

A large, white, serif 'RX' logo is centered within a dark gray square box in the top right corner of the page.

Drug Name: Acetylsalicylic Acid

Trade Name: Aspirin, ASA

Class:

- NSAID (Analgesic, anti-inflammatory)
- Anti-platelet aggregation agent
- Antipyretic

Mechanism of Action:

- Aspirin inhibits the formation of COX, which is responsible for the conversion of arachadonic acid to prostaglandin (the first step in the arachadonic acid cascade).
- Blocks the formation of Thromboxane A₂ & prostacyclin. Thromboxane A₂ causes platelet aggregation and vasoconstriction. Prostacyclin inhibits platelet aggregation and vasodilation. Clinically the blockage of Thromboxane A₂ predominates.
- By suppressing the formation of prostaglandins near the hypothalamus, aspirin promotes a return to a normal body temperature set point.
- The effects of pain relief and anti-inflammation are also related to the blockage of the arachadonic acid cascade.

Indications:

- Chest pain suggestive of AMI

Contraindications:

- Active Bleeding Disorders
- Pregnancy (D)
- Known hypersensitivity

Relative Contraindications:

Asthma (Aspirin triad—hypersensitivity, asthma, nasal polyps)

Precautions:

- Use with caution in patients who report allergies to any NSAID.

Dosage:

Adults:

- Four 81 mg tablets PO, chewed & swallowed.

Pediatrics:

- Not administered to children with an acute viral illness including varicella & influenza (Reye's Syndrome)

Onset:

- 15-30 minutes

Duration:

- 4-6 hours

Side Effects:

- GI Irritation (i.e. Heartburn)
- GI Bleeding
- N/V
- Hypersensitivity Reaction—bronchospasm, urticaria.
- Prolonged bleeding time

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Interactions:

- When administered together, ASA & other anti-inflammatories may cause increased side effects, and increased blood levels of both drugs.
- Administration of ASA with antacids may reduce blood levels by reducing GI absorption.

PEARLS:

- ***ASA should be administered to ALL ACS patients in the acute setting even if they are regularly taking ASA. Unless ASA has been taken by the patient immediately prior to or after the onset of symptoms.***
- ***The exception is if patients are currently taking anticoagulants, ASA should be withheld.***
- ***Toxicology:***
 - ***150-300 mg/kg—mild toxicity***
 - ***300-500 mg/kg—serious toxicity***
 - ***> 500 mg/kg—lethal toxicity***