



Aspirin

## Aspirin

**Body system:**

Pain

**Treatment type:**

Medications

**Related Topics:**

See Deep Venous Thrombosis Prophylaxis for Knee and Leg Conditions; Acetaminophen; Ibuprofen; Naproxen.

### **R** Recommended (generally)

Recommended as a first-line treatment option.

### ODG Criteria

Aspirin may be indicated for 1 or more of the following (1) :

- Carotid endarterectomy, preoperative and postoperative treatment (2)
- Carotid stenosis (2)
- Coronary artery disease (3)
- Joint pain due to osteoarthritis (4)
- Myocardial infarction prophylaxis and 1 or more of the following (3) :
  - Primary prevention in patient with low to moderate risk for coronary event, and patient not receiving warfarin
  - Secondary prevention in patient with stable coronary disease
- Painful conditions (eg, low back pain, musculoskeletal pain, toothache, dysmenorrhea) for up to 10 days
- Pericarditis for up to 8 weeks
- Peripheral arterial disease (5) (6)
- Rheumatoid arthritis

- Stroke and 1 or more of the following (7) :
  - Acute ischemic
  - History of ischemic stroke or transient ischemic attack and need for secondary stroke prophylaxis
- Thrombosis prevention for postoperative total hip or knee arthroplasty for up to 35 days (8)

## Evidence Summary

Aspirin is an analgesic and antiplatelet agent of the nonsteroidal anti-inflammatory drug and salicylate class. It irreversibly blocks cyclooxygenase 1 (COX-1) enzyme within cells. This stops production of prostaglandins that contribute to pain, swelling, and fever. It also inhibits platelet aggregation for the lifespan of the platelet (10-14 days), prolonging bleeding time. (9) (10) (11) **(EG 2)**

A systematic review of 36 systematic reviews found that the success rate (defined as the percentage of individuals achieving at least 50% maximum pain relief) with aspirin 1000 mg was 31%. (12) **(EG 1)** A specialty society guideline recommends the use of aspirin as one option for postoperative deep vein thrombosis prophylaxis for total hip arthroplasty or total knee arthroplasty. (8) **(EG 2)** A specialty society guideline suggests using anticoagulation instead of aspirin for secondary prevention of deep vein thrombosis. (13) **(EG 2)**

Aspirin can trigger asthma symptoms in aspirin-sensitive individuals. Chronic aspirin use can also cause gastrointestinal ulceration. Aspirin may also be associated with renal or hepatic toxicity. (10) (11) (14) **(EG 2)**

### Citations

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