

Appropriate Medication Administration

Appropriate medication administration pass times are critical to the success of your patients' medication regimen!

In general, routine medication regimens should be administered at consistent times from day to day. When drug manufacturers study the best way to formulate and administer their medication, consistent absorption within a desired onset of action window for its intended therapeutic effect all come into consideration for determining the best time to administer a medication. Absorption of medications may be altered by other medications, fluids or food when co-administered, depending on the dosage form or how the drug is formulated.

Please see the below chart for common medications that have specific administration recommendations to maintain efficacy and tolerability profiles as detailed by the drug developer and manufacturer, and approved in the FDA label:

Medications	Conditions/Timing
Bisphosphonates (alendronate, risedronate, ibandronate)	<ul style="list-style-type: none">— Administer on an empty stomach, followed by a full glass (8oz) of water.— Remain upright for at least 30 minutes (all PO bisphosphonates).— Remain upright for at least 60 minutes (ibandronate).
Levothyroxine	<ul style="list-style-type: none">— Administer on an empty stomach, 30-60 minutes before breakfast.— WAIT 4 hours before antacids or Calcium, Magnesium, or Aluminum containing supplements and food products (including dairy).
Cholestyramine (Questran)	<ul style="list-style-type: none">— Give OTHER medications 1 hours before or at least 4-6 hours after cholestyramine.
Psyllium	<ul style="list-style-type: none">— Take Psyllium husk (powder, capsules) 2 hours before or 2 hours after other medications.
Proton Pump Inhibitors (omeprazole, esomeprazole, pantoprazole)	<ul style="list-style-type: none">— Administer on an empty stomach, 30-45 minutes before breakfast.
Antibiotics (levofloxacin, ciprofloxacin, moxifloxacin, doxycycline, tetracycline)	<ul style="list-style-type: none">— Do not co-administer with Calcium, Aluminum, Magnesium and/or Iron containing products by 2 hours before or 2 hours after.— Doxy/Iron- give Iron 3 hours before or 2 hours after antibiotic.

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Calcium and Iron	<ul style="list-style-type: none">— Calcium can bind to Iron and decrease absorption. Separate by 2 hours.
Tetracycline	<ul style="list-style-type: none">— Do not administer sucralfate (contains aluminum), oral iron supplements, or aluminum-, magnesium- or calcium-containing antacids in conjunction with oral tetracycline. Multivitamins with manganese or zinc salts.
Tamsulosin	<ul style="list-style-type: none">— Administer 30 minutes after the same meal each day.
Carbidopa/Levodopa	<ul style="list-style-type: none">— Should be administered as close to scheduled time as possible. Iron salts (including polysaccharide-iron) should be separated by at least 2 hours.
Sucralfate	<ul style="list-style-type: none">— Take on empty stomach at least 1 hour prior to a meal and at bedtime. Antacids should not be taken within ½ hour before or after sucralfate.
Xarelto	<ul style="list-style-type: none">— 15mg and 20mg tablets must be taken with food.— Other strengths may be taken with or without food.
Sulfonylureas (glipizide, glimepiride)	<ul style="list-style-type: none">— Administer 30 minutes before a meal to ensure maximum reduction in postprandial hyperglycemia and reduce risk of hypoglycemia.

References:

1. Technician Tutorial, Medication Administration Timing. Pharmacist's Letter/Pharmacy Technician's Letter. November 2021. [371180]
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3. Centers for Disease Control and Prevention. (2022, December 30). Types of insulin. Centers for Disease Control and Prevention. <https://www.cdc.gov/diabetes/basics/type-1-types-of-insulin.html>