

## Medications That Should Not Be Crushed

**full update April 2025**

Crushing pills can improve ease of administration, but some shouldn't be crushed. Crushing **extended-release** meds can result in administration of a large dose all at once. Crushing **delayed-release** meds can alter the mechanism designed to protect the drug from gastric acids or prevent gastric mucosal irritation. Crushing **sublingual or buccal** tabs can alter effectiveness. Crushing pills **based on certain technologies** (i.e., amorphous solid dispersion or nanocrystals) can alter bioavailability.<sup>9</sup> Crushing **bitter-tasting** meds can be unpleasant for the patient. Crushing **irritating or hazardous** meds can be harmful to the individual crushing the meds. If hazardous meds [e.g., carcinogenic] must be crushed, follow USP Chapter <800> standards in healthcare settings or advising outpatients on proper procedures. Hazardous meds below explicitly state not to crush in the product information. The NIOSH hazardous meds list is at <https://www.cdc.gov/niosh/docs/2025-103/pdfs/2025-103.pdf?id=10.26616/NIOSH PUB2025103>.

*This table has some **common** meds that should not be crushed; many more may not be listed. Brand names are representative and may not be all-inclusive. The most current product labeling for US and Canadian products was used to confirm information, in addition to listed references.*

**Modified-release: Indicates extended-release or delayed-release formulation.<sup>7</sup>**

Medications That Should Not Be Crushed <sup>1,3-5,10,13,14,22</sup>			
Generic Name	Brand Name	Dosage Form	Comments
Acamprosate	Campral (brand discontinued)	Tablet	• Modified-release
Acetaminophen	Tylenol Arthritis Pain Extended-Release (US)	Tablet	• Modified-release
Acoramidis	Attruby	Tablet	• No information on the effects of crushing
Adagrasib	Krazati (US)	Tablet	• Risk of instability; contact manufacturer for crushing instructions <sup>1</sup>
Alendronate	Fosamax	Tablet	• Irritant (oropharyngeal)
Alfuzosin	Uroxatral (US), Xatral (Canada)	Tablet	• Modified-release
Alprazolam	Xanax XR (US)	Tablet	• Modified-release
Ambrisentan	Letairis (US), Volibris (Canada)	Tablet	• Risk of fetal harm and impaired fertility
Amoxicillin/Clavulanate	Augmentin XR (US; brand discontinued)	Tablet	• Modified-release • Scored tablets can be split
Aprepitant	Emend (US)	Capsule	• Nanocrystal <sup>9</sup>
Asciminib	Scemblix	Tablet	• Potential for altered release or absorption due to salt form conversion <sup>1</sup>

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<b>Generic Name</b>	<b>Brand Name</b>	<b>Dosage Form</b>	<b>Comments</b>
Aspirin	Ecotrin	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Irritant (gastric)</li> </ul>
Aspirin/Dipyridamole	Aggrenox (US; brand discontinued)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Atogepant	Qulipta	Tablet	<ul style="list-style-type: none"> <li>• May be an amorphous solid dispersion<sup>1</sup></li> </ul>
Atomoxetine	Strattera	Capsule	<ul style="list-style-type: none"> <li>• Irritant (ocular)</li> </ul>
Avacopan	Tavneos	Capsule	<ul style="list-style-type: none"> <li>• May be an amorphous solid dispersion<sup>1</sup></li> </ul>
Avapritinib	Ayvakit	Tablet	<ul style="list-style-type: none"> <li>• Potential for altered release or absorption due to changes in crystalline form or particle size<sup>1</sup></li> </ul>
Belumosudil	Rezurock	Tablet	<ul style="list-style-type: none"> <li>• Potential for altered release or absorption due to salt form conversion<sup>1</sup></li> </ul>
Benzonatate	Tessalon Perles (US)	Capsule	<ul style="list-style-type: none"> <li>• Local anesthetic effect could increase the risk of choking</li> </ul>
Bexagliflozin	Brenzavvy (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release<sup>20</sup></li> </ul>
Bisacodyl	Dulcolax	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Irritant (gastric)</li> </ul>
Brivaracetam	Briviact (US), Brivlera (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Bad taste<sup>10</sup></li> </ul>
Bosutinib	Bosulif	Tablet	<ul style="list-style-type: none"> <li>• Risks of fetal harm and impaired fertility</li> </ul>
Budesonide	Entocort EC (US), Entocort (Canada)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Budesonide	Uceris (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Buprenorphine	Belbuca (US)	Film	<ul style="list-style-type: none"> <li>• Sublingual dosage form</li> </ul>
Bupropion	Aplenzin (US), Forfivo XL (US), Wellbutrin SR (US), Wellbutrin XL, Zyban	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Cabozantinib	Cabometyx, Cometriq (US)	Capsule, Tablet	<ul style="list-style-type: none"> <li>• Risk of fetal harm and impaired fertility</li> </ul>
Capivasertib	Truqap	Tablet	<ul style="list-style-type: none"> <li>• No information on the effects of crushing</li> </ul>
Capmatinib	Tabrecta	Tablet	<ul style="list-style-type: none"> <li>• Potential for altered release or absorption due to salt form conversion<sup>1</sup></li> </ul>
Carbamazepine	Carbatrol (US), Equetro (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Carbamazepine	Tegretol XR (US), Tegretol CR (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>

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Carvedilol	Coreg CR (US; brand discontinued)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Cefuroxime	Ceftin (brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Bad taste</li> </ul>
Ciprofloxacin	Cipro (US; brand discontinued in Canada)	Tablet	<ul style="list-style-type: none"> <li>• Bad taste</li> </ul>
Ciprofloxacin	Cipro XR (US); Cipro XL (Canada; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Clarithromycin	Biaxin XL	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Clonidine	Kapvay (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Colestipol	Colestid	Tablet	<ul style="list-style-type: none"> <li>• Choking hazard</li> </ul>
Cyclobenzaprine	Amrix (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Cyclophosphamide	Cytosan (US), Procytox (Canada)	Capsule (US), Tablet	<ul style="list-style-type: none"> <li>• Carcinogenic</li> <li>• Cytotoxic</li> <li>• Risk of fetal harm and impaired fertility</li> </ul>
Dabigatran	Pradaxa	Capsule	<ul style="list-style-type: none"> <li>• Intact product must be taken to avoid increased exposure (bioavailability)</li> </ul>
Dalfampridine	Ampyra (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Darifenacin	Enablex	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Dasatinib	Sprycel	Tablet	<ul style="list-style-type: none"> <li>• Risks of fetal harm and impaired fertility</li> </ul>
Deferasirox	Exjade	Tablet	<ul style="list-style-type: none"> <li>• Tablet is for oral suspension</li> </ul>
Desvenlafaxine	Pristiq	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Dexlansoprazole	Dexilant	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Dexmethylphenidate	Focalin XR (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Dextroamphetamine	Dexedrine Spansule	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules<sup>5</sup></li> </ul>
Dextroamphetamine/ Amphetamine	Adderall XR	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Diclofenac	Voltaren (brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Irritant (gastric)<sup>11</sup></li> </ul>

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Diclofenac/misoprostol	Arthrotec	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Irritant (gastric)<sup>11</sup></li> <li>• Risk of fetal harm</li> </ul>
Diclofenac	Voltaren XR (US: Brand discontinued), Voltaren SR (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Diffenlusal	Dolobid (US; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Irritant (gastric)<sup>5</sup></li> </ul>
Diltiazem	Cardizem CD (US), Cardizem LA (US), Cartia XT (US), Dilt-XR (US), Tiazac, Tiazac XC (Canada)	Tablet, Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules (Tiazac)</li> </ul>
Dimethyl Fumarate	Tecfidera	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Disopyramide	Norpace CR (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Divalproex	Depakote Sprinkle (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Divalproex	Depakote (US), Depakote ER (US), Epival (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Docusate Sodium	Colace	Capsule	<ul style="list-style-type: none"> <li>• Bad taste</li> </ul>
Donepezil	Aricept (23 mg strength only [US])	Tablet	<ul style="list-style-type: none"> <li>• Intact product must be taken to avoid increased rate of absorption<sup>5</sup></li> </ul>
Doxazosin	Cardura XL (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Doxycycline	Doryx (US), Apprilon (Canada)	Capsule, Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Scored tablets can be broken up, taking care not to crush the pellets.</li> </ul>
Drospirenone/estetrol	Nextstellis	Tablet	<ul style="list-style-type: none"> <li>• Low-dose product with risk of instability<sup>1</sup></li> </ul>
Duloxetine	Cymbalta	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Dutasteride	Avodart, Jalyn	Capsule	<ul style="list-style-type: none"> <li>• Risk of fetal harm and impaired fertility</li> <li>• Irritant (oropharyngeal)</li> </ul>
Elacestrant	Orserdu	Tablet	<ul style="list-style-type: none"> <li>• Crushing may alter bioavailability<sup>7</sup></li> </ul>
Elbasvir/Grazoprevir	Zepatier (US)	Tablet	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> </ul>
Elexacaftor/Tezacaftor/ Ivacaftor	Trikafta	Tablet	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> </ul>
Ensartinib	Ensacove (US)	Capsule	<ul style="list-style-type: none"> <li>• No information on the effects of opening capsules</li> </ul>
Enzalutamide	Xtandi	Capsule	<ul style="list-style-type: none"> <li>• Risk of fetal harm and impaired fertility</li> </ul>

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Ergotamine	Ergomar (US)	Tablet	• For sublingual administration
Erythromycin delayed-release	Ery-Tab (US)	Tablet	• Modified-release
Erythromycin ethylsuccinate	E.E.S. (US)	Tablet	• Bad taste <sup>18</sup>
Esomeprazole	Nexium	Capsule (US), Tablet (Canada)	• Modified-release • Capsule can be opened for administration of intact granules <sup>12</sup>
Esomeprazole/naproxen	Vimovo (brand discontinued in US)	Tablet	• Modified-release
Eszopiclone	Lunesta (US)	Tablet	• Bad taste
Etravirine	Intelence	Tablet	• Amorphous solid dispersion <sup>9</sup> • Tablet may be dispersed in water • Scored tablets can be split
Everolimus	Afinitor, Zortress (US)	Tablet	• Amorphous solid dispersion <sup>9</sup> • Risk of fetal harm and impaired fertility
Felodipine	Plendil (brand discontinued in US)	Tablet	• Modified-release
Fenofibrate	TriCor (US; brand discontinued)	Tablet	• Nanocrystal <sup>9</sup>
Ferrous Sulfate	Feosol	Tablet	• Mucosal ulceration <sup>2</sup>
Fesoterodine	Toviaz	Tablet	• Modified-release
Fexofenadine/ Pseudoephedrine	Allegra-D	Tablet	• Modified-release
Fezolinetant	Veozah	Tablet	• Effect of crushing on pharmacokinetics is unknown <sup>19</sup>
Finasteride	Propecia, Proscar	Tablet	• Risk of fetal harm
Fluoxetine	Prozac Weekly (US; brand discontinued)	Capsule	• Modified-release
Fluvastatin	Lescol XL (US)	Tablet	• Modified-release (Lescol XL)
Fluvoxamine	Luvox CR (US; brand discontinued)	Capsule	• Modified-release
Futibatinib	Lytgobi (US)	Tablet	• Low-dose product with risk of instability <sup>1</sup>
Gabapentin	Gralise (US), Horizant (US)	Tablet	• Modified-release

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Galantamine	Razadyne ER (US; brand discontinued), Zunveyl (US), Reminyl ER (Canada; brand discontinued)	Capsule, Tablet	• Modified-release
Gepirone	Exxua (US)	Tablet	• Modified-release
Glecaprevir/Pibrentasvir	Mavyret	Tablet	• Amorphous solid dispersion <sup>9</sup>
Glipizide	Glucotrol XL (US)	Tablet	• Modified-release
Guaifenesin	Mucinex (US)	Tablet	• Modified-release
Guaifenesin/ Dextromethorphan	Mucinex DM (US)	Tablet	• Modified-release
Guaifenesin/ Pseudoephedrine	Mucinex D (US)	Tablet	• Modified-release
Guanfacine	Intuniv (US), Intuniv XR (Canada)	Tablet	• Modified-release
Hydroxyurea	Droxia (US; brand discontinued), Hydrea, Siklos (US)	Capsule, Tablet	• Cytotoxic • Risk of fetal harm and impaired fertility
Ibandronate	Boniva (US; brand discontinued)	Tablet	• Irritant (oropharyngeal)
Ibuprofen	Advil, Motrin	Tablet	• Bad taste <sup>4</sup>
Imatinib	Gleevec	Tablet	• Irritant (gastrointestinal) • Scored tablets can be split • Can be dispersed in water • Risk of fetal harm
Inavolisib	Itovebi (US)	Tablet	• No information on the effects of crushing
Indomethacin	Indocin SR (US; brand discontinued)	Capsule	• Modified-release • Can be opened for administration of intact granules <sup>4</sup>
Iptacopan	Fabhalta	Capsule	• No information on the effects of opening capsules
Isavuconazonium Sulfate	Cresemba	Capsule	• Risk of instability or reduced absorption <sup>15</sup>
Isosorbide Mononitrate	Imdur (US; brand discontinued)	Tablet	• Modified-release • Scored tablets can be split

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Isotretinoin	Absorica (US), Absorica LD, Accutane (Canada), Amnesteem (US), Claravis (US), Clarus (Canada), Epuris (Canada), Myorisan (US), Zenatane (US)	Capsule	<ul style="list-style-type: none"> <li>• Irritant (esophageal)</li> <li>• Teratogenic</li> </ul>
Itraconazole	Sporanox	Capsule	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> </ul>
Ivacaftor	Kalydeco	Tablet	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> </ul>
Ivosidenib	Tibsovo	Tablet	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> </ul>
Lamotrigine	Lamictal XR (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Lansoprazole	Prevacid	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Lansoprazole	Prevacid SoluTab (US), Prevacid FasTab (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Should be dissolved in the mouth, not chewed</li> </ul>
Lazertinib	Lazcluze	Tablet	<ul style="list-style-type: none"> <li>• No information on the effects of crushing</li> </ul>
Lenalidomide	Revlimid	Capsule	<ul style="list-style-type: none"> <li>• Teratogenic</li> </ul>
Lenacapavir	Sunlenca	Tablet	<ul style="list-style-type: none"> <li>• Potential for altered release or absorption due to salt form conversion<sup>1</sup></li> </ul>
Lenvatinib	Lenvima	Capsule	<ul style="list-style-type: none"> <li>• Risk of fetal harm and impaired fertility</li> </ul>
Levetiracetam	Keppra	Tablet	<ul style="list-style-type: none"> <li>• Bad taste<sup>4</sup></li> </ul>
Levetiracetam	Keppra XR (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Levodopa/Carbidopa	Sinemet CR	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Scored tablets can be split</li> </ul>
Levomilnacipran	Fetzima	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Lithium Carbonate	Lithobid (US), Lithmax (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Lopinavir/Ritonavir	Kaletra	Tablet	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> <li>• Reduced bioavailability with crushing<sup>8</sup></li> </ul>
Loratadine/ Pseudoephedrine	Claritin-D (US), Claritin Allergy and Sinus (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Lovastatin	Altoprev (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Lubiprostone	Amitiza	Capsule	<ul style="list-style-type: none"> <li>• Exposure of capsule contents will impair absorption<sup>25</sup></li> </ul>
Lumacaftor/Ivacaftor	Orkambi	Tablet	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> </ul>

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Mavoxixafor	Xolremdi	Capsules	<ul style="list-style-type: none"> <li>• No information about the effects of opening capsules</li> </ul>
Memantine	Namenda XR (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Mesalamine (mesalazine)	Apriso (US), Asacol HD (US; brand discontinued), Delzicol (US; brand discontinued), Lialda (US), Mezavant (Canada), Octasa (Canada), Pentasa	Tablet, Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Capsules can be opened for administration of intact granules (Delzicol, Pentasa)</li> </ul>
Metformin	Fortamet (US), Glucophage XR (US; brand discontinued), Glumetza	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Methylphenidate	Aptensio XR (US), Biphentin (Canada), Metadate CD (US), Foquest (Canada), Jornay PM, Metadate CD, Ritalin LA (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Methylphenidate	Concerta, Cotempla XR-ODT (US), Relexxii (US), Ritalin SR (Canada; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Metoprolol Succinate	Toprol-XL (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Scored tablets can be split</li> </ul>
Miltefosine	Impavido	Capsule	<ul style="list-style-type: none"> <li>• Teratogenic</li> <li>• Risk of impaired fertility</li> </ul>
Minocycline	Emrosi (US), Solodyn (US; brand discontinued)	Capsule, Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Mirabegron	Myrbetriq	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Momelotinib	Ojjaara	Tablet	<ul style="list-style-type: none"> <li>• No information on the effects of crushing</li> </ul>
Morphine Sulfate	Avinza (US; brand discontinued); Kadian (Canada; brand discontinued in US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules</li> </ul>
Morphine Sulfate	MS Contin	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Mycophenolate	CellCept	Capsule, Tablet	<ul style="list-style-type: none"> <li>• Teratogenic<sup>23</sup></li> <li>• Irritant<sup>23</sup></li> <li>• Immunosuppressive</li> </ul>
Mycophenolic Acid	Myfortic	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>

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			<ul style="list-style-type: none"> <li>• Teratogenic</li> <li>• Immunosuppressive</li> </ul>
Naproxen	EC Naprosyn (US), Naprelan (US), Pro-naproxen EC (Canada), Teva-naproxen EC (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Nevirapine	Viramune XR (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Niacin	Niaspan (US; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Nicotine	Nicorette (US)	Lozenge	<ul style="list-style-type: none"> <li>• Should be dissolved in the mouth, not chewed</li> </ul>
Nifedipine	Adalat CC (US; brand discontinued), Adalat Oros (Canda), Procardia XL (US), Adalat XL (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Nilotinib	Tasigna, Danziten (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Risk of fetal harm</li> <li>• Can be opened for administration of intact granules</li> </ul>
Nirmatrelvir/ritonavir	Paxlovid	Tablets	<ul style="list-style-type: none"> <li>• No information on the effects of crushing</li> </ul>
Nirogacestat	Ogsiveo (US)	Tablet	<ul style="list-style-type: none"> <li>• In one clinical trial, could be dispersed in water (may not fully dissolve). Ora-Sweet could be added.<sup>6</sup></li> </ul>
Nisoldipine	Sular (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Nitroglycerin	Nitrostat	Tablet	<ul style="list-style-type: none"> <li>• Sublingual dosage form</li> </ul>
Olaparib	Lynparza	Tablet	<ul style="list-style-type: none"> <li>• Amorphous solid dispersion<sup>9</sup></li> <li>• Risk of fetal harm</li> </ul>
Omaveloxolone	Skyclarys	Capsule	<ul style="list-style-type: none"> <li>• Can be opened for administration</li> </ul>
Omeprazole	Prilosec (US), Losec (Canada)	Capsule, Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Capsule can be opened for administration of intact granules<sup>5</sup></li> </ul>
Opicapone	Ongentys (US)	Capsule	<ul style="list-style-type: none"> <li>• Potential for instability<sup>1</sup></li> </ul>
Orphenadrine	Norflex ER (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Oxybutynin	Ditropan XL (US; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Oxycodone	OxyContin (US), OxyNEO (Canada), Xtampza ER (US)	Capsule, Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Oxymorphone	Opana ER (US; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Paliperidone	Invega	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>

<b>Medications That Should Not Be Crushed</b> <sup>1,3-5,10,13,14,22</sup>			
<b>Generic Name</b>	<b>Brand Name</b>	<b>Dosage Form</b>	<b>Comments</b>
Pancreatic Enzymes	Cotazym (Canada), Creon, Pancrease (Canada), Pancreaze (US), Pertzye (US), Viokace, Zenpep (US)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release (capsules)</li> <li>• Irritant (oral mucosal)</li> <li>• Capsules can be opened for administration of intact granules</li> </ul>
Pantoprazole	Protonix (US), Pantoloc (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Paroxetine	Paxil CR	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Risk of fetal harm and impaired fertility</li> </ul>
Pazopanib	Votrient	Tablet	<ul style="list-style-type: none"> <li>• Increased absorption</li> <li>• Risk of fetal harm and impaired fertility</li> </ul>
Pentoxifylline	Trental (US; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Piroxicam	Feldene (US)	Capsule	<ul style="list-style-type: none"> <li>• Irritant (oropharyngeal)<sup>4</sup></li> </ul>
Pirtobrutinib	Jaypirca (US)	Tablet	<ul style="list-style-type: none"> <li>• Risk of fetal harm</li> </ul>
Pomalidomide	Pomalyst	Capsule	<ul style="list-style-type: none"> <li>• Teratogenic</li> </ul>
Posaconazole	Noxafil (US; brand discontinued), Posanol (Canada)	Tablet	<ul style="list-style-type: none"> <li>• Amorphous oral dispersion<sup>9</sup></li> <li>• Modified-release</li> </ul>
Potassium Chloride	Micro-K (US; brand discontinued)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Can be opened for administration of intact granules<sup>4</sup></li> </ul>
Potassium Chloride	Klor-Con (US), K-tab (US; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Potassium Chloride	Klor-Con (US; brand discontinued)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Potassium Chloride	K-Dur (US; brand discontinued)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> <li>• Scored tablet may be cut in half.</li> <li>• May be dispersed in water.</li> </ul>
Pralsetinib	Gavreto	Capsule	<ul style="list-style-type: none"> <li>• Potential for instability<sup>1</sup></li> </ul>
Praziquantel	Biltricide (brand discontinued in US)	Tablet	<ul style="list-style-type: none"> <li>• Bad taste</li> <li>• Scored tablets can be split</li> </ul>
Propafenone	Rythmol SR (US; brand discontinued)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Propranolol	Inderal LA (US), InnoPran XL (US), Lupin-propranolol LA (Canada)	Capsule	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>
Pseudoephedrine	Sudafed 12 Hour (US)	Tablet	<ul style="list-style-type: none"> <li>• Modified-release</li> </ul>

<b>Medications That Should Not Be Crushed</b> <sup>1,3-5,10,13,14,22</sup>			
<b>Generic Name</b>	<b>Brand Name</b>	<b>Dosage Form</b>	<b>Comments</b>
Pseudoephedrine/ Desloratadine	Clarinet D (US)	Tablet	• Modified-release
Pseudoephedrine/ Fexofenadine	Allegra D	Tablet	• Modified-release
Pyridostigmine	Mestinon Timespan (US), Mestinon SR (Canada)	Tablet	• Modified-release
Quetiapine	Seroquel XR	Tablet	• Modified-release
Quizartinib	Vanflyta	Tablet	• In one clinical trial, tablets could be dissolved in water <sup>21</sup>
Rabeprazole	Aciphex (US), Aciphex Sprinkle (US), Pariet (Canada)	Capsule, Tablet	• Modified-release
Raloxifene	Evista	Tablet	• Bad taste <sup>4</sup> • Risk of fetal harm • Evidence of tumors at low doses in lab studies <sup>14</sup>
Ranolazine	Ranexa (US; brand discontinued), Corzyna (Canada)	Tablet	• Modified-release
Regorafenib	Stivarga	Tablet	• Amorphous solid dispersion <sup>9</sup> • Risk of fetal harm and impaired fertility
Repotrectini	Augtyro (US)	Capsule	• No information on the effects of opening capsules
Ripretinib	Qinlock	Tablet	• May be an amorphous solid dispersion <sup>1</sup>
Risedronate	Actonel	Tablet	• Irritant (oropharyngeal)
Risedronate	Atelvia (US), Actonel DR (Canada)	Tablet	• Modified-release • Irritant (oropharyngeal)
Risperidone	Risperdal M-Tab (US; brand discontinued)	Tablet	• Must be allowed to dissolve on the tongue
Ritlecitinib	Litfulo	Capsule	• No information on the effects of opening capsules
Ritonavir	Norvir	Tablet	• Amorphous solid dispersion <sup>9</sup>
Ropinirole	Requip XL (US; brand discontinued)	Tablet	• Modified-release
Selumetinib	Koselugo	Capsules	• Special dosage form (semi-solid fill content) suggests bioavailability may be altered if crushed <sup>1</sup>
Sirolimus	Rapamune	Tablet	• Nanocrystal <sup>9</sup>

<b>Medications That Should Not Be Crushed</b> <sup>1,3-5,10,13,14,22</sup>			
<b>Generic Name</b>	<b>Brand Name</b>	<b>Dosage Form</b>	<b>Comments</b>
Solifenacin	Vesicare	Tablet	• Bad taste
Sotagliflozin	Inpefa	Tablet	• No information on the effects of crushing
Sulfasalazine	Azulfidine EN-Tabs (US), Salazopyrin EN (Canada)	Tablet	• Modified-release
Suvorexant	Belsomra (US)	Tablet	• Amorphous solid dispersion <sup>9</sup>
Suzetrigine	Journavx (US)	Tablet	• Can be dispersed in a small amount of water for immediate administration. <sup>24</sup>
Tacrolimus	Astagraf XL (US), Prograf	Capsule	• Amorphous solid dispersion <sup>9</sup>
Tamsulosin	Flomax (US; brand discontinued), Flomax CR (Canada; brand discontinued)	Capsule, Tablet	• Modified-release • Capsule may be opened for administration of intact beads. <sup>16</sup>
Tapentadol	Nucynta ER	Tablet	• Modified-release
Temozolomide	Temodar (US; brand discontinued), Temodal (Canada)	Capsule	• Cytotoxic • Risk of fetal harm and impaired fertility
Tezacaftor/Ivacaftor	Symdeko	Tablet	• Amorphous solid dispersion <sup>9</sup>
Theophylline	Theo-24 (US)	Capsule	• Modified-release • Can be opened for administration of intact granules
Theophylline	Theo-ER (Canada), Uniphyll (US; brand discontinued), Theo-Dur (US; brand discontinued)	Tablet	• Modified-release
Tipranavir	Aptivus	Capsule	• Bad taste <sup>4</sup>
Tolterodine	Detrol LA	Capsule	• Modified-release
Topiramate	Topamax	Capsule, Tablet	• Bad taste • Capsules can be opened for administration of intact granules
Topiramate	Qudexy XR (US), Trokendi XR (US)	Capsule	• Modified-release • Can be opened for administration of intact granules (Qudexy XR)
Tramadol	ConZip (US), Ultram ER (US; brand discontinued), Zytram XL (Canada)	Capsule, Tablet	• Modified-release
Trazodone	Desyrel (brand discontinued)	Tablet	• Bad taste <sup>5</sup> • Scored tablets can be split

<b>Medications That Should Not Be Crushed</b> <sup>1,3-5,10,13,14,22</sup>			
<b>Generic Name</b>	<b>Brand Name</b>	<b>Dosage Form</b>	<b>Comments</b>
Tucatinib	Tukysa	Tablet	• May be an amorphous solid dispersion <sup>1</sup>
Vadadustat	Vafseo (US)	Tablet	• No information on the effects of crushing
Valganciclovir	Valcyte	Tablet	• Irritant <sup>17</sup> • Risk fetal harm and impaired fertility • Carcinogenic
Valproic Acid	Depakene (brand discontinued)	Capsule	• Irritant (oropharyngeal)
Vandetanib	Caprelsa	Tablet	• Tablet may be dispersed in water. • Risk of fetal harm and impaired fertility
Vemurafenib	Zelboraf	Tablet	• Amorphous solid dispersion <sup>9</sup>
Venetoclax	Venclexta	Tablet	• Amorphous solid dispersion <sup>9</sup>
Venlafaxine	Effexor XR	Capsule	• Modified-release • Can be opened for administration of intact granules
Verapamil	Verelan (US), Verelan PM (US)	Capsule	• Modified-release • Can be opened for administration of intact granules
Verapamil	Isoptin SR (brand discontinued in US)	Tablet	• Modified-release • Scored tablets can be split
Vimseltinib	Romvimza (US)	Capsule	• No information on the effects of opening capsules
Vismodegib	Erivedge	Capsule	• Teratogenic
Voclosporin	Lupkynis	Capsule	• Special dosage form (one-piece soft gelatin capsule) suggests bioavailability may be altered if crushed <sup>1</sup>
Vorasidenib	Voranigo	Tablet	• No information on the effects of crushing
Vorinostat	Zolinza	Capsule	• Risk of fetal harm and impaired fertility
Xanomeline/trospium	Cobenfy (US)	Capsule	• No information on effects of opening capsules
Zileuton	Zyflo CR (US; brand discontinued)	Tablet	• Modified-release
Zolpidem	Ambien CR (US)	Tablet	• Modified-release
Zolpidem	Edluar (US), Intermezzo (US; brand discontinued)	Tablet	• Sublingual dosage form

*Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.*

## References

- Saei K, Schweighardt A, Zhao F. Crushability Analysis of Immediate-Release Oral Tablets and Capsules from the 2020-22 FDA Novel Drug Approvals. *Int J Pharm Compd.* 2024 Sep-Oct;28(5):364-372.
- Liabeuf S, Gras V, Moragny J, Laroche ML, Andrejak M; French National Network of Pharmacovigilance Centers. Ulceration of the oral mucosa following direct contact with ferrous sulfate in elderly patients: a case report and a review of the French National Pharmacovigilance Database. *Clin Interv Aging.* 2014 Apr 25;9:737-40.
- Beckwith MC, Feddema SS, Barton RG, Graves C. A guide to drug therapy in patients with enteral feeding tubes: dosage form selection and administration methods. *Hosp Pharm* 2004;39:225-37.
- ISMP. Oral dosage forms that should not be crushed 2016. <https://www.ismp.org/sites/default/files/attachments/2018-02/DoNotCrush.pdf>. (Accessed March 14, 2025).
- Clinical Pharmacology powered by ClinicalKey. Tampa (FL): Elsevier. 2025. <http://www.clinicalkey.com>. (Accessed March 12, 2025).
- Personal communication (written). Medical Information. SpringWorks Therapeutics. Stamford, CT 06902. March 21, 2025.
- Personal communication (written). Alex Fikhman, MD. Medical Information. Stemline Therapeutics. New York, NY 10022. March 21, 2025.
- Best BM, Capparelli EV, Diep H, et al. Pharmacokinetics of lopinavir/ritonavir crushed versus whole tablets in children. *J Acquir Immune Defic Syndr.* 2011 Dec 1;58(4):385-91.
- Uttaro E, Pudipeddi M, Schweighardt A, Zhao F. To crush or not to crush: A brief review of novel tablets and capsules prepared from nanocrystal and amorphous solid dispersion technologies. *Am J Health Syst Pharm.* 2021 Feb 19;78(5):389-394.
- Uttaro E, Zhao F, Schweighardt A. Filling the Gaps on the Institute for Safe Medication Practices (ISMP) Do Not Crush List for Immediate-release Products. *Int J Pharm Compd.* 2021 Sep-Oct;25(5):364-371.
- Altman R, Bosch B, Brune K, Patrignani P, Young C. Advances in NSAID development: evolution of diclofenac products using pharmaceutical technology. *Drugs.* 2015 May;75(8):859-77.
- Andersson, T., Magner, D., Patel, J. et al. Esomeprazole 40mg Capsules are Bioequivalent when Administered Intact or as the Contents Mixed with Applesauce. *Clin. Drug Investig.* 21, 67–71 (2001).
- NHS. Specialist Pharmacy Service. Statin suggestions for adults with swallowing difficulties. Last updated June 27, 2024. <https://www.sps.nhs.uk/articles/statin-formulations-suggested-for-adults-with-swallowing-difficulties/>. (Accessed March 14, 2025).
- NIOSH list of antineoplastic and other hazardous drugs in healthcare settings, 2016. <https://www.cdc.gov/niosh/docs/2016-161/pdfs/2016-161.pdf>. (Accessed March 21, 2025).
- McCreary EK, Nguyen MH, Davis MR, et al. Achievement of clinical isavuconazole blood concentrations in transplant recipients with isavuconazonium sulphate capsules administered via enteral feeding tube. *J Antimicrob Chemother.* 2020 Oct 1;75(10):3023-3028.
- Fazio V, Altshuler J, Song YB. Safety and Feasibility of Opening Tamsulosin Capsules for Enteral Feeding Tube Administration. *J Pharm Pract.* 2024 Oct;37(5):1164-1169.
- Cipla. Safety Data Sheet. [https://usa.cipla.com/sites/default/files/2024-01/Valganciclovir\\_Tabs\\_SDS\\_12\\_2018.pdf](https://usa.cipla.com/sites/default/files/2024-01/Valganciclovir_Tabs_SDS_12_2018.pdf). (Accessed March 19, 2025).
- Personal communication (written). Md Amran Mia. Quality Assurance Associate. Carnegie Pharmaceuticals. Delran, NJ 08075. March 14, 2025.
- Astellas Answers. Chewing, Cutting, Crushing, Splitting, or Breaking Fezolinetant. <https://www.astellasanswers.com/us/s/p/a574M000000MXIAQA4/veozah?product=a574M000000MXIAQA4&term=crush>. (Accessed March 20, 2025).
- Personal communication (written). Tara K. Thurber. Director, Clinical Operations. Theracos. Farmingham, MA 01701. March 20, 2025.
- Personal communication (written). Medical Information Services. Daiichi Sankyo. Basking Ridge, NJ 07920. March 21, 2025.
- NIOSH list of hazardous drugs in healthcare settings, 2024. <https://www.cdc.gov/niosh/docs/2025-103/pdfs/2025-103.pdf?id=10.26616/NIOSH-PUB2025103>. (Accessed March 21, 2025).
- Roche. Crushing or splitting Cellcept tablets. August 10, 2023. <https://medically.roche.com/global/en/medinfo/cellcept/crushing-or-splitting-cellcept-tablets.html>. (Accessed March 21, 2025).
- Personal communication (verbal). Jessica. Medical Information. Vertex Pharmaceuticals. Boston, MA 02210. March 25, 2025.
- Personal communication (written). Medical Information. Mallinckrodt Pharmaceuticals. Bridgewater, NJ 08807. March 26, 2025.

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