

Pediatrics: Must Know Drug (MKD) Exam Study Guide

Drug	Indications	Side effects/Adverse Reactions	Route	Dosage	Nursing Implications
Lidocaine/Prilocaine (EMLA)	Topical Anesthetic for minor procedures; venipuncture, IV cannulation, superficial minor surgeries	Local pallor, erythema, or burning.	Topical; external use only.	1-2.5 grams covered with occlusive dressing for at least 60 min prior to procedure	In small infants and children, observe patient to prevent accidental ingestion of cream.
Dexamethasone (Decadron)	Corticosteroid; Anti-inflammatory agent, immunosuppressant. Used in variety of allergic, hematologic, dermatologic, neoplastic, rheumatic, autoimmune, nervous system, renal, and respiratory origin (FDA approved in pediatric patients).	Upset stomach, peptic ulcer, gastritis, increased appetite, headaches, dizziness, excitatory psychiatric disturbances(restlessness, mood changes, difficulty sleeping, etc) hyperglycemia, acne/facial rash. Adrenal suppression, Cushingoid appearance, infection, increased intraocular pressure. <i>(most side effects are more common with prolonged use)</i>	<ul style="list-style-type: none"> • PO with food or milk to prevent GI upset <i>or</i> • IM <i>or</i> • IV (slow push over 1-4 min or intermittent infusion over 15-30min) 	<p>Dosing based off of weight and indication!!!</p> <p>Important: look up and verify patient dosing before administering, every time for every patient. You must understand <i>why</i> your patient is ordered the drug and have an accurate weight in kilograms.</p>	<p>May affect growth velocity, cause osteoporosis or impair bone growth; growth should be routinely monitored in pediatric patients, increased risk of fractures in prolonged use.</p> <p>Monitor for hyperglycemia; may alter glucose production/regulation leading to hyperglycemia.</p>
Cefotaxime (Claforan)	<u>Antibiotic: Third generation cephalosporin.</u> Broad-spectrum. Treatment of	Pruritis, skin rash, diarrhea, inflammation at injection/pain/tenderness at injection site.	<ul style="list-style-type: none"> • IV intermittent infusion (30 minutes) • IM. Large doses should 	Dosing based off of weight and indication!!!	Use with caution in patients with anaphylaxis response to Penicillin. Avoid rapid IV

	susceptible lower respiratory tract, skin and skin structure, bone and joint, intra-abdominal, genitourinary tract, septicemia, meningitis.		be divided and administered in 2 sites.	Important: look up and verify patient dosing before administering, every time for every patient. You must understand why your patient is ordered the drug and have an accurate weight in kilograms.	administration, can cause arrhythmias. Educate patient and parents about c.difficile-associated diarrhea-signs/symptoms to look for.
Ampicillin	<u>Antibiotic: Penicillins</u> Treatment of susceptible respiratory, gastrointestinal, and urinary tract infections; bacterial meningitis, septicemia, neonatal sepsis, and endocarditis (FDA approved in pediatric patients)	Hypersensitivity-anaphylaxis GI-diarrhea, nausea, vomiting, oral candidiasis Rash	<ul style="list-style-type: none"> • PO on empty stomach <i>or</i> • IM <i>or</i> • IV (slow push over 3-5 min or intermittent infusion over 10-15 min) 	<u>Varies:</u> Dosing based off of: <ul style="list-style-type: none"> • Age (neonate ≤ 28 days vs. pediatric patient) <i>and</i> • Indication <i>and</i> • Weight in kilograms 	Patients with infectious mononucleosis have developed rash during therapy; ampicillin not recommended in these patients. Generalized maculopapular and pruritic rash appears 7- 10 days after initiation and usually resolves within a week of discontinuation.
Amoxicillin/ Clavulanate (Augmentin)	<u>Antibiotic: Penicillin and beta-lactamase inhibitor.</u> Infections caused by susceptible organisms involving	Antibiotic associate diarrhea may occur. Monitor for C.Dificile associated diarrhea: educate patient and	Administer at the start of a meal to decrease the frequency or severity of GI side	Dosing based off of amoxicillin component. Verify ordered	Reconstituted suspensions should be kept in the refrigerator. Discard after 10 days.

	the lower respiratory tract, otitis media, sinusitis, skin and skin structure, and urinary tract; spectrum same as amoxicillin in addition to beta-lactamase producing <i>M. catarrhalis</i> , <i>H. influenzae</i> , <i>N. gonorrhoeae</i> , and <i>S. aureus</i> (excluding MRSA) (FDA approved in all ages)	parents! May show signs and symptoms after first dose until 3 months after treatment. Candidial diaper rash, diaper rash, nausea, vomiting, urticaria.	effects; may mix with milk, formula, or juice; shake suspension well before use.	amoxicillin to clavulante ratio. As <i>ALWAYS</i> in pediatrics: dosing is determined with consideration of age, weight, and indication.	Hypersensitivity reactions can occur as early as 1 hour after administration and maculopapular rash as late as day 14. Educate your patient and parents!
Albuterol Sulfate (Proventil)	Beta2-Adrenergic Agonist; Bronchodilator; antiasthmatic. Treats asthma, bronchospasm. RESCUE drug. Not maintenance.	Excitement (children and adolescents 2 to 14 years: 20% rate of occurrence), nervousness, tremors, tachycardia, palpitations, increased serum glucose, increased appetite, decreased hematocrit/hemoglobin, hyperactive behavior, dizziness, upper respiratory infection symptoms, muscle spasm, mydriasis, hypertension, ST segment depression, hypokalemia.	In infants and children <4 years, a face mask with either the metered-dose inhaler or nebulizer is recommended. May use an inhaler for community use once child is developmentally mature enough to understand direction and proper use.	0.63-2.5mg (age and weight dependent) every 4-6 hours. To prevent exercise-induced bronchospasm, use 15 to 30 minutes before physical activity.	CNS stimulation, hyperactivity, and insomnia occur more frequently in younger children than in adults. In children receiving oral albuterol therapy, erythema multiforme/Stevens-Johnson syndrome have been reported (rare). lower respiratory tract colonization/infection have been attributed to contaminated multidose albuterol bottle. **Teach

					about proper use, cleaning, and storage of nebulizer/MDI spacer/inhaler.
Digoxin (Lanoxin)	Antiarrhythmic Agent, Cardiac Glycoside. Improves myocardial contractility. Treatment of mild to moderate heart failure, fetal tachycardia, slow ventricular rate in supraventricular tachyarrhythmias such as supraventricular tachycardias (SVT)	Monitor for toxicity (bradycardia, nausea, vomiting, dysrhythmias, or anorexia)	PO* may be IV Direct oral elixir toward side and back of mouth Give water to prevent tooth decay if child has teeth If child vomits, do not re-administer dose	Dose should be based on lean body weight and renal function taken into consideration. Administered every 12 hours.	Hold for infant apical pulse less than 90/min. In children, less than 70/min. Digoxin Immune Fag antidote for toxicity
Ferrous Sulfate	Prevention and treatment of iron deficiency anemias	GI upset is common at start of therapy (diarrhea, constipation, nausea, abdominal pain). Darkening stool (tarry green)	PO (elixir)** Use a straw to prevent staining teeth IV is rare and very painful infusion	Multiple concentrations exist-do not need to memorize dosages. Consider all iron sources when evaluating the dose of iron, including combination products, infant formulas, and	If tolerated, administer on an empty stomach, 1 hour before or 2 hours after milk/antacids. Give with Vitamin C to increase absorption

				liquid nutritional supplements.	
Ibuprofen (Motrin)	Analgesic, NSAID, antipyretic. Also used in Juvenile Idiopathic Arthritis (JIA), closure of patent ductus arteriosus (PDA)	Hemtalologic effects, hepatic effects, renal effects. Decreased hemoglobin, skin rash, epigastric pain, nausea.	PO* Can be IV	<p>Weight-directed dosing: Infants, Children and Adolescents: Oral: 5 to 10 mg/kg/dose every 6 to 8 hours; maximum dose: 600 mg/dose; maximum daily dose: 2,400 mg/day (<i>must memorize</i>)</p> <p>Oral liquid products are available in 2 concentrations (concentrated infant drops: 50 mg/1.25 mL [40 mg/mL] and suspension: 100 mg/5 mL [20 mg/mL]); precautions should be taken to verify and avoid confusion</p>	<p>Should only be administered to infants and children 6 months and older!</p> <p>Assess temperature prior to administering because ibuprofen can mask a fever.</p>

				between the different concentrations; dose should be clearly presented as "mg" Must verify concentration!!!	
Acetaminophen (Tylenol)	Analgesic/antipyretic. Common uses in pediatrics; teething pain, fever, mild to moderate pain.	Acute hepatotoxicity	PO** Can be administered IV	<p>Weight-directed dosing: Infants, Children, and Adolescents: 10 to 15 mg/kg/dose every 4 to 6 hours as needed (<i>must memorize</i>)</p> <p>Oral liquids are available in multiple concentrations. Most pediatric concentrations are 160mg/5mL. Must verify concentration!!!</p>	<p>Assess temperature prior to administering because Tylenol can mask a fever.</p> <p>Prophylactic use of acetaminophen to reduce fever and discomfort associated with vaccination is not recommended</p> <p>Prophylactic use of acetaminophen to reduce risk of febrile seizure in infants and children with or without a history of febrile seizures is also not recommended.</p>