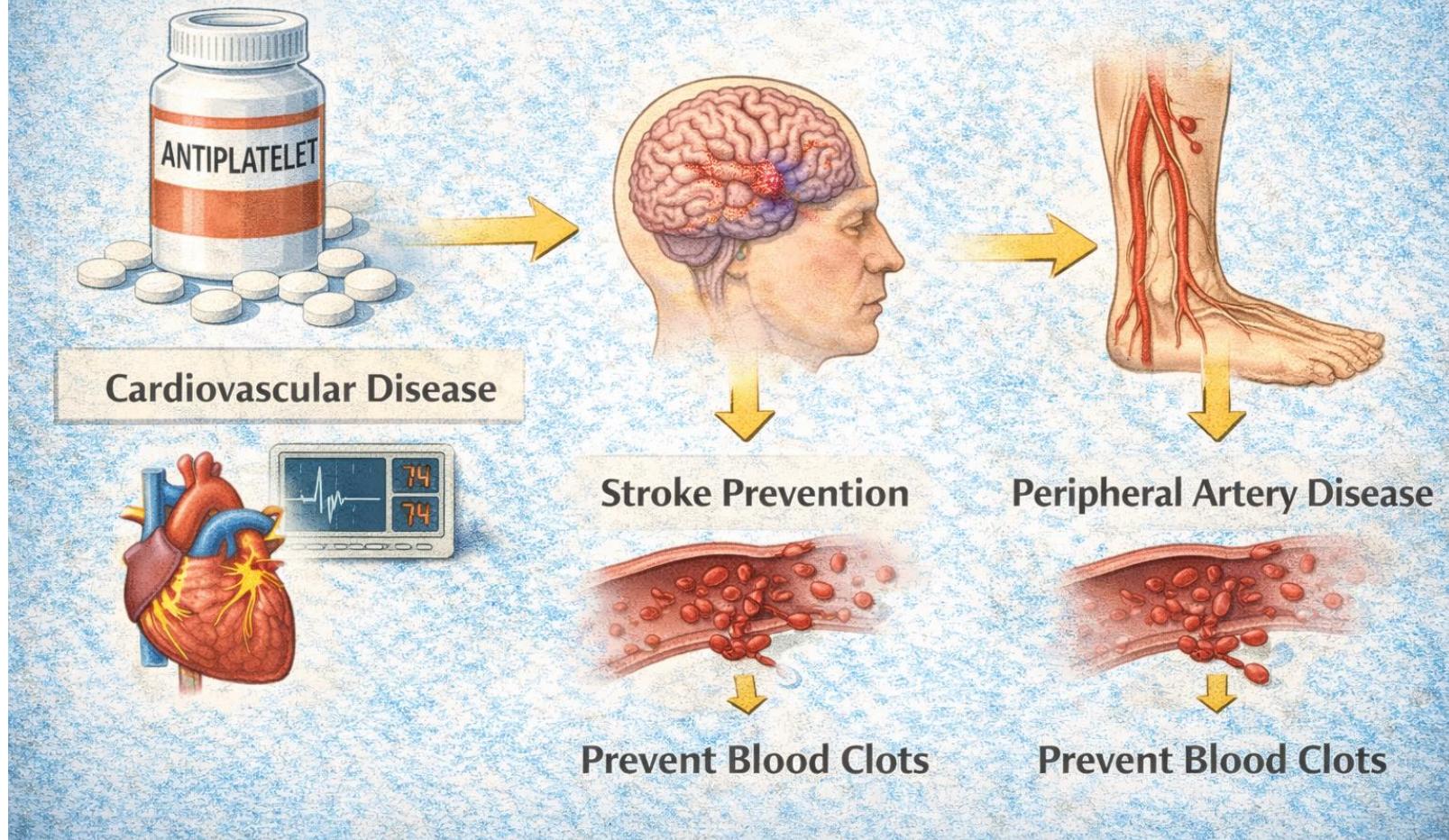
P2Y₁₂ Inhibitors

**PLAVIX
BRILINTA
EFFIENT**

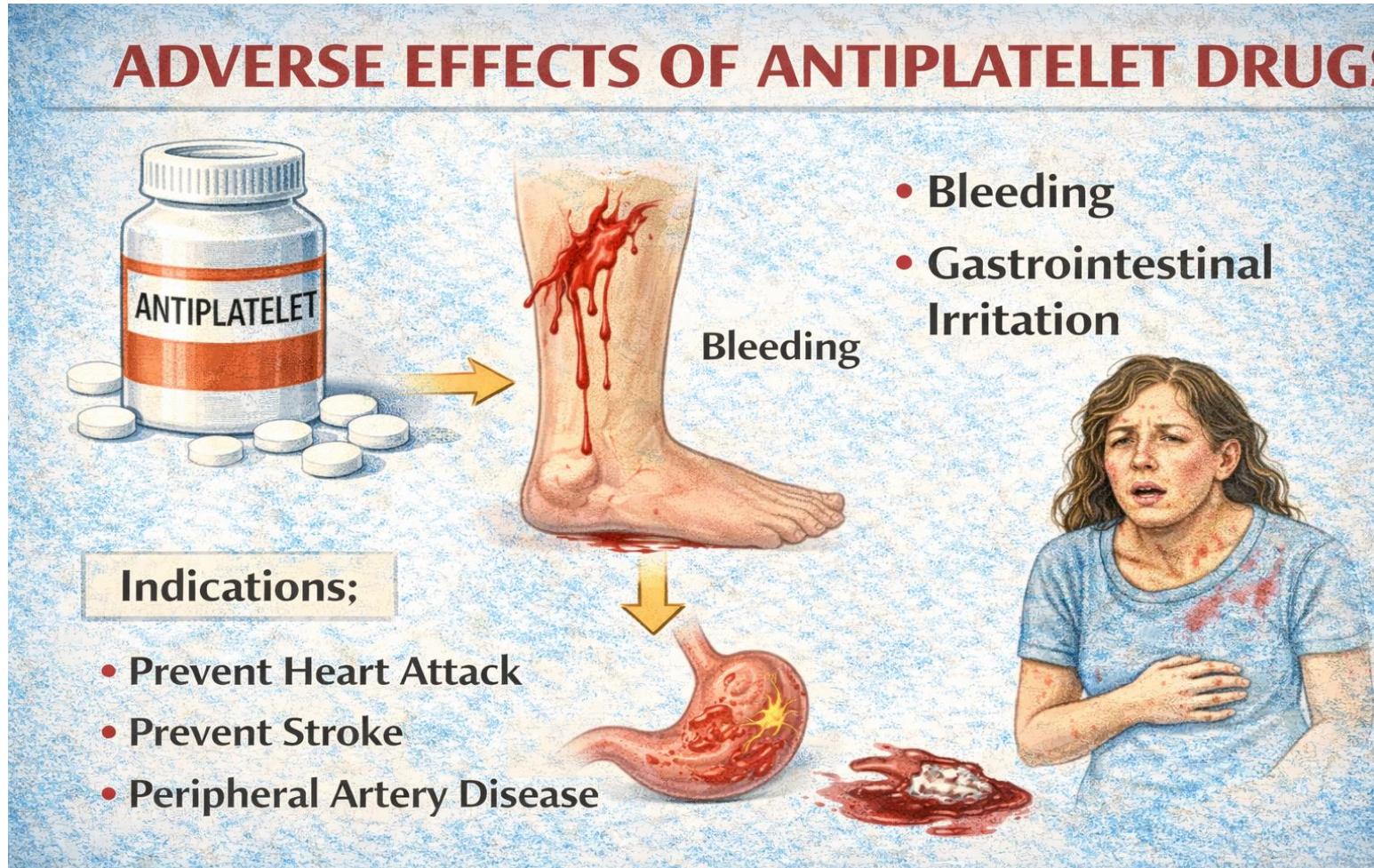




CLINICAL APPLICATION OF ANTIPLATELET DRUGS



ADVERSE EFFECTS OF ANTIPLATELET DRUGS



Multiple Choice Questions (MCQs):

1.Which of the following fibrinolytic drugs is a recombinant tissue plasminogen activator (t-PA)?

- a) Streptokinase
- b) Urokinase
- c) Alteplase
- d) Anistreplase

2.Which antiplatelet drug inhibits cyclooxygenase (COX)-1?

- a) Clopidogrel
- b) Aspirin
- c) Dipyridamole
- d) Abciximab

3.Which of the following is a common adverse effect of fibrinolytic drugs?

- a) Hypertension
- b) Bradycardia
- c) Bleeding
- d) Constipation

4.Which antiplatelet drug is a P2Y12 receptor antagonist?

- a) Aspirin
- b) Dipyridamole
- c) Clopidogrel
- d) Abciximab

5. Glycoprotein IIb/IIIa inhibitors prevent platelet aggregation by blocking the binding of which of the following?

- a) Thromboxane A2
- b) ADP
- c) Fibrinogen
- d) Plasminogen

References:

1. Rang & Dale's Pharmacology. 9th ed. Churchill Livingstone; 2021.
2. Katzung BG, Vanderah TW. Basic & Clinical Pharmacology. 15th ed. McGraw-Hill Education; 2021.
3. Goodman & Gilman's The Pharmacological Basis of Therapeutics. 14th ed. McGraw-Hill Education; 2018.
4. Anderson JL, Morrow DA. Antiplatelet and Anticoagulant Therapy. *Cardiology Clinics*. 2008;26(2):173-194.
5. Collet JP, Thrombolysis in Myocardial Infarction (TIMI) Study Group. Reperfusion therapy for acute myocardial infarction. *European Heart Journal*. 2004;25(23):2145-2154

THANK YOU !