

Oral Dosage Forms That Should Not be Crushed Formulary-Specific List for VCMC and SPH

Generic	Brand	Dosage Form(s)	Reasons/Comments
amoxicillin-clavulanate	Augmentin XR	Tablet	Slow-release (b,h)
aspirin	Aspirin EC	Caplet; Tablet	Slow-release; Enteric-coated
aspirin and dipyridamole	Aggrenox XR	Capsule	Slow-release
atazanavir	Reyataz	Capsule	Note: an oral powder is available, see prescribing information for administration instructions
atomoxetine	Strattera	Capsule	Note: capsule contents can cause ocular irritation <ul style="list-style-type: none"> - Do not open capsules as contents are an ocular irritant
benzonatate	Tessalon Perles	Capsule	Note: swallow whole; local anesthesia of the oral mucosa; choking could occur <ul style="list-style-type: none"> - Capsules are liquid-filled "perles" - Do not alter (break, cut, chew) integrity of dosage form; local mucosal irritant and anesthetic
bisacodyl	Dulcolax	Capsule; Tablet	Enteric-coated (c)
bosentan	Tracleer	Tablet	Note: women who are, or may become, pregnant, should not handle crushed or broken tablets
brivaracetam	Briviact	Tablet	Film-coated (b)
budesonide	Entocort EC	Capsule	Enteric-coated (a) <ul style="list-style-type: none"> - Capsules contain enteric-coated granules in extended-release matrix; can open capsules but do not crush contents - Products are formulated to release active drug at mid- to late small intestine
bu PROP ion	Wellbutrin XL	Tablet	Slow-release <ul style="list-style-type: none"> - Do not crush extended-release tablets - Immediate-release tablet products may be film-coated

carvedilol phosphate	Coreg CR	Capsule	Slow-release (a) (Note: may add contents of capsule to chilled, not warm, applesauce and consume immediately) <ul style="list-style-type: none"> – Immediate-release tablet products may be film-coated – Do not open, chew, or crush extended-release capsules
cefuroxime	Ceftin	Tablet	Taste (b) (Note: use suspension for children) <ul style="list-style-type: none"> – Tablet products may be film-coated but may disperse in water (20 mL) in about 1 minute – Do not crush (risk of sensitization, and taste is unacceptable for oral administration)
cinacalcet	Sensipar	Tablet	Note: tablets are not scored and cutting may cause variable dosage accuracy
cloNIDine	Kapvay	Tablet	Slow-release <ul style="list-style-type: none"> – Do not crush sustained-release product – Immediate-release tablet may disperse in water (20 mL) within 5 minutes
cyclophosphamide	Cytosan	Tablet	Note: drug may be crushed but company recommends using injection
dabigatran	Pradaxa	Capsule	Note: breaking, chewing, or emptying contents of the capsule can result in increased exposure
dasatinib	Sprycel	Tablet	Film-coated (Note: active ingredients are surrounded by wax matrix to prevent healthcare exposure; women who are, or may become, pregnant, should not handle crushed or broken tablet)
dilTIAZem	Cardizem	Tablet	Note: although not in the package insert, the drug has a coating that is intended to release the drug over approximately 3 hours <ul style="list-style-type: none"> – Immediate-release tablets do not disperse in water and may be difficult to crush – Do not crush, chew, or disassemble extended-release tablets or capsules

			containing modified release granules
dil TIAZem	Cardizem CD	Capsule	Slow-release <ul style="list-style-type: none"> - Immediate-release tablets do not disperse in water and may be difficult to crush - Do not crush, chew, or disassemble extended-release tablets or capsules containing modified release granules
dil TIAZem	Tiazac	Capsule	Slow-release (a) <ul style="list-style-type: none"> - Immediate-release tablets do not disperse in water and may be difficult to crush - Do not crush, chew, or disassemble extended-release tablets or capsules containing modified release granules
disopyramide	Norpace CR	Capsule	Slow-release form within a special capsule
divalproex	Depakote EC	Tablet	Enteric-coated
divalproex	Depakote ER	Tablet	Slow-release <ul style="list-style-type: none"> - Divalproex is composed of valproic acid and valproate sodium (1:1) - Do not crush tablet contents
divalproex	Depakote Sprinkles	Capsule	Slow-release <ul style="list-style-type: none"> - Divalproex is composed of valproic acid and valproate sodium (1:1) - Do not crush capsule contents
doxycycline	Vibramycin	Capsule; Tablet	Film-coated (h) (Note: tablet scored in thirds rather than half) <ul style="list-style-type: none"> - Delayed-release products contain enteric-coated granules - Mixed-release products contain both immediate-release and delayed-release granules; do not crush - Do not open immediate-release capsule (irritant) - Immediate-release tablets do not disperse in water
DULoxetine	Cymbalta	Capsule	Slow-release (a) (Note: may add contents of

			capsule to apple juice or applesauce but NOT chocolate) <ul style="list-style-type: none"> - Do not open, chew, or crush capsule - Capsule contains delayed-release (enteric-coated) granules
ergocalciferol	Drisdol	Capsule	Liquid filled (d)
erythromycin	Ery-Tab	Tablet	Enteric-coated
esomeprazole	NexIUM	Capsule	Slow-release (a) <ul style="list-style-type: none"> - Do not crush tablets (extended-release) or capsule contents (enteric-coated granules)
ferrous sulfate	ferrous sulfate	Tablet	Enteric-coated (b)
finasteride	Proscar	Tablet	Note: women who are, or may become, pregnant, should not handle crushed or broken tablets <ul style="list-style-type: none"> - Tablet products are often film-coated - Crush/disperse only using a closed system - Women of childbearing potential should not handle (risk of fetal abnormalities)
ganciclovir	Cytovene	Capsule	Skin irritant
hydroxyurea	Hydrea	Capsule	Note: exposure to the powder may cause serious skin toxicities; health care workers should wear gloves to administer
ibuprofen	Motrin	Tablet	Taste (b,e) <ul style="list-style-type: none"> - Do not crush (taste is unacceptable) - Tablets may be film-coated and do not disperse in water
imatinib	Gleevec	Tablet	Taste (h) (Note: may be dissolved in water or apple juice)
indinavir	Crixivan	Capsule	Taste (Note: capsule may be opened and mixed with fruit puree [e.g., banana])
isosorbide mononitrate	Imdur	Tablet	Slow-release (h)
lansoprazole	Prevacid SoluTab	Tablet	Note: orally disintegrating do not swallow; dissolve in water only and dispense via

			dosing syringe of NG tube <ul style="list-style-type: none"> - Do not crush tablet or capsule contents as they contain enteric-coated granules - The tablet will, however, completely disperse in 10 mL of water
levETIRAcetam	Keppra	Tablet	Taste (b) (Note: some extemporaneous formulas are pharmacy prepared) <ul style="list-style-type: none"> - Do not crush extended-release tablet - Immediate-release tablet products may be film-coated; do not crush (unacceptable taste) - ODTs may disperse easily in small volume of water
lithium	Lithobid	Tablet	Slow-release
loratidine	Claritin-D 12 Hour	Tablet	Slow-release
loratidine	Claritin-D 24 Hour	Tablet	Slow-release
mesalamine	Asacol	Tablet	Slow-release
mesalamine	Pentasa	Capsule	Slow-release
metFORMIN	Glucophage XR	Tablet	Slow-release <ul style="list-style-type: none"> - Do not crush extended-release product - Depending on the manufacturer, the extended-release tablet matrix may appear intact in stool following oral administration - Non-extended-release tablets may be film-coated and do not disperse in water, but they may disperse after crushing
morphine	Oramorph SR	Tablet	Slow-release (b)
mycophenolate mofetil	CellCept	Capsule; Tablet	Teratogenic potential (i)
nicotine	Various	Lozenge	Note: integrity compromised by chewing or crushing
NIFEdipine	Adalat CC	Tablet	Slow-release <ul style="list-style-type: none"> - Do not attempt to aspirate liquid with needle and syringe - Do not chew/crush modified-release tablet

			<ul style="list-style-type: none"> - Solid matrix may appear in stool following oral administration
nitroglycerin	Nitroquick, Nitrostat	Tablet	Sublingual form (g)
oxybutynin	Ditropan XL	Tablet	Slow-release <ul style="list-style-type: none"> - Do not chew or crush extended-release tablet; the inert tablet shell may remain intact into feces following oral administration - Immediate-release tablet may be crushed and dispersed in water (it does not disperse well without crushing)
oxy CODONE	Oxy CONTIN	Tablet	Slow-release (Note: tablet disruption may cause a potentially fatal overdose of oxyCODONE) <ul style="list-style-type: none"> - Do not chew or crush modified-release products - Avoid crushing or dispersing tablets (immediate- or extended-release) for enteral access device administration (clogging risk)
pancrelipase	Creon 10, 20	Capsule	Slow-release (a)
pancrelipase	Pancrease	Capsule	Slow-release
pentoxifylline	TRE ntal	Tablet	Slow-release
potassium chloride	K-Dur, Klor-Con, Klor-Con M	Tablet	Slow-release <ul style="list-style-type: none"> - Klor-Con (b), Klor-Con M (b,h) - Do not crush film-coated or extended-release products - Most tablet products are film-coated - Effervescent product may be diluted as per manufacturer instructions
potassium bicarbonate	Effer-K	Tablet	Effervescent tablet (f)
potassium citrate	Urocit-K	Tablet	Wax-coated; prevents upper GI release
praziquantel	Biltricide	Tablet	Taste (h)
propranolol	Inderal LA	Capsule	Slow-release <ul style="list-style-type: none"> - Do not open, chew, or capsules - Some tablet products may disperse in water (20 mL) within 5 minutes

pseudoephedrine	Sudafed 12 hour, Sudafed 24 hour	Capsule	Slow-release (b)
ritonavir	Norvir	Tablet	Note: crushing tablets has resulted in decreased bioavailability of drug (b)
ritonavir-lopinavir	Kaletra	Tablet	Film-coated
rivaroxaban	Xarelto	Tablet	Note: crushed tablet must be given within 4 hours
sevelamer	Renagel	Tablet	Note: tablets expand in liquid if broken or crushed
sevelamer carbonate	Renvela	Tablet	Note: tablets expand in liquid if broken or crushed (b)
tamsulosin	Flomax	Capsule	Slow-release <ul style="list-style-type: none"> - Do not crush, chew, or open capsule, which is a slow-release product
theophylline	Theo-Dur	Capsule	Slow-release (Note: contains beads that dissolve throughout the GI tract)
topiramate	Topamax	Capsule; Tablet	Taste; Taste (a) <ul style="list-style-type: none"> - Tablet products may be film-coated - Tablet can be crushed and dispersed in water, but that is not recommended for oral administration (bitter taste is unacceptable) - Do not crush or chew capsule products (they contain coated granules or are extended-release) - Tablet and sprinkle capsule are considered to be bioequivalent
valGANCiclovir	Valcyte	Tablet	Teratogenic and irritant potential (i, b)
verapamil	Calan SR	Tablet	Slow-release (h) <ul style="list-style-type: none"> - Most tablet products are film-coated and do not disperse in water. - Do not crush extend-release tablets or capsule contents
verapamil	Verapamil XR	Capsule	Slow-release (h) <ul style="list-style-type: none"> - Do not crush extended-release tablets or capsule products - Most tablet products are film-coated and do not disperse in water

venlafaxine	Effexor XR	Capsule	Slow-release <ul style="list-style-type: none"> - Do not crush extended-release tablet or capsule contents (coated granules) or place them in water - Immediate-release tablet disperses in water after crushing
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Key¹:

- (a):** Capsule may be opened and the contents taken without crushing or chewing; soft foods such as applesauce or pudding may facilitate administration; contents may generally be administered via nasogastric tube using an appropriate fluid provided entire contents are washed down the tube.
- (b):** Liquid dosage forms of the product are available; however dose, frequency of administration, and manufacturers may differ from that of the solid dosage form.
- (c):** Antacids and/or milk may prematurely dissolve the coating of the tablet.
- (d):** Capsule may be opened and the liquid contents removed for administration.
- (e):** The taste of this product form would likely be unacceptable to the patient; administration via nasogastric tube should be acceptable.
- (f):** Effervescent tablets must be dissolved in the amount of diluent recommended by the manufacturer.
- (g):** Tablets are made to disintegrate under the tongue.
- (h):** Tablet is scored and may be broken in half without affecting release characteristics.
- (i):** Skin contact may enhance tumor production; avoid direct contact.

References:

1. Institute for Safe Medication Practices. (2016). *Oral Dosage Forms That Should Not Be Crushed 2016*. Retrieved from: http://file.lacounty.gov/SDSInter/dmh/1042766_MedicationsDoNotCrushList.pdf
2. Institute for Safe Medication Practices. (2016). *FDA and ISMP Lists of Look-Alike Drug Names with Recommended Tall Man Letters*. Retrieved from: <https://www.ismp.org/sites/default/files/attachments/2017-11/tallmanletters.pdf>
3. The American Society for Parenteral and Enteral Nutrition (ASPEN). 2019. *Guidebook on Enteral Medication Administration*.