

# Acetaminophen

## Classification

Analgesic and antipyretic

## Indications

- PCP and higher: treatment of mild to moderate pain
- ACP: reduction of fever

## Contraindications

- Severe hepatic impairment or liver disease
- Acetaminophen-induced liver disease
- Hypersensitivity to acetaminophen, or any component of the formulation

## Adult dosages

- PCP (analgesia) and ■ ACP (analgesia and antipyresis):
  - **500 - 1,000 mg PO**
  - May repeat this dose once after 4 hours
  - 24 hour maximum: 4,000 mg
    - In patients with liver disease, the 24 hour maximum should be lowered to 1,000-2,000 mg
  - May be used concurrently with ibuprofen for analgesia
- ACP only: follow analgesia dosing for antipyresis

## Pediatric Considerations And Dosing

- PCP (analgesia) and ■ ACP (analgesia and antipyresis):
  - [Follow weight-based dosing.](#)
  - < 30 kg: **15 mg/kg PO** (use liquid preparation)
  - 30-50 kg: **500 mg PO** (may use liquid preparation or tablets, depending on patient ability)
  - > 50 kg: **500-1,000 mg PO**
    - May repeat this dose once after 4 hours
    - 24 hour maximum: 75 mg/kg or 1,000 mg
      - Do not exceed 5 doses in 24 hours in patients under the age of 12
- ■ ACP only: follow analgesia dosing for antipyresis

## Mechanism Of Action

Acetaminophen inhibits prostaglandin synthetase in the central nervous system, reducing pain and fever.

## Pharmacokinetics

Completely and rapidly absorbed from the gastrointestinal tract.

- Onset: 30 minutes to 1 hour
- Peak: 1-3 hours
- Duration: 3-8 hours

Metabolism takes place in the liver, and acetaminophen is excreted in the urine.

## **Adverse Effects**

Adverse reactions are uncommon with short-term use of acetaminophen. Rash and hives are rarely reported, but can occur. Constipation can develop with longer term use.

## **Overdose**

Toxicity may occur after a single dose of more than 7,500 mg (adults) or 150 mg/kg (children).

## **Warning And Precautions**

Acetaminophen is the leading cause of serious liver injury in Canada. Patients with pre-existing liver disease (regardless of underlying cause), chronic users of acetaminophen, and children are most at risk. Acetaminophen is a component of many over-the-counter medications, and patients may inadvertently be consuming much higher doses than expected. Paramedics must ensure that a complete medication history is obtained prior to the administration of acetaminophen, including over-the-counter preparations.

## **Drug Interactions**

Alcohol may potentiate acetaminophen's hepatotoxic effects.

