

Acetaminophen and NSAIDs

Reference Sheet - Surgery

Key Points

- Use acetaminophen and NSAIDs **together** around the clock for the first 3-5 days, unless contraindicated and then as needed.
- Consider all sources of acetaminophen and/or NSAIDs before prescribing. This can include combination products and OTC cough/cold products.
- Provide the patient with specific administration instructions based on the formulation prescribed or recommended.

Acetaminophen

Medication	Usual Dose	Max Daily Dose	Common OTC Formulations
Acetaminophen	1000mg three to four times per day	4000mg	Tablet: 325mg or 500mg Capsule: 325mg or 500mg Extended release tablet: 650mg

- Caution should be observed in patients with liver disease, active alcohol use, and G6PD deficiency
- Acetaminophen overdose may occur with 5-6 grams daily for prolonged use (6-8+ weeks) or acute ingestion of at least 7.5 grams

NSAIDs

Medication	Usual Dose	Max Daily Dose	Common OTC Formulations
Celecoxib*	100-200mg two times per day	400mg	Capsule: 50mg, 100mg, 200mg, 400mg
Ibuprofen	400-800mg three to four times per day	3200mg	Tablet: 200mg, 400mg, 600mg, 800mg
Naproxen	200-400mg two to three times per day	1375-1500mg	Tablet: 220mg, 250mg, 275mg, 375mg, 500 mg, 550mg Capsule: 220mg Extended release tablet: 375mg, 500mg, 750mg
Ketorolac	10mg four times per day	200mg	Tablet: 10mg
Meloxicam	15mg one time per day	15mg	Tablet: 7.5mg, 15mg Capsule: 5mg, 10mg

*Celecoxib is preferred in patients with GI risk factors such as history of peptic ulcers, gastrointestinal bleeds, or Helicobacter pylori infection

References

- Acetaminophen - knowyourdose.org. (n.d.). Retrieved December 15, 2022, from <https://www.knowyourdose.org/wp-content/uploads/2021/01/Know-Your-Dose-2020-Acetaminophen-Report.pdf>
- Center for Drug Evaluation and Research. February 7, 2018. Prescription acetaminophen products to be limited to 325 mg per dosage. U.S. Food and Drug Administration. Retrieved December 15, 2022, from <https://www.fda.gov/drugs/drug-safety-and-availability/fda-drug-safety-communication-prescription-acetaminophen-products-be-limited-325-mg-dosage-unit>

NSAID Safety Considerations and Side Effects

Cardiovascular



- Short-term use is safe for most patients
- In patients who have CVD or risk factors for CVD, long-term and high dose NSAID use can increase risk for cardiovascular events (e.g. MI, CVA, CV death)
- Avoid use in patients who have undergone CABG surgery

Gastrointestinal



- Short-term use (≤ 7 days) is safe for most patients. Long-term use risk is low ($< 2\%$)
- In patients > 60 years of age, history of peptic ulcers, gastrointestinal bleeds, or Helicobacter pylori infections, consider celecoxib (Celebrex) and/or use of a concomitant proton pump inhibitor (PPI, e.g. OTC omeprazole)

Renal



- Acute kidney injury from NSAID use can occur in those with risk factors including patients age ≥ 65 , pre-existing kidney impairment, or CKD with high cumulative doses (e.g. ibuprofen 700 mg/day)
- Use with caution in patients with CKD

Bleeding



- Anti-platelet effect is due to COX-1 inhibition, but NSAIDs block COX in a reversible fashion
- Normal platelet function returns within 1-3 days depending on the drug (e.g. 1 day for ibuprofen, 2 days for naproxen, diclofenac)

Pregnancy



- Avoid use of NSAIDs in pregnancy and consult an obstetric specialist