

Key Points

- A combination of ibuprofen and acetaminophen is more effective than opioids for dental pain control and carries less risk for adverse events ^{1,2}
- Use acetaminophen and NSAIDs **together** around the clock for the first 3 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/s prescribed or recommended

Acetaminophen

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

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

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

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

References

1. Moore, P., Ziegler, K., Lipman, R., Aminoshariae, A., Carrasco-Labra, A., & Mariotti, A. (2018). Benefits and harms associated with analgesic medications used in the management of acute dental pain: An overview of systematic reviews. *Journal of the American Dental Association* (1939), 149(4), 256–265.e3. <https://doi.org/10.1016/j.adaj.2018.02.012>
 2. American Dental Association. (2022.) Oral Analgesics for Acute Dental Pain. Retrieved from <https://www.ada.org/resources/research/science-and-research-institute/oral-health-topics/oral-analgesics-for-acute-dental-pain>
- Know Your Dose (2020). Acetaminophen- A look at how misuse can occur and what we can do to promote safe use. Retrieved from <https://www.knowyourdose.org/wp-content/uploads/2021/01/Know-Your-Dose-2020-Acetaminophen-Report.pdf>
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