



CL FORMULARY PAIN MEDS	OK for kids?	Breast Feeding OK?	Pregnancy OK?	Maximum Dosing	Renal Considerations	Hepatic Considerations	Cardiac Considerations	Drug Interactions	Contra-indications	Adverse Effects	Misc.
<b>PROPIONIC ACID NSAIDS</b>											
Ibuprofen  200mg 400mg 800mg tabs  <i>(Advil, Motrin)</i>	Y	Y	Y/N use only in 1st & 2nd trimester	<b>PATIENTS (45+ lbs.)</b> - 200 mg (45 lbs.) - 400 mg (88 lbs.) - 600 mg (120 lbs.) - 800 mg (175 lbs.) <b>q6h</b> Max daily dose (175+ lbs.) = <b>8 tabs</b> (400 mg tab)  <i>Consult a pediatric dosing chart for kids &lt; 88 lbs.</i>  <b>Onset</b> = 0.5 hr. <b>Peak</b> = 1-2 hrs. <b>Duration</b> = 4-6 hrs. <b>t-1/2</b> = 1.8-2 hrs.	<b>Dosing Adjustments:</b> No dosing adjustments for mild - moderate renal disease	Higher risk of blood clots than other NSAIDS --> caution in pts. w/ peripheral artery disease / atherosclerosis			<b>GI Risk:</b> Low	<b>CNS:</b> Dizziness (3-9%)  <b>GI Disturbances:</b> (<10%)	Some Ibuprofen formulations may contain phenylalanine ( <i>CL formulation does not</i> )
Naproxen [Base]  500mg tabs  <i>(Naprosyn)</i>	Y	N	Y/N use only in 1st & 2nd trimester	<b>PATIENTS</b> <u>(12-64 yrs. &amp; 110+ lbs.)</u> <b>500 mg q12h</b>  Max daily dose = <b>2 tabs</b> (500 mg tab)  <b>Onset</b> = 1 hr. <b>Peak</b> = 2-4 hrs. <b>Duration</b> = 4-7 hrs. <b>t-1/2</b> = 12-17 hrs.	<b>Dosing Adjustments:</b> No dosing adjustments for mild - moderate renal disease	Less risk of blood clots than Ibuprofen --> safer in pts. w/ peripheral artery disease / atherosclerosis			<b>Elders &gt; 65 yrs.</b> Due to long half-life	<b>CNS:</b> Dizziness (9%) Drowsiness (3-9%) Headache (9-15%)  <b>Dermatologic:</b> Pruritus (3-9%) Rash/Ecchymoses (3-9%)	Similar adverse effects to Ibuprofen, but more of them and more significant effects
									<b>GI Risk:</b> Moderate - High	<b>Endocrine:</b> Fluid retention (3-9%)	Pediatric doses not available at CL pharmacy
									<b>GI Disturbances:</b> (<14%)	<b>Hematologic:</b> Hemolysis (3-9%)	Naproxen Na has faster onset but is not on formulary
										<b>Oral:</b> Stomatitis	Max daily dose of Naproxen Sodium = <b>2 tabs</b> (550 mg tab)
										<b>Respiratory:</b> Dyspnea (3-9%)	

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<b>ACETIC ACID NSAIDS</b>											
Diclofenac Na [extended release]  50mg tabs  ( <i>Voltaren</i> )	N	N	Y/N use only in 1st & 2nd trimester	<u>ADULTS (17+ yrs.)</u> <b>50 mg q8h</b>  Max daily dose = <b>3 tabs</b> (50 mg tab)	<b>Dosing Adjustments:</b> No dosing adjustments for mild - moderate renal disease	<b>Contraindicated if</b> liver disease present	Less likely to interfere with antiplatelet function of Aspirin than Ibuprofen or Naproxen		<b>GI Risk:</b> Moderate	<b>CNS:</b> Headache (8%)	
				<b>Onset</b> = 1 hr. <b>Peak</b> = 2.25 hrs. <b>Duration</b> = 4-6 hrs. <b>t-1/2</b> = 2.25 hrs.			<b>Cardiovascular Risk:</b> High		<b>Dermatologic:</b> Pruritis (7%)		
							<b>Cardiac AE's:</b> Edema (33%)		<b>GI Disturbances:</b> (<10%)		

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<b>MISC. ANALGESICS</b>											
<b>Acetaminophen</b>  <i>(Tylenol, Tempra, Panadol)</i>	Y	Y	Y	<p><u>PATIENTS (40+ lbs.)</u></p> <ul style="list-style-type: none"> <li>-325 mg (48 lbs.)</li> <li>-650 mg (95 lbs.)</li> <li>-975 mg (143+ lbs.)</li> </ul> <p><b>q6h</b></p> <p><i>(can dose 650mg q 4 hrs. if necessary for pts. weighing 143+ lbs.)</i></p> <p>Max daily dose for Adults (143+ lbs.) = <b>12 tabs</b> (325 mg tab)</p> <p>Max daily dose for Elders (&gt;65 yrs.) = <b>8 tabs</b> (325 mg tab)</p> <p><i>Consult a pediatric dosing chart for kids &lt; 48 lbs.</i></p> <p><b>Onset</b> = 0.5 hrs.  <b>Peak</b> = 0.5-1 hr.  <b>Duration</b> = 4-6 hrs.  <b>t-1/2</b> = 2-3 hrs. (<i>longer in kids</i>)</p>	<p><b>Dosing Adjustments:</b> If GFR 10-50 mL/min/1.73m<sup>2</sup>, limit to q6h</p> <p><b>Dosing Adjustments:</b> If GFR &lt; 10 mL/min/1.73m<sup>2</sup>, limit to q8h</p> <p><b>Dosing Adjustments (KIDS):</b> If intermittent dialysis, limit to q 8 hrs.</p>	<p><b>Dosing Adjustments:</b> -Mild-mod. impairment -Active liver disease * 325 - 500 mg q6h</p> <p><b>Dosing Adjustments:</b> -Cirrhosis * 325 mg q8h</p>	<p><b>Avoid Concomitant Use:</b> -Imatinib -Isoniazid</p> <p><b>Other Drug Interactions:</b> Warfarin (Coumadin) + Acetaminophen may cause increased bleeding risk if taken &gt; 1 week --&gt; <i>less bleeding risk than NSAIDs</i></p>	<p><b>Alcoholism</b></p>	<p><b>Bleeding:</b> Can increase INR if combined w/ Warfarin when taken &gt; 7 days</p> <p><b>Hepatic:</b> Acute liver failure increases with high doses, especially when recommended daily dose is exceeded</p>	<p>Very dangerous to exceed maximum doses. If combining w/ other products containing Acetaminophen, do not exceed combined max daily dose of:</p> <ul style="list-style-type: none"> <li>-4 g for monitored, healthy adults</li> <li>-3 g for unmonitored, healthy adults</li> <li>-2.6 g for elders</li> </ul> <p>Alcohol and fasting increase toxicity risk.</p>	



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<b>OPIOIDS, cont.</b>											
<b>Codeine + Acetaminophen</b> <i>30/300mg tabs (Tylenol #3)</i>	N	N	Consult PCP / OBGYN	<u>PATIENTS (12+ yrs.)</u> -30/300 mg (48-110 lbs.) -60/600 mg (110+ lbs.) q6h <i>(can dose q 4 hrs. if necessary)</i>  Max daily dose (48-110 lbs.) = <b>6 tabs</b> (30/300 mg tab)  Max daily dose (110+ lbs.) = <b>12 tabs</b> (30/300 mg tab)  <b>Onset</b> = 0.5-1 hrs. <b>Peak</b> = 1.5-2 hrs. <b>Duration</b> = 4-6 hrs. <b>t-1/2</b> = 2-3 hrs.	<b>Dosing Adjustments:</b> If GFR 10-50 mL/min/1.73m <sup>2</sup> , limit to q6h  <b>Dosing Adjustments:</b> If GFR < 10 mL/min/1.73m <sup>2</sup> , limit to q8h  <b>Caution:</b> Severe renal impairment	<b>Dosing Adjustments:</b> -Mild - mod. impairment -Active liver disease -Alcoholism * 30/300mg q6h  <b>Dosing Adjustments:</b> - Cirrhosis * 30/300mg q8h  <b>Avoid if:</b> Severe hepatic impairment / disease	<b>Caution:</b> CV disease  <b>Including:</b> -Acute MI -Post-MI -Unstable Angina	<b>Avoid Concomitant Use:</b> -Azelastine -Eluxadoline -Orphenadrine -Paraldehyde -Thalidomide  <b>CYP2D6 inhibitors --&gt;</b> - Amiodarone -Cimetidine -Desipramine -Duloxetine (Cymbalta) -Fluoxetine (Prozac) -Paroxetine (Paxil) -Propafenone -Quinidine -Ritonavir	<b>CYP2D6 "Ultrarapid Metabolizers"</b>  <b>Allergy:</b> Metabisulfite  <b>Alcoholism</b>  <b>CNS depression</b>  <b>Caution with:</b> -Morbid obesity -Hypovolemia -Adrenal Insufficiency -Impaired Biliary Tract -Thyroid Disorder -Prostatic Hyperplasia -Seizure Disorder	<b>GI:</b> 10% -Abdominal pain -Constipation  --> More emetogenic than other opioids	No studies showing that Tylenol #3 interacts w/ Warfarin, but studies do show Acetaminophen can if taken > 1 week
<b>Hydrocodone + Acetaminophen</b> <i>5/325mg tabs (Lortab, Norco, Zydome, **Vicodin)</i>	Y	N	Consult PCP / OBGYN	<u>PATIENTS (110+ lbs.)</u> <b>10/650 mg q6h</b> <i>(can dose q 4 hrs. if necessary)</i>  Max daily dose = <b>12 tabs</b> (5/325 mg tab)  <u>ELDERS (&gt;65 yrs.) &amp; PATIENTS (48-110 lbs.)</u> <b>5/325 mg q6h</b> <i>(can dose q 4 hrs. if needed)</i>  Max daily dose = <b>6 tabs</b> (5/325 mg tab)  <b>Onset</b> = 0.25-0.5 hr. <b>Peak</b> = 0.5-2 hrs. <b>Duration</b> = 4-8 hrs. <b>t-1/2</b> = 3-4.5 hrs.	<b>Dosing Adjustments:</b> If GFR 10-50 mL/min/1.73m <sup>2</sup> , limit to q6h  <b>Dosing Adjustments:</b> If GFR < 10 mL/min/1.73m <sup>2</sup> , limit to q8h  <b>Caution:</b> renal impairment	<b>Dosing Adjustments:</b> -Mild - mod. impairment -Active liver disease -Alcoholism *5/325mg q6h  <b>Caution:</b> hepatic impairment	<b>Caution:</b> CV disease  <b>Including:</b> -Acute MI -Post-MI -Unstable Angina	<b>Avoid Concomitant Use:</b> -Alcohol -Convivaptan -Eluxadoline -Fusidic Acid -Idelalisib -Orphenadrine -Thalidomide	<b>Alcoholism</b>  <b>CNS depression</b>  <b>GI:</b> Caution w/ acute abdominal conditions	<b>GI:</b> Most Common --> Constipation  <b>Less Common --&gt;</b> Dyspepsia Peptic Ulcer	No studies showing that Vicodin interacts w/ Warfarin, but studies do show Acetaminophen can if taken > 1 week
								<b>Caution with:</b> -Morbid Obesity -Adrenal Insufficiency -Impaired Biliary Tract -Thyroid Disorder -Prostatic Hyperplasia -Pancreatitis -Psychosis	<b>Hepatic:</b> Acute liver failure if recommended doses exceeded	<b>**Vicodin is technically 5/300 mg and may not be automatically substituted with 5/325 mg generic</b>	

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<b>OPIOIDS, cont.</b>											
<b>Tramadol [Immediate Release]</b>  50mg tabs  (Ultram)	N	N	N	<b>ADULTS (18-64 yrs.)</b> <b>100 mg q6h</b>  Max daily dose = <b>8 tabs</b> (50 mg tab)  <b>ELDERS (&gt;65 yrs.)</b> <b>100 mg q8h</b>  Max daily dose = <b>6 tabs</b> (50 mg tab)  <b>Onset = 1 hr.</b> <b>Peak = 2-4 hrs.</b> <b>Duration = 3-6 hrs.</b> <b>t-1/2 = 6-8 hr. (7-9 hrs. for active metabolite)</b>	Dosing Adjustments: If Creatinine Clearance [CrCl] <30 mL/min., limit to 100 mg q12h	Dosing Adjustments: -Cirrhosis  * 50mg q12h	Ideal Opioid for Pts. Taking Anticoagulants or Antiplatelets:  -Warfarin (Coumadin, Jantoven)  -Apixaban (Eliquis)  -Dabigatran (Pradaxa)  -Edoxaban (Savaysa)  -Rivaroxaban (Xarelto)  -Aspirin  -Clopidogrel (Plavix)  -Prasugrel (Effient)  -Ticagrelor (Brilinta)	Avoid Concomitant Use:  -MAOIs -Carbamazepine -Orphenadrine -Thalidomide  <b>Moderate:</b>  -SSRIs -Clarithromycin -Fluconazole  <b>Mild:</b>  -other antidepressants	Allergy:  Codeine or opioid allergy  <b>Respiratory:</b>  Elders w/ chronic respiratory disorders  <b>History of Seizures</b>	CNS:  Headache (18-32%) Dizziness (26%) Sedation (16%) Stimulation (14%) Insomnia (11%)  <b>GI:</b>  Constipation (24%) Nausea (24%) Dyspepsia (13%) Diarrhea (10%)  <b>Oral:</b>  Xerostomia (13%)  <b>Seizures:</b>  Increased risk of seizure (regardless of seizure history) if combined w/:  -SSRI's -neuroleptics / antipsychotics -tricyclic antidepressants -CYP2D6 & 3A4 inhibitors - Bupropion -Clarithromycin -Cyclobenzaprine -Donepezil -Promethazine	Recommend combining w/ Acetaminophen for moderate - severe pain. Tramadol pain relief equivalent to Codeine w/o APAP  Ideal for pts. w/ history of GI Ulcer or Neuropathic Pain dx  Ideal for pts. taking oral hypoglycemics  Ideal opioid for pts. already taking NSAID  OK for patients w/ hx of histamine release reactions to opioids  Inhibits Serotonin & Norepinephrine reuptake  Weak binding to opioid receptors  <b>2017 FDA Contraindication:</b> should not be used to treat pain in kids <12 years  FDA-approved only for use in adults
Note: Whenever possible, reduce the maximum dosages of opioids listed above by combining them with Acetaminophen and/or NSAID. Note: Maximum dosages of pain meds listed are the maximum doses that can be administered to a patient <u>without</u> systemic disease and must be adjusted for safety in patients with systemic disease. Note: Drug classes shown in <b>red italics</b> are listed in the second tab below (Interaction Meds).											

\*Referenced from *Dental Management of the Medically Compromised Patient (2013)*, *Lexicomp Drug Information Handbook for Dentistry (2016 & 2017)*, *Micromedex Online Database (2018)*,

*UpToDate Online Database (2018)*, & *Pharmacist's Letter / Prescriber's Letter PL Detail-Docment #271106 (2011)*

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## Common Medications that Interact with Common Dental Pain Medications

Addiction Meds.	Anti-Clotting	Antidepressants, Mood Stabilizers, & Serotonin Affecting Meds				Antipsychotics & Psychotropics		Sedatives, Hypnotics, & Anxiolytics	
Mixed Agonist / Antagonist Opioids	Anticoagulants	Tricyclic Antidepressants (TCAs)	Monoamine Oxidase Inhibitors (MAOIs)	Selective Serotonin Reuptake Inhibitors (SSRIs)	Other 'Serotonin Syndrome' Causing Meds (when mixed w/ opioids)	Antipsychotics	Psychotropics	Benzodiazepines	Sedatives, Hypnotics, & Anxiolytics
Bunavail	Apixaban	Amitriptyline	Eldepryl	Brintellix	Amerge	Abilify	Anafranil	Alprazolam	Ambien
Buprenex	Coumadin	Amoxapine	Emsam	Celexa	Axert	Adasuve	Atenolol	Ativan	Atarax
Buprenorphine	Dabigatran	Anafranil	Isocarboxazid	Citalopram	Bupropion	Aripiprazole	Atomoxetine	Chlordiazepoxide	Belsomra
Depade	Edoxaban	Asendin	Linezolid	Escitalopram	Carbamazepine	Aristada	Catapres	Clonazepam	Benadryl
Dolophine	Eliquis	Aventyl Hydrochloride	Marplan	Fluoxetine	Depakene	Asenapine	Clomipramine	Clorazepate	Busodium
Methadone	Jantoven	Clomipramine	Nardil	Fluvoxamine	Imitrex	Brexpiprazole	Clonidine	Dalmane	Buspar
Methadose	Pradaxa	Desipramine	Parnate	Lexapro	Lithium	Cariprazine	Corgard	Diazepam	Buspirone
Probuphine	Rivaroxaban	Doxepin	Phenelzine	Olanzapine / Fluoxetine	Lithobid	Chlorpromazine	Fluvoxamine	Doral	Butabarbital
Suboxone	Savaysa	Elavil	Selegiline	Paroxetine	Maxalt	Clozapine	Gabapentin	Estazolam	Butalbital
Zubsolv	Warfarin	Imipramine	Tranylcypromine	Paxil	Rizatriptan	Clozaril	Guanfacine	Flurazepam	Butisol Sodium
	Xarelto	Norpramin	Zelapar	Prozac	Sumatriptan	Decanoate	Inderal	Halcion	Carisoprodol
<b>Opioid Antagonists</b>		Pamelor	Protriptyline	<b>Mood Stabilizers</b>		Tegretol	Discmelt	Intuniv	Chloral Hydrate
				Sarafem	Valproic Acid	Droperidol	Kapvay	Libritabs	Diphenhydramine
Naloxone				Sertraline	Wellbutrin	Fanapt	Lopressor	Librium	Edluar
Naltrexone	Aspirin	Silenor	Carbatrol	Vortioxetine	Zyban	Fazaclo	Luvox	Lorazepam	Equanil
Narcan	Brilinta	Sinequan	Depakote	Zoloft	OTC meds w/ Serotonin & Norepinephrine Reuptake Inhibitors (SNRIs)	Geodon	Fluphenazine	Midazolam	Eszopiclone
Contrave	Clopidogrel	Surmontil	Divalproex Sodium		Dextromethorphan	Haldol	Metoprolol	Mitran	Fiorinal
Vivitrol	Effient	Tofranil	Equetro			Haloperidol	Nadolol	Niravam	Hydroxyzine
	Plavix	Trimipramine	Eskalith			Iloperidone	Naltrexone	Oxazepam	Intermezzo
	Prasugrel	Vanatrip	Lamictal			Granisetron	Neurontin	Poxi	Luminal
	Ticagrelor	Vivactil	Lamotrigine			Inapsine	Pindolol	Prosom	Lunesta
			Oxcarbazepine			Cymbalta	Inapse	Quazepam	Mebaral
						Desvenlafaxine	Invega	Restoril	Mephobarbital
						Duloxetidine	Linezolid	Propranolol	Meprobamate
						Metoclopramide	Latuda	Serax	
						Effexor	Loxapine	Temazepam	Miltown
						Fetzima	Ondansetron	Tranxene	Nembutal
						Khdezla	Reglan	Strattera	Pentobarbital
						Levomilnacipran	Ritonavir	Triazolam	
						Milnacipran	Zofran	Valium	Rameleton
						Pristiq	Zyvox	Versed	Roserem
						Trazodone		Xanax	Secobarbital
						Venlafaxine			Seconal Sodium
									Solfoton
									Soma
									Somnote
									Sonata
									Suvorexant
									Vanadom
									Vistaril
									Zaleplon
									Zolpidem
									Zolpimist

Common Medications that Interact with Common Dental Pain Medications

ADDICTION MEDS.	ANTI-CLOTTING	ANTIDEPRESSANTS, MOOD STABILIZERS, & SEROTONIN AFFECTING MEDS				ANTIPSYCHOTICS & PSYCHOTROPICS		SEDATIVES, HYPNOTICS, & ANXIOLYTICS	
						Antipsychotics			
						Sustenna Thiothixene Thorazine Trifluoperazine Trilafon Trinza Versacloz Vraylar Ziprasidone Zydis Zyprexa			

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## Pediatric Pain Medication Dosing

### Acetaminophen

Dosing = 10 – 15 mg/kg/dose every 4 – 6 hours (Max 5 doses in 24 hours)

	Children's Acetaminophen Suspension	Children's Chewable Acetaminophen Tablets	Acetaminophen Tablets (Adult)
Concentration	<b>160 mg/5 ml</b>	<b>80 mg</b>	<b>325 mg</b>
Weight lbs.			
<b>6 – 11 lbs.</b>	1.3 mL	½ tablet	
<b>12 – 17 lbs.</b>	2.5 mL	1 tablet	
<b>18 – 23 lbs.</b>	3.8 mL	1 ½ tablets	
<b>24 – 35 lbs.</b>	5 mL	2 tablets	
<b>36 – 47 lbs.</b>	7.5 mL	3 tablets	
<b>48 – 59 lbs.</b>	10 mL	4 tablets	
<b>60 – 71 lbs.</b>	12.5 mL	5 tablets	
<b>72 – 95 lbs.</b>	15 mL	6 tablets	
<b>48 - 95 lbs.</b>			<b>1 tablet</b>
<b>96+ lbs.</b>	20 mL	8 tablets	<b>2 tablets</b>

### Ibuprofen

Dosing = 5 – 10 mg/kg/dose every 6 to 8 hours (Max of 4 doses in 24 hours)

	Children's Ibuprofen Suspension	Ibuprofen Tablet	Ibuprofen Tablet
Concentration	<b>100 mg/5 ml</b>	<b>400 mg</b>	<b>800 mg</b>
Weight lbs.			
<b>12 – 17 lbs.</b>	2.5 mL		
<b>18 – 23 lbs.</b>	3.8 mL		
<b>24 – 35 lbs.</b>	5 mL		
<b>36 – 47 lbs.</b>	7.5 mL		
<b>48 – 59 lbs.</b>	10 mL		
<b>60 – 71 lbs.</b>	12.5 mL		
<b>72 – 95 lbs.</b>	15 mL		
<b>88 – 175 lbs.</b>	20 mL	1 tablet	
<b>176+ lbs.</b>	40 mL	2 tablets	1 tablet