

Generic drug names follow systematic naming conventions regulated by the USAN Council (United States Adopted Names). Learning these stems helps you recognize a drug's class, mechanism, or origin at a glance.

Drug Name Stems by Therapeutic Class

Stem	Drug Class / Mechanism	Examples
-olol	Beta-blockers (beta-adrenergic antagonists)	metoprolol, atenolol, propranolol
-pril	ACE inhibitors (angiotensin-converting enzyme)	lisinopril, enalapril, captopril
-sartan	ARBs (angiotensin II receptor blockers)	losartan, valsartan, irbesartan
-statin	HMG-CoA reductase inhibitors (cholesterol)	atorvastatin, rosuvastatin, simvastatin
-dipine	Calcium channel blockers (dihydropyridine)	amlodipine, nifedipine, felodipine
-azide / -thiazide	Thiazide diuretics	hydrochlorothiazide, chlorothiazide
-semide	Loop diuretics	furosemide, bumetanide
-prazole	Proton pump inhibitors (PPIs)	omeprazole, pantoprazole, esomeprazole
-tidine	H2 receptor antagonists	famotidine, ranitidine, cimetidine
-cyclovir	Antiviral (herpesvirus)	acyclovir, valacyclovir, ganciclovir
-cillin	Penicillin-class antibiotics	amoxicillin, ampicillin, oxacillin
-mycin / -micin	Macrolide or aminoglycoside antibiotics	azithromycin, gentamicin, erythromycin
-floxacin	Fluoroquinolone antibiotics	ciprofloxacin, levofloxacin, moxifloxacin
-azole (anti-infective)	Antifungals	fluconazole, itraconazole, metronidazole
-vir	Antivirals (general)	oseltamivir, ritonavir, tenofovir
-mab	Monoclonal antibodies	rituximab, trastuzumab, pembrolizumab
-nib	Tyrosine kinase inhibitors (targeted therapy)	imatinib, erlotinib, sunitinib
-zumab	Humanized monoclonal antibodies	bevacizumab, nivolumab, tocilizumab
-cept	Fusion proteins (receptor decoys)	etanercept, abatacept, rilonecept
-gliptin	DPP-4 inhibitors (diabetes)	sitagliptin, saxagliptin, alogliptin
-gliflozin	SGLT-2 inhibitors (diabetes)	empagliflozin, dapagliflozin, canagliflozin
-glutide	GLP-1 receptor agonists (diabetes)	semaglutide, liraglutide, exenatide
-tidine / -setron	5-HT3 antagonists (antiemetics)	ondansetron, granisetron, palonosetron
-triptan	5-HT1B/1D agonists (migraine)	sumatriptan, rizatriptan, eletriptan
-pam / -lam	Benzodiazepines (anxiolytics/sedatives)	diazepam, lorazepam, alprazolam
-pine	Atypical antipsychotics	olanzapine, quetiapine, clozapine
-done	Antipsychotics (various)	haloperidol, risperidone, ziprasidone
-pram / -tine (SSRI)	Selective serotonin reuptake inhibitors	sertraline, fluoxetine, escitalopram
-venlafaxine / -xetine (SNRI)	Serotonin-norepinephrine reuptake inhibitors	duloxetine, venlafaxine, desvenlafaxine
-codone / -morphine	Opioid analgesics	oxycodone, hydromorphone, morphine
gluco- / -sone (corticosteroid)	Corticosteroids	prednisone, dexamethasone, methylprednisolone

Stem	Drug Class / Mechanism	Examples
-phylline	Xanthine bronchodilators	theophylline, aminophylline
-terol	Beta-2 agonists (bronchodilators)	albuterol, salmeterol, formoterol
-caine	Local anesthetics	lidocaine, bupivacaine, ropivacaine
hepar- / -parin	Anticoagulants (heparin-type)	heparin, enoxaparin, dalteparin
-xaban	Factor Xa inhibitors (anticoagulants)	rivaroxaban, apixaban, edoxaban
-gatran	Direct thrombin inhibitors	dabigatran, argatroban, bivalirudin
-olone	Corticosteroids or progestins	prednisolone, progesterone, medroxyprogesterone
-estrel / -estrone	Estrogens / progestins	norgestrel, estrone, levonorgestrel

Prefix Clues in Drug Names

Prefix	Meaning	Example
cef- / ceph-	Cephalosporin antibiotic	cefazolin, cephalexin
co-	Combination product	co-trimoxazole
dex-	Dextro- isomer (or potent form)	dextroamphetamine, dexamethasone
eso-	(S)-enantiomer of existing drug	esomeprazole (S-omeprazole)
levo-	Levo- (L-) isomer	levofloxacin, levothyroxine
nor-	Demethylated (N-desmethyl) metabolite	norepinephrine, norgestimate
val-	Prodrug form (often oral bioavailability)	valacyclovir, valganciclovir

Key Tips for Decoding Drug Names

1. Look for the stem at the END of the generic name — stems are almost always suffixes.
2. Brand names are capitalized; generic names are lowercase.
3. '-mab' = monoclonal antibody. The middle syllable tells you the source: -u- = human, -zu- = humanized, -xi- = chimeric, -o- = mouse.
4. When two drugs share a stem, they share a class — useful for predicting side effects and contraindications.
5. Prodrugs often end in '-pro-' or start with 'val-' — they are converted to active form in the body.
6. High-alert medications (insulin, heparin, opioids, concentrated electrolytes) require extra verification regardless of name recognition.