NURSE IN THE MAKING®

Pharmacology Quick Reference Guide

for Nursing Students

Pharmacology Cheat Sheet

NURSE IN THE MAKING®

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SCAN ME!

DRUG NAME & PREFIXES/SUFFIXES

ANTIBIOTICS / ANTIBACTERIALS

Medication Name	Prefixes/Suffixes
Tetracyclines	-cycline
Sulfonamides	sulf-
Cephalosporins	cef-, ceph-
Penicillins	-cillin
Aminoglycosides & macrolides	-micin, -mycin
Fluoroquinolones	-floxacin

ANTIFUNGALS

Medication Name	Prefixes/Suffixes
Antifungals	-azole

ANESTHETICS / ANTIANXIETY

Medication Name	Prefixes/Suffixes
Local anesthetics	-caine
Barbiturates (CNS depressants)	-barbital
Benzodiazepines (anxiolytics)	-zolam, -zepam

ANALGESICS/OPIOIDS

Medication Name	Prefixes/Suffixes
Opioids	-done, -one
Nonsteroidal anti-inflammatories (NSAIDs)	-profen
Salicylates	Commit to memory
Nonsalicylates	Commit to memory

ANTIVIRALS

Medication Name	Prefixes/Suffixes
Antivirals (undefined group)	-vir-, -vir
Antivirals (anti-herpes viral agents)	-clovir
Antiretrovirals (protease inhibitors)	-navir
Antiretrovirals (nucleoside reverse transcriptase inhibitors)	-vudine

ANTIDEPRESSANTS

Medication Name	Prefixes/Suffixes
Selective serotonin reuptake inhibitors (SSRIs)	-oxetine, -talopram, -zodone
Tricyclic antidepressants (TCAs)	-triptyline, -pramine

UPPER RESPIRATORY

Medication Name	Prefixes/Suffixes
H1 antagonists (second-generation antihistamines)	-tadine, -tirizine
Nasal decongestants	-eph-, -zoline

LOWER RESPIRATORY

Medication Name	Prefixes/Suffixes
Beta2-agonists (bronchodilators)	-terol
Xanthine derivatives (bronchodilators)	-phylline
Cholinergic blockers (anticholinergics)	-tropium
Immunomodulators & leukotriene modifiers	-zumab, -lukast

DRUG NAME & PREFIXES/SUFFIXES

ANTIDIABETICS

Medication Name	Prefixes/Suffixes
Thiazolidinediones	-glitazone
Inhibitors of the DPP-4 enzyme	-gliptin

CARDIAC: ANTIHYPERTENSIVES

Medication Name	Prefixes/Suffixes
ACE inhibitors	-pril
Beta blockers	-olol
Angiotensin II receptor antagonists	-sartan
Calcium channel blockers	-pine, -amil
Vasopressin receptor antagonists	-vaptan
Alpha-1 blockers	-osin
Loop diuretics	-ide, -semide
Thiazide diuretics	-thiazide
Potassium-sparing diuretics	-actone

GASTROINTESTINAL

Medication Name	Prefixes/Suffixes
Histamine H2 antagonists (H2 blockers)	-tidine
Proton pump inhibitors (PPIs)	-prazole

CARDIAC: ANTIHYPERLIPIDEMICS

Medication Name	Prefixes/Suffixes
HMG-CoA reductase inhibitors	-statin

CARDIAC: OTHER

Medication Name	Prefixes/Suffixes
Anticoagulants (factor Xa inhibitors)	-xaban
Low-molecular-weight heparins (LMWHs)	-parin
Thrombolytics (clot busters)	-teplase
Antiarrhythmics	-arone

ANTIDOTES

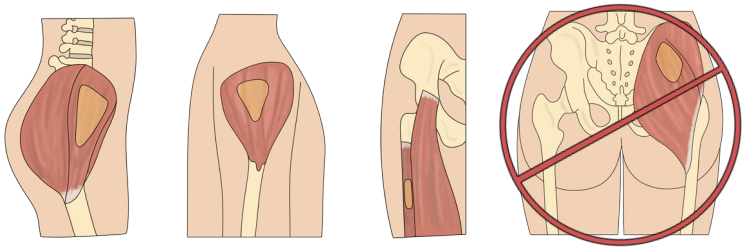
Medication Name	Antidote
Acetaminophen (Tylenol)	Acetylcysteine
Anticholinergics	Physostigmine
Aspirin	Sodium bicarbonate
Benzodiazepines	Flumazenil
Beta blockers	Glucagon
Calcium channel blockers	Glucagon, dextrose, insulin, calcium, vasopressors
Carbon monoxide	Oxygen
Cholinergics	Atropine
Cyanide	Hydroxocobalamin

Medication Name	Antidote
Digoxin	Digibind
Heparin	Protamine sulfate
Insulin	Glucagon or dextrose
Iron	Deferoxamine
Lead	Succimer or calcium disodium edetate
Magnesium sulfate	Calcium gluconate
Opioids/narcotics	Naloxone
Tricyclic antidepressants	Sodium bicarbonate
Warfarin (Coumadin)	Vitamin K

ROUTES OF ADMINISTRATION

INTRAMUSCULAR (IM)

Ventrogluteal *(below the hipbone)* | **Deltoid** *(upper arm)* | **Vastus lateralis** *(anterior thigh)* | **Dorsogluteal** *No longer recommended*



ADMINISTRATION *Best Practices*

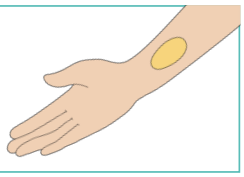
⚠ Do not administer injections in volumes exceeding 3 mL (2 mL for the deltoid)

⚠ Draw up larger volumes in 2 syringes and use different sites of administration

INTRADERMAL (ID)

ADMINISTRATION *Best Practices*

- Most common site: inner forearm
- Administer slowly just beneath the surface of the skin until a wheal or raised bump appears under the skin

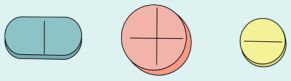


INTRAVENOUS (IV)

ADMINISTRATION *Best Practices*

- Always choose an area that will least impede patient activity
- Sites will vary due to age, vein fragility, disease processes, fluid volume status

ORAL (PO)

Enteric-coated (EC) or extended-release (ER, XR)	
Scored tablets	

ADMINISTRATION *Best Practices*

⚠ Never crush enteric-coated (EC) or extended-release (ER, XR) medications

- Split scored tablets only

TRANSDERMAL PATCH

ADMINISTRATION *Best Practices*

- Place patch in a clean, dry, hair-free area
- Rotate the application site with each use
- Can swim or shower with patch on
- Always remove previous patch prior to placing new one
- Avoid cutting or altering patch

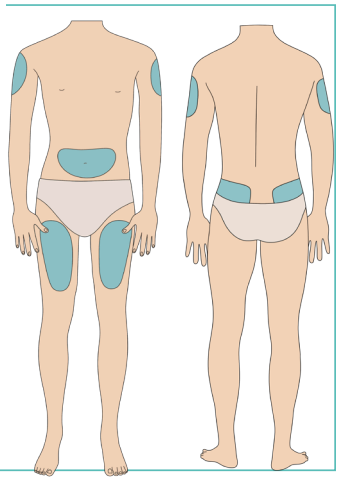
⚠ Wear gloves when applying patch to prevent the medication from being absorbed through your skin

SUBCUTANEOUS (SUBQ)

ADMINISTRATION *Best Practices*

- Injection sites:
  - Abdomen; 2 in away from umbilicus
  - Upper arm; 3 in below shoulder and 3 inches above elbow on side or back of arm
  - Upper thigh; outer side

⚠ Do not massage the site afterward



EAR & EYE DROPS

ADMINISTRATION *Best Practices*

EYE "OPHTHALMIC" DROPS

- Have patient sit upright or lie down with head tilted back
- Pull down lower eyelid to create a small pocket
- Hold dropper close to eye but avoid touching the surface
- Instill prescribed number of drops into the conjunctival sac
- Ask patient to close eyes gently and press inner canthus for 1-2 minutes (to prevent systemic absorption)
- Position patient on back with legs slightly bent and feet flat

EAR "OTIC" DROPS

- Position patient in side-lying position with the affected ear facing up
- Warm ear drops to body temperature by rolling the bottle between hands (to prevent dizziness)
- Pull pinna up and back for adults & children over 3 years
- Pull pinna down and back for children under 3 years
- Hold dropper close to ear but avoid touching the ear canal

SUPPOSITORIES

ADMINISTRATION *Best Practices*

RECTAL

- Place patient in lateral or Sims' position
- Apply water-soluble lubricant to tapered end of suppository
- Have patient take a deep breath and as they exhale, insert tapered end of suppository beyond anal sphincter
- Ask patient to retain suppository for as long as possible

VAGINAL

- Have patient void before insertion
- Position patient on back with legs slightly bent and feet flat
- Apply water-soluble lubricant
- Insert suppository into vagina along the posterior vaginal wall

ABBREVIATIONS

Abbreviations	Meaning
AC	Before meals
PC	After meals
BID	Twice a day
TID	Three times a day
QID	Four times a day
QHS	Every night at bedtime
Q4H	Every 4 hours
PRN	As needed
STAT	Immediately
PO	By mouth
SL	Sublingual (under the tongue)
IV	Intravenous
IM	Intramuscular
SC/SQ	Subcutaneous
ID	Intradermal

Abbreviations	Meaning
GTT	Drop(s)
PR	Per rectum
TOP	Topical
UNG/OINT	Ointment
TAB	Tablet
CAP	Capsule
XR/ER	Extended-release
HS	At bedtime
Mg	Milligram
Mcg	Microgram
mL	Milliliter
D/C	Discontinue
NPO	Nothing by mouth
Rx	Prescription

OFFICIAL "DO NOT USE" LIST

The Joint Commission

Do Not Use	Potential Problem	Instead, Write
U (unit)	Mistaken for “0” (zero), the number “4” (four) or “cc”	unit
IU (International Unit)	Mistaken for "IV" (intravenous) or the number "10" (ten)	International Unit
Q.D., QD, q.d., qd (daily)	Mistaken for each other	daily
Q.O.D., QOD, q.o.d, qod (every other day)	Period after the Q mistaken for “I” and the “O” mistaken for “I”	every other day
Trailing zero (X.0 mg)* Lack of leading zero (.X mg)	Decimal point is missed	X mg or 0.X mg
MS	Can mean morphine sulfate or magnesium sulfate	morphine sulfate
MSO_4 and $MgSO_4$	Confused for one another	magnesium sulfate

CARDIAC MEDICATIONS

DIGOXIN

- Assess apical pulse for 1 min prior to administration
- Withhold dose if pulse is < 60 bpm for adults
- Check last serum digoxin level
  - If not yet obtained, review protocol and speak with HCP

DILTIAZEM

- Check BP and HR prior to administration or titration
- Place on telemetry prior to starting therapy for continuous cardiac monitoring
- **Monitor:**
  - I&O
  - Daily weights
  - For S&S of heart failure

ADENOSINE

- **Needs to be given rapid IV push**
- Know facility policy of who can administer (ex.: RN or HCP)
- Continuous cardiac monitoring
  - Connect to defibrillator and cardiac monitor during administration

NITROGLYCERIN

PATCH & OINTMENT:

- Rotate sites of administration to prevent skin irritation
- Remove patch and ointment from previous site before reapplying
- Wear gloves during administration to prevent the medication from being absorbed through your skin

SUBLINGUAL TABLETS:

- Patient should be lying on stretcher or in bed
- May cause syncope due to rapid dilation
- Must dissolve entirely beneath the tongue for proper absorption

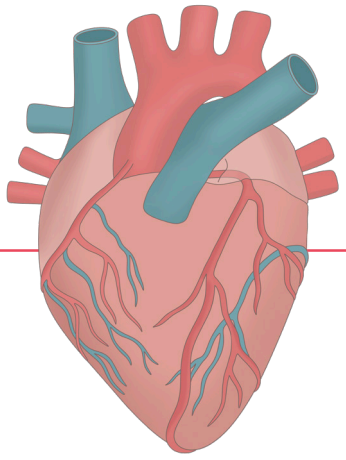
FUROSEMIDE

- Monitor fluid status
  - Daily weights
  - I&O
  - Lung sounds
  - Skin turgor
  - Mucous membranes
- Check BP and HR before and during administration
- Implement fall precautions
- Administer with caution; rapid IV administration can cause ototoxicity
- Assess for allergies to sulfonamides

⚠ Risk for cross-sensitivity

MANAGEMENT FOR ADMINISTERING CARDIAC MEDICATIONS

- Patients should be on telemetry or continuous cardiac monitoring
- If cardiac changes arise and/or persist, advocate for transfer to cardiac floor if warranted
- Always verify prior to medication administration:
  - Electrolyte levels
  - Lab values
  - BP
  - HR
- Know your patient's history
  - Cardiac events, surgeries, procedures, stents
- All cardiac patients should have at least 2 patent IV sites



RESPIRATORY MEDICATIONS

ALBUTEROL (SABA)

- Rescue inhaler for acute attacks
- Shake well before use
- Do not exceed 3 doses (2-4 puffs) every 20 minutes
- Rinse mouth after use to prevent thrush
- May cause tachycardia, tremors

FLUTICASONE

- Inhaled Corticosteroid
- Not for acute attacks
- Rinse mouth after use to prevent thrush
- Must be tapered—do not stop abruptly
- Long-term use can cause osteoporosis, hyperglycemia

SALMETEROL (LABA)

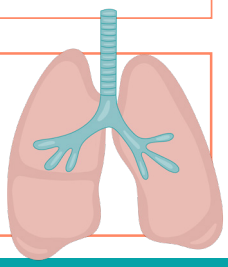
- Not for acute attacks (use SABA first)
- Must be taken daily
- Use bronchodilator first, then wait 5 minutes before corticosteroid
- Rinse mouth after use to prevent thrush
- May cause palpitations, insomnia

ACETYLCYSTEINE (MUCOLYTIC)

- Thins mucus & treats acetaminophen overdose
- Has a rotten egg smell (this is normal!)
- Use with caution in asthma—may cause bronchospasms
- Encourage hydration to thin mucus

MANAGEMENT FOR ADMINISTERING RESPIRATORY MEDICATIONS

- Monitor respiratory status before, during, and after administration
- Ensure proper technique for inhalers and nebulizers
- Encourage hydration to thin secretions for mucolytics
- Monitor for side effects:
  - Tachycardia
  - Thrush
  - Bronchospasms



PAIN MEDICATIONS

MORPHINE

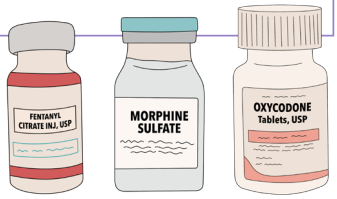
- Opioid Analgesic
- Gold standard for severe pain
- Risk for respiratory depression—hold if RR <12
- Monitor BP & LOC—can cause hypotension & sedation
- Have Naloxone (Narcan) available for overdose reversal
- Encourage fiber & fluids—opioids cause constipation

IBUPROFEN

- NSAID - Non-Steroidal Anti-Inflammatory Drug
- Avoid in kidney disease (Nephrotoxic)
- Increases risk of GI bleeding & ulcers—take with food
- Contraindicated in pregnancy (especially 3rd trimester)
- Do not give to asthma patients—may cause bronchospasms

ACETAMINOPHEN

- **Max dose:** 3,000 mg/day
- Hepatotoxic if taken in high doses—monitor liver function (ALT, AST)
- **Antidote:** Acetylcysteine (Mucomyst)
- Safe for children
- No anti-inflammatory effects



FENTANYL

- Opioid Analgesic
- Stronger than morphine (50-100x more potent)
- Transdermal patch lasts 72 hours—rotate sites
- Remove old patch before applying new one
- High risk for abuse & overdose—monitor closely
- Respiratory depression is a major concern

OXYCODONE

- Used for moderate to severe pain
- Take with food to prevent nausea
- Can cause dependence & tolerance with long-term use
- Monitor for respiratory depression & sedation
- Encourage fiber & fluids to prevent constipation

MANAGEMENT FOR ADMINISTERING PAIN MEDICATIONS

- Assess pain level before & after administration
- Monitor vital signs, especially respiratory rate & BP
- Opioids cause constipation—encourage fiber & hydration
- NSAIDs are nephrotoxic—monitor kidney function
- Avoid benzodiazepines & opioids together—high risk for overdose
- Always have reversal agents ready (Naloxone for opioids, Flumazenil for benzos)