

acetaminophen

Abenol*, Acephen, Aceta, Acetaminophen, Actimol, Aminofen, Apacet, Apo-Acetaminophen*, Arthritis Foundation Pain Reliever, Aspirin Free, Aspirin Free Anacin, Aspirin Free Pain Relief, Atasol*, Banesin, Children's Pain Reliever, Children's Tylenol Soft Chews, Dapa, Dolono, DatriL, Dynafed*, Dynafed E.X., Exdol*, Feverall, Genapap, Genebs, Halenol, Halenol Children's, Infant's Pain Reliever, Liquiprin, Mapap, Maranax, Neopap, Oraphen-PD, Panadol, Redutemp, Ridenol, Robigesic*, Silapap, St. Joseph Aspirin-Free Drops, Tapanol, Tempra, Tylenol, Tylenol Arthritis, Uni-Ace

Pharmacologic class: Synthetic non-opioid *p*-aminophenol derivative

Therapeutic class: Analgesic, antipyretic

Pregnancy risk category B

Action

Unclear; pain relief may occur through blocking of pain impulses (perhaps via inhibition of prostaglandin synthesis in CNS). Fever reduction may occur through action on heat-regulating center in hypothalamus.

Availability

Caplets, capsules: 160 mg, 500 mg, 650 mg (extended-release)

Drops: 100 mg/ml

Elixir: 80 mg/2.5 ml, 80 mg/5 ml, 120 mg/5 ml, 160 mg/5 ml

Gelcaps: 500 mg

Liquid: 160 mg/5 ml, 500 mg/15 ml

Solution: 80 mg/1.66 ml, 100 mg/1 ml, 120 mg/2.5 ml, 160 mg/5 ml, 167 mg/5 ml

Suppositories: 80 mg, 120 mg, 125 mg, 300 mg, 325 mg, 650 mg

Suspension: 32 mg/ml, 160 mg/5 ml

Syrup: 160 mg/5 ml

Tablets (chewable): 80 mg, 160 mg

Tablets (extended-release): 160 mg, 325 mg, 500 mg, 650 mg

Tablets (film-coated): 160 mg, 325 mg, 500 mg

Indications and dosages

➤ Mild to moderate pain caused by headache, muscle ache, backache, minor arthritis, common cold, toothache, or menstrual cramps; fever

Adults: 325 to 650 mg P.O. q 4 to 6 hours, or 1,000 mg three or four times daily. Or two extended-release caplets or tablets P.O. q 8 hours, to a maximum dosage of 4,000 mg/day. Or 650 mg P.R. q 4 to 6 hours, to a maximum dosage of 4,000 mg/day.

Oral use

Age	Usual dosage	Maximum dosage
11-12 years	480 mg q 4 hr	5 doses in 24 hr
9-10 years	400 mg q 4 hr	5 doses in 24 hr
6-8 years	320 mg q 4 hr	5 doses in 24 hr
4-5 years	240 mg q 4 hr	5 doses in 24 hr
2-3 years	160 mg q 4 hr	5 doses in 24 hr
1 year	120 mg q 4 hr	5 doses in 24 hr
4-11 months	80 mg q 4 hr	5 doses in 24 hr
0-3 months	40 mg q 4 hr	5 doses in 24 hr

Rectal use

Age	Usual dosage	Maximum dosage
6-12 years	325 mg q 4 to 6 hr	2,600 mg/day
3-6 years	120-125 mg q 4-6 hr	720 mg/day
1-3 years	80 mg q 4 hr	
3-11 months	80 mg q 6 hr	

Dosage adjustment

- Renal or hepatic impairment

Contraindications

- Hypersensitivity to drug

Administration

- Be aware that although most patients tolerate acetaminophen well, toxicity can occur with a single dose.
- Know that acetylcysteine may be ordered to treat acetaminophen toxicity, depending on patient's blood drug level. Activated charcoal is used to treat acute, recent acetaminophen overdose (within 1 hour of ingestion).
- Determine overdose severity by measuring blood acetaminophen level no sooner than 4 hours after overdose ingestion (to ensure that peak concentration has been reached).

Route	Onset	Peak	Duration
P.O.	0.5-1 hr	10-60 min	3-8 hr (dose dependent)
P.R.	0.5-1 hr	10-60 min	3-4 hr

Adverse reactions

Hematologic: hemolytic anemia, neutropenia, leukopenia, pancytopenia, thrombocytopenia

Hepatic: jaundice, hepatotoxicity

Metabolic: hypoglycemic coma

Skin: rash, urticaria

Other: hypersensitivity reactions (such as fever)

Interactions

Drug-drug. *Activated charcoal, cholestyramine, colestipol:* decreased acetaminophen absorption
Barbiturates, carbamazepine, diflunisal, hydantoin, isoniazid, rifabutin, rifampin, sulfipyrazone: increased risk of hepatotoxicity

Hormonal contraceptives: decreased acetaminophen efficacy

Oral anticoagulants: increased anticoagulant effect

Phenothiazines (such as chlorpromazine, fluphenazine, thioridazine): severe hypothermia

Zidovudine: increased risk of granulocytopenia

Drug-diagnostic tests. *Home blood glucose measurement systems, urine 5-hydroxyindole acetic acid:* false-positive results

Drug-behaviors. *Alcohol use:* increased risk of hepatotoxicity

Precautions

Use cautiously in:

- anemia, hepatic or renal disease
- elderly patients
- pregnant or breastfeeding patients
- children younger than age 2.

Patient monitoring

- Observe for acute toxicity and overdose. Signs and symptoms of acute toxicity are as follows—*Phase 1:* nausea, vomiting, anorexia, malaise, diaphoresis. *Phase 2:* right upper quadrant pain or tenderness, liver enlargement, elevated bilirubin and liver enzyme levels, prolonged prothrombin time, oliguria (occasional). *Phase 3:* recurrent anorexia, nausea, vomiting, and malaise; jaundice; hypoglycemia; coagulopathy; encephalopathy; possible renal failure and cardiomyopathy. *Phase 4:* either recovery or progression to fatal complete liver failure.

Patient teaching

- Caution parents or other caregivers not to give acetaminophen to children younger than age 2 without consulting prescriber first.
- Tell patient, parents, or other caregivers not to use drug concurrently with other acetaminophen-containing products.
- Teach patient, parents, or other caregivers to contact prescriber if fever or other symptoms persist despite taking recommended amount of drug.
- Inform patient with chronic alcoholism that drug may increase risk of severe liver damage.