

Useful Medications for Oral Conditions*

DISCLAIMER: Drug information is constantly changing and is often subject to interpretation. While care has been taken to ensure the accuracy of the information presented, the American Academy of Pediatric Dentistry is not responsible for the continued currency of the information, errors, omissions, or consequences resulting from the use of these medications. Decisions about drug therapy must be based upon the independent judgment of the clinician, changing drug information, and evolving healthcare practices.

* Pediatric dosage should not exceed adult dosage.

Analgesics

Mild/Moderate Pain¹

Acetaminophen

Important: Both acute and chronic doses of acetaminophen are associated with hepatotoxicity. For this reason, this drug has been reformulated so the products are limited to 325 mg per dosage unit.

Forms: Liquid, tablet, oral disintegrating tablet, caplet, rectal suppository, injectable

Usual oral dosage:²⁻⁵

Children <12 years: 10-15 mg/kg/dose every 4-6 hours as needed (maximum daily dose 75 mg/kg, but not to exceed 4,000 mg/24 hours)

OR

ALTERNATIVE DOSING BASED ON AGE OF CHILD ³			
Age	Weight		Dosage mg ³
	lbs	kg	
0-3 months	6-11	2.7-5.3	40
4-11 months	12-17	5.4-8.1	80
1-2 years	18-23	8.2-10.8	120
2-3 years	24-35	10.9-16.3	160
4-5 years	36-47	16.4-21.7	240
6-8 years	48-59	21.8-27.2	320-325
9-10 years	60-71	27.3-32.6	325-400
11 years	72-95	32.7-43.2	480-500

Children ≥12 years, adolescents, and adults: 325-650 mg every 4-6 hours

OR 1,000 mg 3-4 times daily as needed (maximum daily dose 4,000 mg)

Ibuprofen

Forms: Liquid, tablet, injectable

Usual oral dosage:²⁻⁵

Infants and children <12 years: 4-10 mg/kg/dose every 6-8 hours as needed (maximum single dose 600 mg)

OR

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

Children ≥12 years and adolescents: 200-400 mg every 4-6 hours as needed (maximum daily dose 3,200)

Adults: 200-400 mg/dose every 4-6 hours as needed

OR 600-800 mg every 6-8 hours as needed (maximum daily dose 3,200)

Medications continued on the next page.

Naproxen

Important: Dosage expressed as 200 mg naproxen base is equivalent to 220 mg naproxen sodium. For acute pain, naproxen sodium may be preferred because of increased solubility leading to faster onset, higher peak concentration, and decreased adverse drug events.⁴

Forms: Suspension, tablet

Usual dosage:²⁻⁵

Children and adolescents: 5-7 mg/kg every 8-12 hours as needed (maximum daily dose 1,000 mg)

Adults: Initial dose of 500 mg, then 250-500 mg every 12 hours

OR 250 mg every 6-8 hours as needed (maximum daily dose 1,250 mg on day 1, then 1,000 mg/day thereafter)

Moderate/Severe Pain

Important: The use of codeine and its alternatives, oxycodone, hydrocodone, morphine, and tramadol, for children as an analgesic is not recommended by the American Academy of Pediatrics.⁶ An overview of the benefits and risks of analgesic medications for the management of acute dental pain has been summarized.⁷

Systemic Antibiotics

Amoxicillin

Forms: Suspension, chewable tablet, tablet, capsule

Usual oral dosage:²⁻⁵

Infants >3 months, children, and adolescents <40 kg: 20-40 mg/kg/day in divided doses every 8 hours (maximum single dose 500 mg)

OR 25-45 mg/kg/day in divided doses every 12 hours (maximum single dose 875 mg)

Adolescents >40 kg and adults: 250-500 mg every 8 hours

OR 500-875 mg every 12 hours

Endocarditis prophylaxis:^{3,4,8}

Infants, children, and adolescents: 50 mg/kg (maximum single dose 2,000 mg) 30-60 minutes before procedure

Adults: 2,000 mg 30-60 minutes before procedure

Periodontal disease treatment for select cases using oral regimen combination of amoxicillin and metronidazole⁹

Children and adolescents: Amoxicillin: 25-35 mg/kg/day in divided doses every 8 hours for 7 days (maximum single dose 500 mg)

AND Metronidazole: 10 mg/kg/dose every 8 hours for 7 days (maximum single dose 250 mg)

Adults: Amoxicillin: 375-500 mg every 8 hours for 7 days

AND Metronidazole: 250 mg every 8 hours for 7 days

Caution: For individuals who are allergic to penicillin, see alternative regimens under azithromycin and metronidazole

Amoxicillin clavulanate potassium

Important: Use the lowest dose of clavulanate combined with amoxicillin available to decrease gastrointestinal adverse drug events. The frequency of dosing is generally based on the ratio of amoxicillin to clavulanate.⁴

Forms: Suspension, chewable tablet, tablet

Usual oral dosage:²⁻⁵ (based on amoxicillin component):

Children >3 months of age up to 40 kg: 25-45 mg/kg/day in doses divided every 12 hours (maximum single dose 875 mg; maximum daily dose 1,750 mg) (prescribe suspension or chewable tablet due to clavulanic acid component)

Children >40 kg, adolescents, and adults: 500-875 mg every 12 hours (prescribe tablet)

Examples of formulations and dosing schedule:^{3,4}

4:1 formulations are dosed 3 times daily (amoxicillin 125 mg/clavulanate 31.25 mg; amoxicillin 250 mg/clavulanate 62.5 mg; amoxicillin 500 mg/clavulanate 125 mg)

7:1 formulations are dosed 2 times daily (amoxicillin 200 mg/clavulanate 28.5 mg; amoxicillin 400 mg/clavulanate 57 mg; amoxicillin 875 mg/clavulanate 125 mg)

Azithromycin

Important: Doses may vary for extended release suspension depending on the reason for prescribing the antibiotic.

This drug is an option for patients with Type I allergy to penicillin and/or cephalosporin antibiotics.

Caution: This drug can cause cardiac arrhythmias in patients with pre-existing cardiac conduction defects.^{3,4}

Forms: Tablet, capsule, suspension, injectable

Usual oral dosage:²⁻⁵

Infants, children, and adolescents: 10-12 mg/kg on day 1, single dose, (maximum 500 mg), followed by 5-6 mg/kg once daily for remainder of treatment (2-5 days)

Adults: 500 mg on day 1, single dose, followed by 250 mg daily as a single dose (maximum 250 mg) for 2-5 days

Endocarditis prophylaxis:^{3-5,8}

Infants, children, and adolescents: 15 mg/kg (maximum single dose 500 mg) 30-60 minutes before procedure

Adults: 500 mg 30-60 minutes before the procedures

Periodontal disease treatment for select cases using oral regimen of azithromycin only, when allergic to penicillin⁹

Children and adolescents: 10-12 mg/kg once daily for 3 days (maximum daily dose 500 mg)

Adults: 500 mg once daily for 3 days (maximum daily dose 500 mg/day)

Cephalexin

Caution: This antibiotic should not be used by an individual who has a history of anaphylaxis, angioedema, or urticaria with penicillin or ampicillin.³⁻⁵

Forms: Suspension, tablet, capsule

Usual oral dosage:²⁻⁵

Infants, children, and adolescents: Mild to moderate infections: 25-50 mg/kg/day divided every 6-12 hours (maximum daily dose 2,000 mg)

Severe infections: 75-100 mg/kg/day divided every 6-8 hours (maximum daily dose 4,000 mg)

OR 500 mg every 12 hours

Adults: 250-1,000 mg every 6 hours (maximum daily dose 4,000 mg)

Endocarditis prophylaxis:^{3,4,8}

Infants, children, and adolescents: 50 mg/kg (maximum single dose 2,000 mg) 30-60 minutes before procedure

Adults: 2,000 mg 30-60 minutes before procedure

Clarithromycin

Important: This drug is an option for patients with Type I allergy to penicillin and/or cephalosporin antibiotics.

Caution: This drug can cause cardiac arrhythmias in patients with pre-existing cardiac conduction defects.^{3,4}

Forms: Suspension, tablet

Usual oral dosage:²⁻⁵

Infants, children and adolescents: 7.5 mg/kg/dose every 12 hours (maximum single dose 500 mg)

Adults: 500 mg every 12 hours

Endocarditis prophylaxis:^{3,4,8}

Infants, children, and adolescents: 15 mg/kg (maximum single dose 500 mg) 30-60 minutes before procedure

Adults: 500 mg 30-60 minutes before procedure

Clindamycin

Important: This is an option for patients with Type I allergy to penicillin and/or cephalosporin antibiotics. This antibiotic is effective for infections (e.g., abscesses) with gram-positive aerobic bacteria and gram-positive or gram-negative anaerobic bacteria. However, *Clostridioides difficile* colitis is a serious adverse reaction with this antibiotic.³⁻⁵

This antibiotic is no longer recommended for endocarditis prophylaxis for dental procedures.⁸

Forms: Suspension, capsule, injectable

Usual oral dosage for soft tissue infections:²⁻⁵

Infants, children, and adolescents: 20-30 mg/kg/day in divided doses every 8 hours (maximum single dose 450 mg); higher doses of 30-40 mg/kg/day for *Methicillin-resistant Staphylococcus aureus* (MRSA) infections

Adults: 300-450 mg every 6-8 hours (maximum daily dose 1,800 mg)

Medications continued on the next page.

Doxycycline

Important: Tetracycline may cause permanent tooth discoloration, enamel hypoplasia in developing teeth, and hyperpigmentation of the soft tissues. Due to these side effects, this drug usually is not recommended for women who are pregnant and children <8 years old. However, short-term use of doxycycline (<21 days) is recommended by the American Academy of Pediatrics for specific infections when necessary because there is lack of clinical evidence that this form of tetracycline results in discoloration of developing teeth when used for <21 days.^{3,4,10}

Forms: Suspension, tablet, delayed release tablet, capsule, injectable

Usual oral dosage:²⁻⁵

Children >8 years and adolescents: 2.2 mg/kg/dose every 12 hours (maximum single dose 100 mg)

Adults: 100 to 200 mg/day once a day or divided 2 times daily every 12 hours

Endocarditis prophylaxis:^{3,4,8}

Children >8 years and adolescents: children <45 kg, 2.2 mg/kg

children >45 kg, 100 mg 30-60 minutes before procedure

Adults: 100 mg 30-60 minutes before the procedure

Metronidazole

Important: Metronidazole is a useful addition to an antibiotic regimen when coverage of anaerobic bacteria is needed. Patients should avoid ingestion of alcohol as a beverage or ingredient in medications or propylene glycol-containing products while taking metronidazole. There is a warning with the drug because it has been shown to be carcinogenic in mice and rats.^{3,4}

Forms: Tablet, tablet extended release, capsule, suspension, injectable

Usual oral dosage:

For anaerobic odontogenic infections (off-label use):³⁻⁵

Children: No recommendations available

Adolescents and adults: 500 mg every 8 hours with penicillin or a second or third generation cephalosporin, if allergic to penicillin

For periodontal disease, including necrotizing gingivitis:^{4,5,9}

Children and adolescents who are allergic to penicillin: 10 mg/kg/dose every 8 hours for 7 days (maximum single dose 250 mg)

Adults who are allergic to penicillin: 250-500 mg every 8 hours for 7 days

See amoxicillin and azithromycin above for other periodontal treatment approaches. In addition, concurrent periodontal debridement is important for disease management.

For young children or individuals who are unable to swallow pills, a metronidazole suspension (50 mg/mL) is available in a compounding kit.

Penicillin V Potassium

Important: Anaphylactic reactions have been demonstrated in patients receiving penicillin, most notably those with a history of beta-lactam hypersensitivity, sensitivity to multiple allergens, or prior IgE-mediated reactions (e.g., angioedema, urticaria, anaphylaxis).³

Forms: Liquid, tablet

Usual oral dosage:²⁻⁵

Children and adolescents: 25-50 mg/kg/day in divided doses every 6 hours (maximum daily dose 2,000 mg)

Adults: 250-500 mg every 6-8 hours

Antimicrobial Agents

Chlorhexidine gluconate

Important: Most brands contain alcohol.

Forms: Dental solution 0.12% (118 mL, 473 mL)

Usual dosage for gingivitis/periodontitis and stomatitis (off label use for stomatitis):²⁻⁵

Children ≥8 years, adolescents, and adults: Rinse with 15 mL 2 times daily (after breakfast and before bed) for 30 seconds and expectorate.

Mupirocin

Important: For external use only; not for use in patients <2 months of age.

Forms: Ointment 2%; cream 2%

Usual dosage for localized impetigo or skin infection:²⁻⁵

Infants, children, adolescents, and adults: Apply a small amount of ointment to the affected area 3 times daily for 5-10 days. If no clinical response after 5 days, then reevaluate.

Retapamulin

Important: For external use only; limited information on age group <9 months of age.

Forms: Ointment 1%

Usual dosage for localized impetigo:²⁻⁵

Infants >9 months, children, adolescents, and adults: Apply a small amount of ointment to the affected area 2 times daily for 5 days.

Antifungal Agents for Candidiasis***Systemic antifungal agent for oral candidiasis*****Fluconazole**

Important: The drug requires acidic pH in the stomach to disintegrate and dissolve for oral absorption; therefore, absorption is decreased by medications that increase gastric pH. Also, prescribe with caution for patients taking other medications metabolized by CYP enzymes because fluconazole is a hepatic enzyme inhibitor.^{3,4} Pediatric dosage may exceed adult dosage due to the pharmacokinetic properties in children.

Form: Suspension 10 mg/mL, 40 mg/mL; tablet: 50 mg, 100 mg, 150 mg, 200 mg; injectable: 100mg/50 mL, 200 mg/100 mL, 400 mg/200 mL.

Usual dosage for oropharyngeal candidiasis:²⁻⁵

Infants, children, and adolescents: 6-12 mg/kg/dose once daily for 7-14 days (maximum single dose 400 mg)

Adults: Single dose of 200 mg on day 1, then 100-200 mg/dose once daily for 7-14 days

Topical or transmucosal agents for oral candidiasis**Clotrimazole**

Important: This drug is not for use in patients <3 years of age.

Form: Lozenge 10 mg

Usual dosage:²⁻⁵

Children >3 years, adolescents, and adults: Dissolve 1 lozenge 5 times daily for 7-14 days. Treatment may extend beyond clinical resolution.

Miconazole

Important: This dosage form contains milk protein concentrate.

Form: Buccal tablet 50 mg

Usual dosage:^{3,4}

Adolescents >13 years and adults: 1 tablet daily for 14 days; apply to the gum region, just above the upper lateral incisor.

Nystatin

Form: Suspension (100,000 units/mL)

Usual oral dosage:^{3,4,10}

Infants: 200,000 units (2 mL) 4 times daily; ½ of dose placed in each side of mouth. Use for 7-14 days.

Children, adolescents, and adults: Swish 400,000-600,000 units (4-6 mL) 4 times daily for several minutes and swallow; continue at least 48 hours after symptoms resolve. Use for 7-14 days.

Topical agents for angular cheilitis**Clotrimazole**

Form: Cream 1%

Usual dosage:^{4,11}

All ages: Apply a thin layer to the corners of the mouth 2-4 times daily for 7-14 days or until complete healing.

Miconazole nitrate

Forms: Ointment 2%; cream 2%

Usual dosage:^{4,11}

Children >2 years, adolescents, and adults: Apply a thin layer to the corners of the mouth 2-4 times daily for 7-14 days or until complete healing.

Medications continued on the next page.

Nystatin

Forms: Ointment, cream (100,000 units/g)

Usual dosage:^{2,4,11}

For all ages: Apply a thin layer to corners of mouth 2-4 times daily for 7-14 days or until complete healing.

Nystatin, triamcinolone acetonide (not Food and Drug Administration [FDA]-approved for this use)

Forms: Ointment, cream (100,000 units nystatin/g and 0.1% triamcinolone acetonide)

Usual dosage:^{4,11}

All ages >2 months: Apply a thin layer to the corners of the mouth 2 times daily for no longer than 2 weeks. Should be used for the shortest period of time in children (3-5 days).

Antiviral Agents

Systemic agent for primary herpetic gingivostomatitis

Acyclovir (not FDA-approved for this use)

Forms: Suspension 200 mg/5 mL; tablets 400 mg, 800 mg; capsules 200 mg; injectable 50 mg/mL

Usual dosage:³⁻⁵

Infants, children, and adolescents: 20 mg/kg/dose 4 times daily for 5-7 days (maximum single dose 800 mg)

Immunocompromised children: 20 mg/kg/doses 4 times daily for 7-10 days

Immunocompromised adolescents: 400 mg 3 times daily for 5-10 days or until resolution

Adults: 400 mg 3 times daily for 5-10 days

Valacyclovir (not FDA-approved for this use)

Forms: Suspension may be compounded by pharmacist; tablets 500 mg, 1,000 mg

Usual dosage:³⁻⁵

Infants ≥3 months, children and adolescents: 20 mg/kg/dose 2 times daily for 5-7 days (maximum single dose 1,000 mg)

Immunocompromised children and adolescents: 20 mg/kg/dose 2 times daily for 10-14 days

Adults: 1,000 mg 2 times daily for 7-10 days

Systemic agents for herpes labialis

Acyclovir (not FDA-approved for this use)

Form: Suspension 200 mg/5 mL; tablets 400 mg, 800 mg; capsules 200 mg; injectable 50 mg/mL

Usual dosage:²⁻⁵ (Begin treatment at the earliest signs/symptoms)

Infants and children: 20 mg/kg/dose 4 times daily for 7-10 days or until clinical resolution (maximum single dose 400 mg)

Immunocompromised children: 20 mg/kg/dose 4 times daily for 7-10 days or until clinical resolution

Adolescents and adults: 400 mg 3 times daily for 5-10 days or until clinical resolution

Famciclovir

Form: Tablet 125 mg, 250 mg, 500 mg

Usual dosage:²⁻⁵

Children and adolescents: Safety and efficacy have not been established.

Adolescents and adults: 1,500 mg as a single dose at the first sign or symptom of infection

Immunocompromised adolescents and adults: 500 mg 2 times daily for 5-10 days

Valacyclovir

Form: Tablet 500 mg, 1,000 mg

Usual oral dosage:²⁻⁵

Children ≥12 years, adolescents, and adults: 2,000 mg every 12 hours for 1 day (2 doses); initiate at first signs or symptoms of infection (maximum daily dose 4,000 mg for one-day regimen)

Immunocompromised adolescents and adults: 1,000 mg every 12 hours for 5-10 days (maximum daily dose 3,000 mg)

Topical agents for herpes labialis

Docosanol (over-the-counter)

Form: Cream 10%

Usual dosage:²⁻⁵

Children ≥ 12 years, adolescents, and adults: Apply a thin layer on the lesion 5 times daily for up to 10 days.

Acyclovir

Form: Cream 5%

Usual dosage:³⁻⁵

Children ≥ 12 years, adolescents, and adults: Apply a thin layer on the lesion 5 times daily for 4 days.

Acyclovir (minimal transmucosal absorption)

Important: This dosage form contains milk protein concentrate.

Form: Buccal tablet 50 mg

Usual dosage:³⁻⁵

Children ≥ 12 years, adolescents, and adults: Apply 1 tablet 1 time to the upper gums in area of canine fossa.

Acyclovir with hydrocortisone

Form: Cream (5% acyclovir with 1% hydrocortisone)

Usual dosage:³⁻⁵

Children ≥ 6 years, adolescents, and adults: Apply a thin layer on the lesion 5 times daily for 5 days.

Penciclovir (by prescription only)

Form: Cream 1%

Usual dosage:²⁻⁵

Children ≥ 12 years, adolescents, and adults: Apply a thin layer on the lesion every 2 hours while awake for 4 days.

Topical Corticosteroids

Use for noninfectious ulcers and mucocutaneous lesions, including aphthous ulcers, localized contact allergic reactions, and symptomatic benign migratory glossitis.

Triamcinolone acetonide (medium potency corticosteroid)

Form: Dental paste or ointment 0.1%

Usual dosage:^{3,4,11}

Children, adolescents, and adults: Apply paste to ulcers 2-4 times daily, after meals and at bedtime; not to exceed 14 day course.

Avoid eating or drinking for 30 minutes after application

Fluocinonide (high potency corticosteroid; not FDA-approved for oral application)

Form: Gel, ointment 0.05%

Usual dosage:^{4,11}

Adolescents and adults: Apply thin amount of gel or ointment to ulcers 2-4 times daily; not to exceed 14 day course.

Dexamethasone (high potency corticosteroid; not FDA-approved for oral application)

Form: Elixir, solution 0.5 mg/5 mL (contains alcohol)

Usual dosage:¹¹

Adolescents and adults: Rinse with 5 mL 2-4 times daily for 2 minutes and expectorate; not to exceed 14 day course.

Clobetasol (super-high potency corticosteroid; not FDA-approved for oral application)

Form: Gel, ointment 0.05%

Usual dosage:^{4,11}

Adolescents and adults: Apply thin amount of gel or ointment to ulcers 2-4 times daily, not to exceed 14 day course.

Medications continued on the next page.

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