

#### FIXED-COMBINATION(S)

With butabarbital, a barbiturate, and codeine, a narcotic (**Fiorinal**); with dipyridamole, an antiplatelet agent (**Aggrenox**); with oxycodone, a narcotic (**Percodan**); with pentazocine, an analgesic (**Talwin Cmpd**); with caffeine, a stimulant (**Anacin, Midol**)

#### CLASSIFICATION

**Clinical:** Analgesic, antipyretic, anti-inflammatory, anticoagulant  
**Pharmacotherapeutic:** Salicylate; nonsteroidal

#### PREGNANCY/LACTATION

**Category C (Category D if full dose used in third trimester):** Readily crosses placenta; distributed in breast milk. May prolong gestation and labor, decrease fetal birth weight, increase incidence of stillbirths, neonatal mortality, hemorrhage. Avoid use during last trimester (may adversely affect fetal cardiovascular system: premature closure of ductus arteriosus).

#### AVAILABILITY (OTC)

**Tablets:** 325 mg, 500 mg. **Tablets (chewable):** 81 mg. **Tablets (enteric coated):** 81 mg, 165 mg, 325 mg, 500 mg, 650 mg, 975 mg. **Tablets (controlled-release):** 650 mg, 800 mg. **Suppository:** 120 mg, 200 mg, 300 mg, 600 mg.

#### PHARMACOKINETICS

Rapidly, completely absorbed from GI tract; enteric-coated absorption delayed; rectal absorption delayed, incomplete. Widely distributed. Rapidly hydrolyzed to salicylate. Half-life: 15–20 min (aspirin); salicylate: 2–3 hrs at low dose; >20 hrs at high dose.

#### ACTION/THERAPEUTIC EFFECT

Produces analgesic, anti-inflammatory effect by inhibiting prostaglandin synthesis, *reducing inflammatory response and intensity of pain stimulus reaching sensory nerve endings*. Antipyresis produced by drug's effect on hypothalamus, producing vasodilation, *thereby decreasing elevated body temperature*. Inhibits platelet aggregation.

#### USES/UNLABELED

Treatment of mild to moderate pain, fever, inflammatory conditions. Treatment of transient ischemic attack, ischemic stroke, agina, acute myocardial infarction (MI), recurrent MI, specific revascularization procedures, and rheumatologic diseases. *Prophylaxis against thromboembolism, treatment of Kawasaki disease.*

#### ADMINISTRATION/HANDLING

##### Oral

- Do not crush or break enteric-coated or sustained-release form.
- May give with water, milk, or meals if GI distress occurs.

##### Rectal

- If suppository is too soft, chill for 30 min in refrigerator or run cold water over foil wrapper.
- Moisten suppository with cold water before inserting well up into rectum.
- Refrigerate suppositories.

#### INDICATION/ROUTE/DOSAGE

##### Pain, fever

**Oral/Rectal:** Adults, elderly: 325–650 mg q4h as needed, up to 4 g/day.

##### Rheumatoid arthritis, osteoarthritis, other inflammatory conditions

**Oral:** Adults, elderly: 3.2–6 g/day in divided doses.

##### Juvenile arthritis

**Oral:** Children: 60–110 mg/kg/day in divided doses (q6–8h). May increase dose at 5–7 day intervals.

##### Acute rheumatic fever

**Oral:** Adults, elderly: 5–8 g/day. Children: 100 mg/kg/day, then decrease to 75 mg/kg/day for 4–6 wks.

##### Thrombosis (decrease TIAs)

**Oral:** Adults, elderly: 1.3 g/day in 2–4 divided doses.

##### Thrombosis (decrease MI)

**Oral:** Adults, elderly: 300–325 mg/day.

##### Usual pediatric dosage

**Oral/Rectal:** Children: 10–15 mg/kg/dose q4h up to 60–80 mg/kg/day.

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#### PRECAUTIONS

**Contraindications:** Chicken pox or flu in children/teenagers, GI bleeding or ulceration, bleeding disorders, history of hypersensitivity to aspirin or NSAIDs, allergy to tartrazine dye, impaired hepatic function. **Cautions:** Vitamin K deficiency, chronic renal insufficiency, those with "aspirin triad" (rhinitis, nasal polyps, asthma).

#### INTERACTIONS

**DRUG:** Alcohol, NSAIDs may increase risk of GI effects (e.g., ulceration). Urinary alkalinizers, antacids increase excretion. Anticoagulants, heparin, thrombolytics increase risk of bleeding. Large dose may increase effect of insulin, oral hypoglycemics. Valproic acid, platelet aggregation inhibitors may increase risk of bleeding. May increase toxicity of methotrexate, zidovudine. Ototoxic medications, vancomycin may increase ototoxicity. May decrease effect of probenecid, sulfipyrazone. **FOOD:** None significant. **LAB VALUES:** May alter SGOT (AST), SGPT (ALT), alkaline phosphatase, uric acid; prolong prothrombin time, bleeding time. May decrease cholesterol, potassium, T<sub>3</sub>, T<sub>4</sub>.

#### SIDE EFFECTS

**OCCASIONAL:** GI distress (cramping, heartburn, abdominal distension, mild nausea), allergic reaction (pruritus, urticaria, bronchospasm).

#### ADVERSE REACTIONS/TOXIC EFFECTS

High doses may produce GI bleeding and/or gastric mucosal lesions. Low-grade toxicity characterized by ringing in ears, generalized pruritus (may be severe), headache, dizziness, flushing, tachycardia, hyperventilation, sweating, thirst. Febrile, dehydrated children can reach toxic levels quickly. Marked intoxication manifested by hyperthermia, restlessness, abnormal breathing pattern, convulsions, respiratory failure, coma.

#### NURSING IMPLICATIONS

**Baseline Assessment:** Do not give to children/teenagers who have flu or chicken pox (increases risk of Reye's syndrome). Do not use if vinegarlike odor is noted (indicates chemical breakdown). Assess type, location, duration of pain, inflammation. Inspect appearance of affected joints for immobility, deformities, skin condition. Therapeutic serum level for antiarthritic effect: 20–30 mg/dl (toxicity occurs if levels are over 30 mg/dl).

**Intervention/Evaluation:** In long-term therapy, monitor plasma salicylic acid concentration. Monitor urinary pH (sudden acidification, pH 6.5–5.5), may result in toxicity. Assess skin for evidence of bruising. If given as antipyretic, assess temperature directly before and 1 hr after giving medication. Evaluate for therapeutic response: relief of pain, stiffness, swelling, increase in joint mobility, reduced joint tenderness, improved grip strength.

**Patient/Family Teaching:** Do not crush or chew sustained-release or enteric-coated form. Take with food or after meals; take with full glass of water (reduces risk of lodging in esophagus). Report ringing in ears or persistent GI pain. Therapeutic anti-inflammatory effect noted in 1–3 wks.

**Lifespan Considerations:** Caution in children with acute febrile illness (Reye's syndrome). Use lower dosage in elderly; may be more susceptible to toxicity.