

Name(s)

- **Generic:** ibuprofen (eye byoo PROE fen) | **Brand:** Advil, Motrin, NeoProfen, IBU

Therapeutic Category

- Analgesic (Non-opioid) | Nonsteroidal Anti-inflammatory Drug (NSAID)

Indication(s)

1. VARIOUS RX | **Inflammatory Disease; Rheumatoid Disorders; Mild to Moderate Pain; Reduction of Fever; Patent Ductus Arteriosus (PDA)**
 2. VARIOUS OTC | **Reduction of Fever; Management of Pain due to Headache; Migraine; Sore Throat; Arthritis; Physical or Sprains/Strains; Menstrual Pain; Dental Pain; Minor Muscle/Bone/Joint Pain; Backache; Cold/Flu Pain.**
- OFF LABEL | Acute Gout Flares; Pericarditis

Dosage Form & Strength

- **Capsule** (Multiple types – liquid gels, regular): 200 mg
- **Tablets** (Multiple types – dye free, chewable): 200 mg (OTC), 400 mg, 600 mg, 800 mg
- **Suspension** (Multiple types – alcohol/dye free, various flavors): 100 mg/5 mL (children), 50 mg/1.25 mL (infant),
- **Solution (IV):** 10mg/mL

Dosing by Indication

- **Dosing for Mild to Moderate Pain (Analgesia) for Adults**
 - PO: 200-800 mg po 3-4 times daily. Typical dose is 400 mg w/ 1200-2400 mg/day. Max 3200 mg/day. American Pain Society suggests 200-400 mg po q4-6h with a max 3200 mg/day
 - IV: 400-800 mg parenterally q6h prn with a max 3200 mg/day
- **Dosing for Fever (Antipyretic) for Adults**
 - IV: Initiate 400 mg parenterally then q4-6h OR 100-200 mg q4h prn with a max of 3200 mg/day
- **Dosing for Dysmenorrhea (Painful periods or Menstrual Cramps/Pains) in Adolescent to Adult Females**
 - PO: 200-800 mg 3-4 times daily. Typical dose is between 1200-2400 mg/day. Max duration of 3-5 days.
- **Dosing for Osteoarthritis or Rheumatoid Arthritis in Adults**
 - PO: 400-800 mg 3-4 times daily w/ max of 3200 mg/day
- OFF LABEL | **Dosing for Acute Gout Flares**
 - PO: 800 mg tid initiated w/in 24-48 hours of flare onset for 5-7 days. D/c 2-3 days after resolution.
- OTC | **Dosing for General Analgesia & for Antipyretic Effects**
 - PO: 200 mg q4-6h prn. If no relief may increase to 400 mg q4-6h prn. Max of 1200 mg/day. Duration of therapy of up to 10 days for analgesia and up to 3 days as an antipyretic
- OTC | **Dosing for Migraines**
 - PO: 400 mg at onset of symptoms with a max of 400 mg/days
- OFF LABEL | **Dosing for Pericarditis**
 - PO: 600 mg q8h for 7-14 days if acute and max of 1200-1400 mg if recurrent with decreasing taper by 200-400 mg ever 1-2 weeks



- **Dosing for Analgesic Effects in Pediatrics**

- **IV | 6 months to <12 years:** 10 mg/kg/dose with a max of 400 mg/dose q4-6h prn. Max dose is 40 mg/kg/day or 2400 mg/day (whichever is less)
- **IV | 12-17 years** 400 mg q4-6h prn with a max of 2400 mg/day
- **PO | 6 months and children <50 kg:** 4-10 mg/kg/day dose OR fixed dosing based on weight chart
- **PO | 6 months to 11 years old:** Refer to chart. Dose repeated every 6-8 hours with max 4 doses/day

Weight (kg)	Weight (lbs)	Age	Dose (mg)
5.4 – 8.1	12 – 17	6 – 11 months	50
8.2 – 10.8	18 – 23	12 – 23 months	75 – 80
10.9 – 16.3	24 – 35	2 – 3 years	100
16.4 – 21.7	36 – 47	4 – 5 years	150
21.8 – 27.2	48 – 59	6 – 8 years	200
27.3 – 32.6	60 – 71	9 – 10 years	200 – 250
32.7 – 43.2	72 – 95	11 years	300

- **PO | ≥12 years and adolescents:** 200 mg q4-6h prn for up to **10 days**. If pain persists increase to 400mg. Max dose is 1200 mg/day.

- **Dosing for Fever (Antipyretic) in Pediatrics**

- **IV | 6 months to <12 years:** 10 mg/kg/dose q4-6 h prn with max dose of 40 mg/kg/day or 2400 mg/day
- **IV | 12 to 17 years:** 400 mg q4-6h prn. Max dose of 2400 mg/day
- **PO | ≤6 months, children, and adolescents:** 5-10 mg/kg/dose q6-8h. Max dose is 400 mg. Max daily dose is 40 mg/kg/day up to 1200 mg/day.
- **PO | 6 months to 11 years:** Same chart as shown previously. Dose repeated every 6-8 hours, max 4 doses/day.
- **PO | ≥12 years and adolescents:** 200 mg q4-6h prn for up to **3 days**. If pain persists increase to 400mg. Max dose is 1200 mg/day.

Mechanism of Action & Pharmacology

- **MOA:** Reversible inhibition of the cyclooxygenase-1 and 2 (COX-1 and 2) enzymes. This inhibition decreases the formation of prostaglandin precursors. Ibuprofen has multiple benefits such as being an antipyretic, analgesic and anti-inflammatory. Additional anti-inflammatory mechanisms may be attributed to neutrophil aggregation and activation which decreases cytokine levels (cytokines are proinflammatory). There is also an inhibition of chemotaxis and the alteration of lymphocyte activity.
- **Absorption:** Rapid at 85% | **Metabolism:** Hepatic through oxidation | **Excretion:** 45-80% excreted in the urine with fecal excretion to a lesser extent | **Onset of Action:** Analgesic effects w/in 30-60 minutes. Antipyretic effects w/in 1-2 hours with high variability based on age with the max effect seen w/in 2-4 hours | **Time to Peak:**



Tablets are 1-2 hours; Suspension has a median of 30 minutes; Chewable tablets have a median of 1.5 hours | **Duration of Action:** Antipyretic effects last about 6-8 hours | **Half-Life Elimination:** Pediatrics around 1.5 hours; Adults ~2.5 hours w/ high variability based on age range | **Protein Binding:** >90%

Special Populations & Considerations

- Severe **hypersensitivity reaction** such as serious skin reactions
- **Geriatric** dosing may require lower end of dosing compared to adults
- Use of NSAIDs chronically in **women** may be associated with **reversible infertility**
- Conflicting data for **birth defects**. Suggested avoidance starting at 30 weeks gestation. NSAID use close to conception may be associated with **increased miscarriage risk**

Side Effects

- GI bleeding, upset **stomach**, n/v/d, headache, constipation, dizziness

ALERT U.S. BOXED WARNING: Serious cardiovascular thrombotic events – NSAIDs cause increased risk of serious cardiovascular thrombotic events such as MI and stroke. Ibuprofen is contraindicated in CABG surgery. There is an increased risk for serious GI bleed, ulcerations, perforations

Drug Interactions

- Drugs with **Antiplatelet properties** such as other **NSAIDs** such as **naproxen, meloxicam** or agents such as **SSRIs** and **P2Y12 inhibitors** such as **clopidogrel**
- **Alcohol** may increase adverse/toxic effects of NSAIDs such as GI bleed
- **ACE inhibitors** may enhance adverse/toxic effects of NSAIDs as well as NSAIDs may decrease ACE inhibitors efficacy.

Monitoring Parameters

- Irregular bleeding/bruising; Rash, itching/swelling; Weight gain; Liver problems (dark urine)

Patient Counseling Information

- Used to ease pain, swelling, fever, arthritis
- Take with food to avoid stomach upset

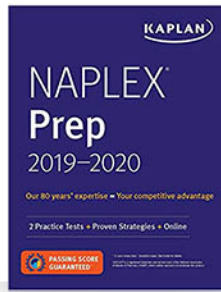
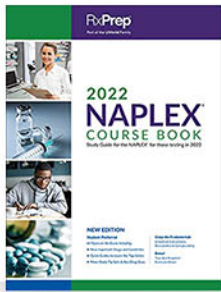
Reference(s)

- <https://www.drugs.com/ppa/ibuprofen.html>
- <https://www.webmd.com/drugs/2/drug-5166-9368/ibuprofen-oral/ibuprofen-oral/details>

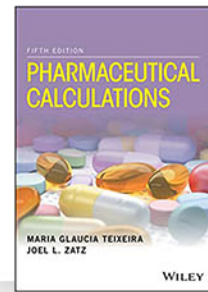
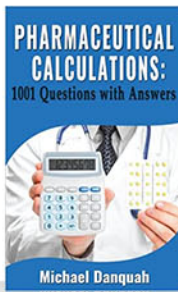
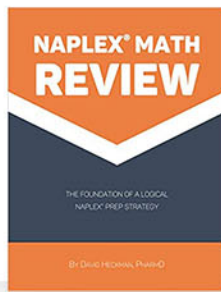
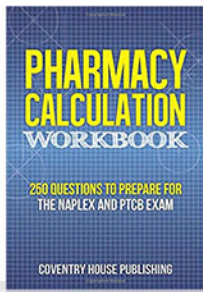


PREPARE FOR SUCCESS!

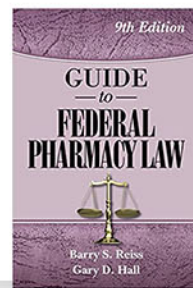
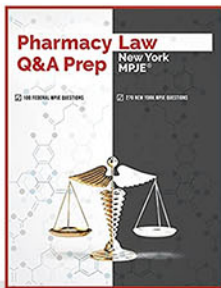
Comprehensive (NAPLEX)



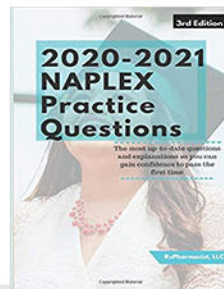
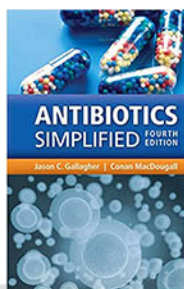
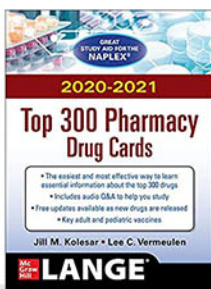
Calculations (NAPLEX)



Pharmacy Law (MPJE)



Supplemental



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(6 am CST, 4 am PST)

HEY NEW GRAD!

So you landed that perfect job offer or got the perfect match for your PGY1 and now the **ONLY** thing standing in your way is passing the NAPLEX and MPJE.

Here are some NAPLEX & MPJE prep recommendations to help you do everything you can to **pass the first time!**

HEY STUDENT!

When I was P1 one of the best pieces of advice I got from those before me was to use a NAPLEX Prep book while learning each topic.

This helps focus your learning and the repetition helps to retain info and indirectly prepare you for the NAPLEX



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