

# Acetaminophen and NSAIDs

## Reference Sheet - Dentistry

### Key Points

- A combination of ibuprofen and acetaminophen is more effective than opioids for dental pain control and carries less risk for adverse events<sup>1,2</sup>
- 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 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, 500mg, 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

# 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 ( $\leq 7$  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  $\geq 65$ , 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>
  - Center for Drug Evaluation and Research (2018). FDA Drug Safety Communication: Prescription Acetaminophen Products to be Limited to 325 mg Per Dosage Unit; Boxed Warning Will Highlight Potential for Severe Liver Failure. U.S. Food and Drug Administration. Retrieved from <https://www.fda.gov/drugs/drug-safety-and-availability/fda-drug-safety-communication-prescription-acetaminophen-products-be-limited-325-mg-dosage-unit>