

MHS MRG 02 - Safe and Cost Effective Administration for Covert Medication and in Dysphagia

Guidance for inpatient Mental Health Services NHS GG&C

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Background

Covert medication is the administration of any medical treatment in disguised form. This usually involves disguising medication by administering it in food and drink. This document concerns the choice of formulation of the medication to be given covertly only. Please refer to the documents below for detail on the best practice in making a decision about whether or not covert administration is suitable and what documentation should accompany this decision;

[The Mental Welfare Commission-Good practice guidance on covert administration \(Feb 2017\)](#)

[NHS GG&C's covert pathway](#)

[Covert Administration of Medication Provision of Pharmaceutical Advice](#)

Different formulations of medication can have vastly different purchase costs, for example, the drug tariff cost (August 2024) for nitrazepam 5mg tablets is £3.15 for 28 tablets and the cost of nitrazepam suspension 2.5mg/5ml is £159.60 for 70ml. Making a 5mg dose in tablet form cost around 11p and in liquid form £22.80. Monthly this equates to a cost of £3.15 for the tablets and £638 for the liquid. Once a medicine is given covertly it becomes unlicensed, therefore in most cases using the formulation with the lowest cost price is appropriate. There are some exceptions where specific medicines are licensed if given mixed with certain liquids which will be covered in this document.

General Guidance

- 1) Ensure that medication is required for continuing active treatment of an ongoing condition or to prevent deterioration of physical/mental health. For example, thyroxine treatment.
- 2) Following the principles of realistic medicines an analysis of the risk/benefit of staying on medication required to be administered covertly should be undertaken. Medication that may be increasing the side effect burden without providing immediate health benefits should where appropriate be withdrawn. The decision to do this or not will be dependent on each patients' set of circumstances and medical history.
- 3) Modified release preparations generally cannot be given covertly.
- 4) As a general rule unless otherwise stated crushed tablets or the contents of opened capsules can be mixed with soft cold foods. Ideally around a teaspoons size of food and (smooth, lump free) jams/chocolate spreads being the best medium.
- 5) Medicines that are crushed or mixed should be administered immediately.
- 6) Liquid preparations tend to be more expensive and can be strongly flavoured making them more difficult to give covertly.
- 7) Pharmacists preparing advice about the administration of medication covertly should consider cost along with safety.
- 8) *If not covered in the A-Z (starting on the next page) advice should always be sought from a pharmacy.*

Using thickening agents to thicken liquid medication;

NHSGGC's medication pages accessed 29/6/17 state that the "preferred thickener for patients over the age of three years is Nutilis Clear®; a gum based thickener. Nutilis Clear is licensed to thicken food and drinks **not medicines**, so thickening of any liquid medications to the recommended viscosity may require more or less thickener than is stated in the instructions on the side of the tin. Any thickening of a liquid medicine is using the medication **unlicensed** and as such prescribing should be in line with the principles of NHSGGC Unlicensed Medicines Policy. For more information, contact the Central Prescribing Team"

There is no data about how the thickening agent impacts on the pharmacokinetics of the liquid medication. Therefore crushing a tablet/opening a capsule and mixing with a soft food is generally the best option (where available and recommended in guidance below). If the patient is aware that the medication is in the soft food, this does not require the use of the covert pathway. This approach is simply making it more palatable and/or safe for patients with swallowing difficulties.

Licensed liquids should only be used if they are of the appropriate fluid consistency without the need for thickener.

Liquid specials should only be considered if thickener is not required but the patient is unable to manage any solid dosage forms. Liquid specials should NEVER be given covertly (unlicensed medication given in an unlicensed manner) unless the medication is essential and a pharmacist has provided advice stating that this is the most appropriate formulation to give covertly, as part of a covert pathway.

<https://ggcmedicines.org.uk/media/vxmcmi2n/nutilis-clear-prescription-info-002-201222.pdf>

Frequently seen A-Z

| Drug name | Preferred choice | Alternatives/additional information |
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| Alendronic acid | This is not considered essential and should not be given covertly. There may be a strong argument for an individual cases in which case consider the options in next column. These are considerably more expensive than tablets >£250 per annum | Use the effervescent tablets or the oral solution. Alternatively consider using once-yearly zoledronic acid. ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2017. Accessed at www.newtguidelines.com on 06/02/24 |
| Amitriptyline | The tablets can be crushed and dispersed in water Crushed amitriptyline tablets have a bitter taste. ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2018. Accessed at www.newtguidelines.com on 06/02/24 | No documented food interactions Can crush and mix with food as described in general principles. |
| Amlodipine | Most tablet brands will disperse in water easily. They disperse in one to five minutes. Give immediately as the drug is light sensitive ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Feb 19. Accessed at www.newtguidelines.com on 06/02/24 | Bioavailability is not affected by food with the exception of below ² . Administration of amlodipine with grapefruit or grapefruit juice is not recommended as bioavailability may be increased in some patients resulting in increased blood pressure lowering effects. ² ² Amlodipine 10mg tablets, Mylan. Last updated 05/08/22. Accessed at Amlodipine 10 mg Tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 16/8/24 |
| Amoxicillin | Amoxicillin suspension may be mixed with formula, milk, water or other cold drinks. Drink right away after mixing. ¹ ¹ Amoxicillin: Dosage - Last updated 03/01/22. Accessed at https://www.drugs.com/amoxicillin.html#dosage on 06/02/24 | No documented food interactions Can crush and mix with food as described in general principles |
| Apixaban | For patients who are unable to swallow whole tablets, Apixaban 5 mg Film-coated Tablets may be crushed and suspended in water, or 5% glucose in water (G5W), or apple juice or mixed with apple puree and immediately administered orally. ¹ ¹ Apixaban 5mg Film-Coated Tablets, Teva UK Limited. Last updated 24/07/24. Accessed at https://www.medicines.org.uk/emc/product/13690/smpc on 16/8/24 | No documented food interactions Can crush and mix with food as described in general principles |
| Aripiprazole | Use oro-dispersible tablets ¹ | No documented food interactions |

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| | <p>¹NEEMC Guidelines for tablet crushing. NHS North-East Essex. Last updated October 2020. Accessed at https://www.neessexccg.nhs.uk/uploads/files/GUIDELINES%20FOR%20TABLET%20CRUSHING%20%202020.pdf on 01/06/22</p> | Can crush and mix with food as described in general principles |
| Aspirin | <p>Use the dispersible tablets. Give with food¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Aug 2012. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>No documented food interactions</p> <p>Consider need. Must be clear benefit to individual</p> |
| Atenolol | <p>The tablets can be crushed and mixed with water for administration.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2019. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>No documented food interactions</p> <p>Can crush well to break up the film-coating and mix with food as described in general principles.</p> |
| Atorvastatin | <p>The tablets can be crushed and mixed with water for administration. Atorvastatin tablets are not very soluble and a residue may be left. Give immediately as the drug is light sensitive.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2024. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>Avoid grapefruit². No other documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> <p>Consider need. Must be clear benefit to individual</p> <p>²Atorvastatin 10 mg Film-coated Tablets, Ranbaxy (UK) Limited. Last updated 19/10/23. Accessed at Atorvastatin 10 mg Film-coated Tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 16/8/24</p> |
| Betahistine | <p>The tablets can be crushed and mixed with water for administration. The drug is very soluble.¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2019. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Bisacodyl | <p>Consider alternatives. Use the suppositories¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2010. Accessed at www.newtguidelines.com on 06/02/24</p> | The tablet has an enteric coating, and is designed to release the drug in the colon where it has its effect. Do not crush as it has an irritant effect on the stomach. ¹ |
| Bisoprolol | <p>The tablets can be crushed finely and mixed with water for administration. The lower strength tablets will disperse in one to five minutes without crushing. The higher strength tablets should be crushed before mixing with water.¹</p> | <p>Can be taken with food², therefore can crush and mix with food as described in general principles</p> <p>²Bisoprolol 1.25mg film coated tablets, Mylan. Last updated</p> |

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| | <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2019. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>06/05/22. Accessed at Bisoprolol fumarate 1.25 mg film-coated tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 16/8/24</p> |
| <p><u>Calcium</u> TheiCal D3®</p> <p>Accrete D3®</p> <p>Cacit D3®</p> <p>Adcal D3®</p> <p>Calcichew D3 And forte®</p> | <p>Preferred brand, chewable tablet though does dissolve slowly in mouth. Tropical flavoured</p> <p>Change to alternate brand</p> <p>Change to alternate brand</p> <p>Chewable tablet or dissolving tablets available¹.</p> <p>¹ https://bnf.nice.org.uk/drug/colecalciferol-with-calcium-carbonate.html Accessed 01/06/22</p> <p>Calcichew D3® and Calcichew D3® Forte will not disperse easily but will crush for administration to patients with swallowing problems who are not able to chew the tablets themselves.²</p> <p>² Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2012. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>Oxalic acid (found in spinach and rhubarb) and phytic acid (found in whole cereals) may inhibit calcium absorption through formation of insoluble compounds with calcium ions. The patient should not take calcium products within two hours of eating foods high in oxalic acid and phytic acid².</p> <p>²Theical, Stirling Anglian Pharmaceuticals. Last updated 25/7/22. Accessed at https://www.medicines.org.uk/emc/medicine/29206 on 16/8/24</p> <p>No other documented food interactions</p> |
| Carbamazepine | <p>Use the suppositories or liquid (contains sorbitol)¹</p> <p>Maintain brand.</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2023. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>No documented food interactions</p> <p>Carbamazepine oral suspension is given orally, usually in two or three divided doses. Carbamazepine oral suspension (oral suspension should be shaken before use) may be taken during, after or between meals.²</p> <p>²Carbamazepine 100 mg/5 ml Oral Suspension, Ranbaxy (UK) Limited. Last updated 09/04/24. Accessed at https://www.medicines.org.uk/emc/product/3060/smpc# on 16/8/24</p> <p>Suppositories licenced for max 7 days at a maximum dose of 1g/day.³</p> <p>³ Carbamazepine Essential Pharma 125 mg Suppositories. Accessed at Carbamazepine Essential Pharma 125 mg Suppositories - Summary of Product Characteristics (SmPC) -</p> |

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| | | (emc) (medicines.org.uk) on 16/8/24 |
| Cetirizine | <p>You can crush the tablet and mix it with a small amount of soft food such as yogurt, honey or mashed potato. Must be swallowed straight away, without chewing ¹</p> <p>¹ Cetirizine. Accessed at Cetirizine for hayfever – Medicines For Children on 16/8/24</p> | No documented food interactions |
| Chlorphenamine | <p>Crush tablet and mix with water; tablet will disperse in 1-2 minutes ¹</p> <p>¹NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2015. Accessed at: neemmc-guidelines-for-tablet-crushing-april-2015.docx (live.com) on 16/8/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Co-beneldopa | <p>Use the dispersible tablets. ¹</p> <p>They should be dispersed in at least 25mL of water per tablet. They may also be taken in dilute orange squash, however orange juice should not be used.²</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2022. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>Dose should be taken 30 min before or one hour after meals. Food intake generally reduces the extent of levodopa absorption by 15% but this can be variable².</p> <p>Dispersible tablets have a faster onset of action and shorter duration of action than modified-release capsules and a direct substitution cannot occur. Contact Pharmacy for advice on dosage conversion¹.</p> <p>If changing from capsules to dispersible tablets a direct changeover is acceptable, but the patient should be monitored for any change in effect as there may be an altered bioavailability. It may be appropriate to prescribe a small "when-required" dose to cover any unexpected "on-off" effects. ¹</p> <p>Consider getting advice from Parkinson's nurse.</p> <p>² Madopar 100 mg/25 mg Dispersible Tablets, Roche Products Limited. Last updated 08/04/20. Accessed at https://www.medicines.org.uk/emc/product/6924/smpc on 16/8/24</p> |
| Co-careldopa | <p>Change to co-beneldopa dispersible tablets¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated December 2022. Accessed at www.newtguidelines.com on 06/02/24</p> | Consider getting advice from Parkinson's nurse |

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| Co-codamol | <p>Use the effervescent tablets or the sachets¹. Note the high sodium content in the effervescent tablets prohibits regular long-term use.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Jan 2023. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>No documented food interactions</p> <p>Sodium content approximately 13-17mmol per tablet. Consider switching to paracetamol liquid and codeine liquids separately if the high sodium load of the effervescent tablets is a problem¹.</p> |
| Codeine | <p>Use liquid¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Jan 2023. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>No documented food interactions</p> <p>Note liquid contains alcohol.¹</p> |
| Diazepam | <p>Tablets may be crushed¹</p> <p>¹Diazepam: Important considerations. Last updated 15/11/20. Accessed at https://www.healthline.com/health/diazepam-oral-tablet#important-considerations on 16/08/24</p> | <p>Do not take with grapefruit juice¹.</p> |
| Digoxin | <p>The tablets can be crushed for administration ¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2019. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>No documented food interactions</p> |
| Dihydrocodeine | <p>Use the suspension¹</p> <p>Standard-release tablets can be crushed² Do not crush sustained-release tablets</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Dec 2018. Accessed at www.newtguidelines.com on 06/02/24</p> <p>²White R and Bradnam V, Handbook of Drug Administration via Enteral Feeding Tubes. Accessed at www.medicinescomplete.com on 16/8/24</p> | <p>No documented food interactions</p> <p>Consider changing to a transdermal opioid patch if regular long term pain relief required</p> |
| Diltiazem | <p>All tablets and capsules are labelled as modified-release, however the 60mg generic preparation is not slow-release and can be crushed¹</p> <p>Patients on once or twice-daily modified-release preparations may need to be converted onto three-times-daily doses of the generic preparation¹</p> <p>The MR capsules have been opened and the contents mixed with soft food for administration. Do not crush the capsule contents.¹ This method may not be suitable for patients with limited understanding or impaired ability to follow instructions.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University</p> | <p>Alternatively, switch to amlodipine (NB amlodipine does not offer the rate-control effects of diltiazem).¹</p> <p>No documented food interactions</p> |

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| | Health Board (NHS Wales). Last updated Jul 2019. Accessed at www.newtguidelines.com on 06/02/24 | |
| Doxycycline | <p>Do not open the capsules as the contents are irritant, instead use the dispersible tablets ¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2019. Accessed at www.newtguidelines.com on 06/02/24</p> | <p>The absorption of doxycycline is not notably influenced by simultaneous ingestion of food or milk²</p> <p>² Doxycycline 100mg Capsules, Sovereign Medical. Last updated 06/12/21. Accessed at Doxycycline 100mg Capsules - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 16/8/24</p> |
| Duloxetine | <p>The capsules can be opened and their contents mixed with apple juice or apple sauce. ¹</p> <p>The capsule contain enteric coated beads which should not be chewed or crushed, therefore this method may not be appropriate for patients with limited understanding or impaired ability to follow instructions. Give the mixture immediately.¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2019. Accessed at www.newtguidelines.com on 06/02/24.</p> | <p>Food delays peak levels by several hours and decreases absorption by 11%, however this is not considered clinically relevant. ²</p> <p>²White R and Bradnam V, Handbook of Drug Administration via Enteral Feeding Tubes. Accessed at www.medicinescomplete.com on 16/08/24</p> |
| Enalapril | <p>The tablets can be crushed and dispersed in water for administration. Without crushing some brands will disperse in around five minutes¹</p> <p>Crushed tablets may have a bitter after-taste.</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2024. Accessed at www.newtguidelines.com on 12/08/24.</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Esomeprazole | <p>Change to suitable alternative</p> <p>OR</p> <p>For patients who have difficulty in swallowing, the tablets can also be dispersed in half a glass of non-carbonated water. No other liquids should be used as the enteric coating may be dissolved. Stir until the tablets disintegrate and drink the liquid with the pellets immediately or within 30 minutes. Rinse the glass with half a glass of water and drink. The pellets must not be chewed or crushed.¹</p> <p>¹ Esomeprazole 20 mg Gastro-resistant Tablets, Cipla EU Ltd. Last updated 21/02/23. Accessed at https://www.medicines.org.uk/emc/product/10557/smpc on 16/08/24</p> | <p>Change to lansoprazole or omeprazole or esomeprazole granules² for oral suspension.</p> <p>² Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2019. Accessed at www.newtguidelines.com on 16/08/24.</p> |
| Ferrous salts | <p>Use ferrous fumarate tablets; The tablets are easy to swallow but may also be crushed or chewed being almost tasteless.¹</p> | <p>The absorption of iron from the gut is decreased if it is taken at the same time as coffee, tea, eggs or milk. Its absorption is</p> |

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| | <p>¹Ferrous fumarate 210mg Tablets, Advanz Pharma Last updated 09/2023. Accessed at https://www.medicines.org.uk/emc/product/2821 on 12/08/24</p> | <p>enhanced if it is taken at the same time as foods or supplements containing vitamin C (ascorbic acid).¹ Or convert to an appropriate dose of ferrous fumarate liquid².</p> <p>¹ Fersamal (ferrous fumarate). Last updated 28/11/11. Accessed at https://www.netdoctor.co.uk/medicines/dietry/a6730/fersamal-ferrous-fumarate/ on 06/06/22</p> <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2017. Accessed at www.newtguidelines.com on 12/08/24</p> |
| Finasteride | <p>Place the tablet in the barrel of an oral or enteral syringe. Draw water up into the syringe and allow the tablet to disperse (in order to minimise contact with the medication).¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2017. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>No documented food interactions.</p> <p>Women of childbearing potential should avoid handling crushed or broken tablets</p> |
| Fluconazole | <p>The capsules can be opened, and the contents mixed with water for administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2013. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>No documented food interactions</p> <p>Can open capsules and mix with food as described in general principles</p> |
| Fluoxetine | <p>The capsules have been opened and the contents dispersed in 120mL water. The capsule contents will dissolve in about 5 minutes¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated September 2022. Accessed at www.newtguidelines.com 12/08/24</p> | <p>Fluoxetine is well absorbed from the gastro-intestinal tract after oral administration. The bioavailability is not affected by food intake.²</p> <p>Can open capsule and mix with food as described in general principles</p> <p>²Fluoxetine 20mg Capsules – Summary of Product Characteristics. Flamingo Pharma (UK) Ltd. Last updated 08/04/22. Accessed at Fluoxetine 20 mg Capsules - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 16/08/24</p> |
| Folic acid | <p>The tablets have been crushed and mixed with water for administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |

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| | version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2015. Accessed at www.newtguidelines.com on 12/08/24 | | | | |
| Furosemide | <p>Tablets will disperse in 1-2 minutes. Liquid preparation available.^{1,2}</p> <p>¹NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2015. Accessed at: neemmc-guidelines-for-tablet-crushing-april-2015.docx (live.com) on 16/8/24</p> <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2019. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Food reduces the bioavailability by 30%, however no specific recommendations for timing of administration in relation to intake.³</p> <p>Can crush and mix with food as described in general principles</p> <p>³White R and Bradnam V, Handbook of Drug Administration via Enteral Feeding Tubes. Accessed at www.medicinescomplete.com on 18/08/24</p> | | | |
| Gabapentin | <p>The contents of the capsules can be sprinkled on food or given in fruit juice to mask their unpleasant taste. They should be given immediately as the drug is rapidly hydrolysed ¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2019. Accessed at www.newtguideline.com on 12/08/24.</p> | <p>Do not give at the same time as aluminium/magnesium antacids¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2019. Accessed at www.newtguideline.com on 12/08/24</p> | | | |
| Gliclazide | <p>Crush the tablets well (as the drug is practically insoluble) and mix with water or orange juice for administration¹</p> <p>Do not crush the modified-release tablets¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2020. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Switching from modified-release to standard tablets should be done with careful blood monitoring.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">30mg modified- release tablet</td> <td style="text-align: center;">equiv alent to</td> <td style="text-align: center;">80mg standard tablet</td> </tr> </table> <p>It may be advisable to monitor blood glucose in any patient when altering the formulation / crushing the tablets.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2020. Accessed at www.newtguidelines.com on 12/08/24</p> <p>Gliclazide is well absorbed. Food intake does not affect the rate or degree of absorption²</p> <p>Can crush and mix with food as described in general principles</p> <p>²Gliclazide 80mg Tablets, Flamingo Pharma (UK) Ltd Last updated 29/04/22. Accessed at</p> | 30mg modified- release tablet | equiv alent to | 80mg standard tablet |
| 30mg modified- release tablet | equiv alent to | 80mg standard tablet | | | |

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| | | Gliclazide 80 mg Tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 16/08/24 |
| Haloperidol | <p>The capsules can be opened and the contents dispersed in water¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Oct 2018. Accessed at www.newtguidelines.com on 12/08/24.</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> <p>Liquid preparation (Haldol) also available². Haldol can be mixed with water, apple, orange, tomato or cola drinks³, avoid hot drinks. Drink immediately.</p> <p>² Haldol 2mg/ml oral solution, Janssen-Cilag Ltd. Last updated 06/11/23. Accessed at HALDOL 2 mg/ml oral solution - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 12/08/23</p> <p>³ Haloperidol (oral). Last updated 22/02/24. Accessed at https://www.drugs.com/cons/haloperidol.html#dosage on 16/08/24</p> |
| Hyoscine hydrobromide | <p>Consider using the patch¹</p> <p>The tablets can be dissolved in water but absorption may vary¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2012. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Ibuprofen | <p>Ibuprofen is safe to crush for patients in skilled nursing facilities. Also, ibuprofen may be taken with food to limit GI irritation¹</p> <p>Use the syrup² (this may not be practical for larger doses).</p> <p>¹ Richard S. Weiner (2001). Pain Management: A Practical Guide for Clinicians, Sixth Edition (2001) pp 437. Accessed online at https://books.google.co.uk/books?id=lg7slgP9D3kC&pg=PA437&pg=PA437&dq=crush+ibuprofen&source=bl&ots=gq4zZtYx3w&sig=oOorWD4M99HGn_fuBRX-iPZvV4Q&hl=en&sa=X&ved=0ahUKEwj99eH6ypXV/AhXIKcAKHVILBAw4HhDoAQqvMAE#v=onepage&q=crush%20ibuprofen&f=false on 16/08/24</p> <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2015. Accessed at www.newtguidelines.com on 06/06/22</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |

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| <p>Isosorbide mononitrate</p> | <p>The standard-release tablets can be crushed and dispersed in water. They may have an increased rate of absorption and therefore increased side effects.¹</p> <p>Dispersing the tablets in water may alter their rate of absorption, and therefore their side effects. Consider reducing the dose and giving doses more frequently if this occurs.¹</p> <p>Do not crush or open MR preparations.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated December 2019. Accessed at www.newtguidelines.com on 12/08/24</p> | |
| <p>Ispaghula husk</p> | <p>Use the granules or the powder.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2013. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Do not use when giving via enteral feeding tubes – may congeal & block the tube.¹</p> |
| <p>Lactulose</p> | <p>Use the solution¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2017. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Lactulose solution may be administered diluted or undiluted. Each dose may if necessary be taken with water or fruit juices, etc².</p> <p>²Duphalac 3.335 g/5 ml Oral Solution, Mylan. Last updated 13/06/22 Accessed at Duphalac 3.335 g/5 ml Oral Solution - Summary of Product Characteristics (SmPC) - (emc) on 16/08/24</p> |
| <p>Lamotrigine</p> | <p>Use the dispersible tablets¹</p> <p>The MHRA has issued guidance recommending that (where possible) patients on lamotrigine (when used for seizures) are maintained on a specific manufacturer's product, due to variability in product characteristics which may lead to a loss of seizure control when switching between brands / manufacturers. When managing patients with enteral tubes or swallowing difficulties it may not be possible to maintain the patient on their previous preparation due to the need to change to an appropriate formulation. However all product switches should be carried out with care and close monitoring, and where possible patients should be maintained from then onwards on a single manufacturer's product.^(see end references)</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2019. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |

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| Lansoprazole | <p>Capsules may be opened and the granules mixed with a small amount of water, apple/tomato juice or sprinkled onto a small amount of soft food (e.g. yoghurt, apple puree) to ease administration. Capsules may be opened and capsule contents may then be mixed with 40mL apple juice. After preparing the suspension or mixture, the drug should be administered immediately ¹</p> <p>The FasTabs® and orodispersible tablets can be placed in the mouth where they will disperse to release gastro-resistant granules which will be swallowed with the patient's saliva. They can also be dispersed in water, leaving micro-granules which should be swallowed without being crushed. The FasTab is strawberry flavoured. ²</p> <p>¹ Lansoprazole 30mg Gastro-resistant Capsules, Accord UK Ltd. Last updated 27/10/21. Accessed at https://www.medicines.org.uk/emc/product/4761/sm-pc# on 06/06/2022</p> <p>²Zoton – FasTab 15mg, Pfizer Ltd. Last updated 10/09/21. Accessed at Zoton FasTab 15 mg - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 16/08/24</p> | <p>Food markedly reduces the bioavailability of lansoprazole. Small amounts of foods such as apple sauce, or apple or orange juice, or yoghurt do not seem to significantly affect the bioavailability of lansoprazole from the contents of the capsules. In crossover studies in fasting healthy subjects, the bioavailability of enteric-coated granules (removed from a capsule of lansoprazole 30 mg) mixed with either orange juice, tomato juice, or with one tablespoonful of strained pear, yoghurt, cottage cheese, or <i>Ensure</i> pudding was comparable to that of an intact capsule given with water³</p> <p>³Baxter, K. and Stockley, I. Stockley's drug interactions. London: Pharmaceutical Press. Accessed online at www.medicinescomplete.com on 16/08/24</p> |
| Levothyroxine | <p>The tablets can be crushed and mixed with water for administration.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2021. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Absorption of levothyroxine (thyroxine) possibly reduced by antacids, proton pump inhibitors, calcium salts, cimetidine, oral iron, sucralfate, colestipol, polystyrene sulphonate resin and cholestyramine (administration should be separated by 4-5 hours).²</p> <p>² Levothyroxine Aristo 100 micrograms tablets, Aristo Pharma Limited. Last updated 02/09/21. Accessed at https://www.medicines.org.uk/emc/product/11620/smpc on 06/06/22.</p> <p>Can crush and mix with food as described in general principles</p> |
| Lisinopril | <p>The tablets can be dispersed in water. The drug is soluble, and the tablets disperse in one to five minutes¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2020. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Lisinopril absorption is not affected by the presence of food².</p> <p>Can crush and mix with food as described in general principles</p> <p>²Lisinopril 5 mg tablets, Mylan. Last updated 30/09/22. Accessed at https://www.medicines.org.uk/emc/product/10114/smpc on 16/08/24</p> |
| Lithium | <p>Use the equivalent dose of the liquid¹.</p> | <p>Lithium carbonate 200mg is approximately equivalent to lithium citrate 520mg (5ml Priadel</p> |

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| | <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2020. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>liquid¹). Different preparations/brands of lithium vary widely in their bioavailability, when changing between lithium preparations, serum lithium levels should first be checked and repeated as for a new initiation. As most tablets are modified release, when this is change to a liquid form the total daily dose will need to be given in divided doses².</p> <p>¹Priadel liquid Clinical medicinal product information, BNF content published by NICE Accessed 06/06/22</p> <p>² Priadel 520 mg/5 ml Liquid, Pfizer. Last updated 09/03/22. Accessed at https://www.medicines.org.uk/emc/product/13164/smpc on 06/06/22</p> |
| Loratadine | Switch to cetirizine or chlorphenamine (chlorphenamine liquid is available and is inexpensive) | |
| Lorazepam | <p>The tablets can be crushed and mixed with water for administration.¹ Without crushing they disperse in one to five minutes.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2020. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Do not give with caffeine containing drinks or grapefruit²</p> <p>Can crush and mix with food as described in general principles</p> <p>² Lorazepam 1mg Tablets Last Updated on EMC 21/10/2020. Genus Pharmaceuticals https://www.medicines.org.uk/emc/product/6137/smpc Accessed 20/08/24</p> |
| Macrogol | Use sachets | <p>No documented food interactions.</p> <p>First add the right amount of water and stir until the powder has dissolved and the water is clear. The resultant liquid can be mixed with liquids such as squash, juice, hot chocolate, milk etc to encourage them to drink it. DO NOT mix the powder straight into the milk/juice/flavoured drink – it needs to ‘bind’ with the water first.¹</p> <p>The manufacturers specifically recommend against reconstitution with fizzy drinks as there is a risk of interaction between macrogols and phosphoric acid.²</p> <p>¹howtousemacrogollaxativesmay2022.pdf (eric.org.uk) Last updated 2022. Accessed 20/08/24</p> |

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| | | <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated August 2021. Accessed at www.newtguidelines.com on 12/08/24</p> <p>If thickening is required, refer to the MHRA warning, Polyethylene glycol (PEG) laxatives and starch-based thickeners: potential interactive effect when mixed, leading to an increased risk of aspiration</p> |
| Metformin | <p>You can crush standard metformin tablets using a pill crusher. You can add crushed medicine to food. You CANNOT crush modified release metformin.¹</p> <p>¹https://www.uclh.nhs.uk/patients-and-visitors/patient-information-pages/metformin Last updated Oct 2018. Accessed 20/08/24</p> | <p>Licensed liquid available but expensive and unlicensed if given mixed with food</p> <p>Can crush and mix with food as described in general principles</p> <p>It is recommended that the tablets are not crushed at the patient's bedside as some brands are quite hard. If the tablets are to be crushed (e.g. to make a suspension) this should be done with appropriate equipment, e.g. a mortar and pestle, and the use of protective eyewear should be considered.²</p> <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated September 2023. Accessed at www.newtguidelines.com on 12/08/24</p> |
| Metronidazole | <p>Crush the tablets and mix with water¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated September 2023. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>No documented food interactions with tablet form.²</p> <p>Can crush and mix with food as described in general principles</p> <p>²Flagyl 400mg Tablets, SANOFI Last updated 21/09/23, Accessed at https://www.medicines.org.uk/emc/product/9238/smpc on 21/08/24</p> |
| Mirtazapine | <p>Use the orodispersible tablets. The orodispersible tablets will disperse immediately in water.¹</p> <p>Note the standard tablet, when crushed, has a bitter taste and an anaesthetic taste on the mouth.¹</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |

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| | <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Aug 2020. Accessed at www.newtguidelines.com on 12/08/24</p> | |
| Morphine | <p>Consider switching to transdermal opiate preparations for patients with chronic pain.¹</p> <p>Use MST Continus[®] sachets or the immediate-release oral solution, according to clinical need.¹</p> <p>MXL[®] capsules can also be opened and the contents sprinkled onto cold soft food for patients with swallowing difficulties. The contents of the capsules should not be chewed or crushed, and therefore this method may not be appropriate for patients with limited understanding or impaired ability to follow instructions.¹</p> <p>Zomorph[®] capsules can be opened and the contents sprinkled on food, e.g. yogurt or jam.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2024. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>No significant interaction with food</p> <p>See recommendations as before</p> <p>For patients with swallowing difficulties unable to receive morphine orally, the preferred alternative routes are rectal and subcutaneous. The bioavailability and duration of analgesia of morphine when given in the soluble, dispersible and rectal formulations are the same¹</p> |
| Nitrazepam | <p>The tablet may be crushed before swallowing. The tablet may take longer than 2 minutes to disperse.¹</p> <p>¹NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2015. Accessed at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.stch.org.uk%2Fwp-content%2Fuploads%2Fneemmc-guidelines-for-tablet-crushing-april-2015.docx on 21/08/24</p> <p>The Australian Drug Guide: Every Person's Guide to Prescription and Over-the-counter Medicines, Street Drugs, Vaccines, Vitamins and Minerals. Jonathon Upfal, 2006 Accessed 09/06/21</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Olanzapine | <p>The Velotab[®] may be dispersed in a full glass of water or other suitable beverage (orange juice, apple juice, milk, or coffee) immediately before administration. Wear gloves as irritant to skin. Protect eyes.^{1,2}</p> <p>¹SPC accessed on EMC 06/06/22 Eli Lilly, Zyprexa Velotab, last updated on 02/02/24 ZYPREXA VELOTAB 10 mg orodispersible tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk)</p> <p>²NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2015. Accessed at: https://view.officeapps.live.com/op/view.aspx?src=h</p> | |

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| | https://www.stch.org.uk/wp-content/uploads/2015/04/neemmc-guidelines-for-tablet-crushing-april-2015.docx on 21/08/24 | |
| Omeprazole | <p>Patients can open the capsule and swallow the contents with half a glass of water or after mixing the contents in a slightly acidic fluid e.g., fruit juice or applesauce, or in non-carbonated water. Patients should be advised that the dispersion should be taken immediately (or within 30 minutes).¹</p> <p>Disperse the MUPS® tablet in water, then mix this with orange / apple / pineapple juice, apple sauce, or yogurt²</p> <p>¹Omeprazole Capsules 10mg, Dr Reddy's Laboratories Ltd. Last updated 02/05/2023 Accessed at https://www.medicines.org.uk/emc/product/10339/smpc on 21/08/24</p> <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2023. Accessed at www.newtguidelines.com on 12/08/24</p> | |
| Oxycodone | <p>Use the liquid. OxyNorm Concentrate liquid can be diluted with a soft drink to aid administration and improve palatability if desired¹.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2013. Accessed at www.newtguidelines.com accessed on 12/08/24</p> | <p>Consider changing to an alternate opioid</p> <p>Grapefruit juice can increase levels of oxycodone²</p> <p>²Oxynorm concentrate 10mg/ml, Napp pharmaceuticals. Last updated 20/08/24. Accessed at https://www.medicines.org.uk/emc/product/12489/smpc on 21/08/24</p> |
| Paracetamol | <p>Use the orodispersible tablets, the soluble tablets or the suspension (250mg/5mL). The soluble tablets contain a lot of sodium which may be a problem in some patients.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2022. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Disperse effervescent tablets in water¹. Note high sodium content in effervescent tablets².</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2022. Accessed at www.newtguidelines.com on 12/08/24</p> <p>²Paracetamol Effervescent 500 mg Tablets, Cipla EU Ltd. Last updated 05/02/24. Accessed at Paracetamol 500 mg effervescent tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 21/08/24</p> |
| Phenobarbital | The tablets may be crushed and mixed with water for administration ¹ | No documented food interactions |

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| | <p>The MHRA has issued guidance recommending that (where possible) patients on phenobarbital (when used for seizures) are maintained on a specific manufacturer's product, due to variability in product characteristics which may lead to a loss of seizure control when switching between brands / manufacturers. When managing patients with enteral tubes or swallowing difficulties it may not be possible to maintain the patient on their previous preparation due to the need to change to an appropriate formulation. However all product switches should be carried out with care and close monitoring, and where possible patients should be maintained from then onwards on a single manufacturer's product.^(see end references)</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2021. Accessed at www.newtguidelines.com on 12/08/24</p> | Can crush and mix with food as described in general principles |
| Pirenzepine | Use hyoscine patches or trihexyphenidyl (see below) | Tablets have been observed to disperse |
| Prednisolone | <p>Many brands of tablets disperse easily in water, with some dispersing almost immediately and others taking two to five minutes¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated November 2021. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>Its initial absorption, but not its overall bioavailability, is affected by food²</p> <p>Can crush and mix with food as described in general principles</p> <p>²Prednisolone 1mg Tablets, Wockhardt Ltd. Last updated 25/5/21. Accessed at Prednisolone 1mg Tablets - Summary of Product Characteristics (SmPC) - (emc) on 21/08/24</p> |
| Pregabalin | <p>Open the capsules and dissolve the contents in water for administration. The capsule contents may have an unpleasant taste¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2021. Accessed at www.newtguidelines.com on 12/08/24</p> | <p>No clinically significant interaction with food.²</p> <p>Open capsule and mix with food as described in general principles</p> <p>²Pregabalin 100mg hard capsules, Mylan. Last updated 24/01/22 Accessed at Pregabalin Mylan 100 mg hard capsules - Summary of Product Characteristics (SmPC) - (emc) on 21/08/24</p> |
| Procyclidine | <p>Tablets will disperse in > 2 minutes¹</p> <p>¹NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2015. Accessed at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.stch.org.uk%2Fwp-content%2Fuploads%2Fneemmc-guidelines-for-tablet-crushing-april-2015.docx on 21/08/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Propranolol | You can cut or crush the tablet. ¹ | No documented food interactions |

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| | <p>Tablets will disperse in >2minutes.²</p> <p>¹ https://www.healthline.com/health/propranolol-oral-tablet#important-considerations Last updated 24/02/23 Accessed 21/08/24</p> <p>²NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2015. Accessed at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.stch.org.uk%2Fwp-content%2Fuploads%2Fneemmc-guidelines-for-tablet-crushing-april-2015.docx on 21/08/24</p> | <p>Can crush and mix with food as described in general principles.</p> <p>Do not crush / open MR preparations.</p> |
| Quetiapine | <p>The crushed tablets have been added to soft food (e.g. yogurt). They taste bitter.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2019. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles.</p> <p>Do not crush MR tablets</p> |
| Ramipril | <p>The capsule contents can be placed directly into the mouth, or onto bread if the patient has swallowing difficulties. Stability studies have shown that ramipril can be mixed with apple juice or apple sauce, and this may be helpful for patients with swallowing difficulties. The capsule contents taste unpleasant. The tablets can be crushed and mixed with water for administration, the drug is poorly soluble¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2021. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>Ramipril capsules may be taken before, with or after meals, because food intake does not modify its bioavailability¹</p> <p>¹Ramipril 10 mg hard capsules, Aurobindo Pharma. Last updated 07/02/24. Accessed at Ramipril 10 mg capsules - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 21/08/24</p> |
| Risedronate | <p>Review whether the medication is still needed. Consider switching to yearly zoledronic acid.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2014. Accessed at www.newtguidelines.com on 13/08/24</p> | |
| Risperidone | <p>Use the liquid or the orodispersible tablet.¹</p> <p>The liquid can be mixed with any non-alcoholic drink except tea.^{1,2}</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2022. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>Food does not affect the absorption of Risperidone. Though incompatible with most types of tea.²</p> <p>² Risperidone 1 mg/ml oral solution, Aurobindo Pharma. Last updated 01/08/22. Accessed at Risperidone 1mg/ml oral solution - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 21/08/24</p> |
| Senna | <p>Use liquid¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University</p> | <p>Consider alternative laxatives.</p> |

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| | Health Board (NHS Wales). Last updated Feb 2021. Accessed at www.newtguidelines.com 13/08/24 | |
| Sertraline | <p>For enteral tubes, tablets can be dispersed in water for administration. They disperse in one to five minutes.¹</p> <p>The tablets can be crushed and mixed with food for patients with swallowing difficulties. Crushed tablets have a bitter taste, and an anaesthetic effect on the tongue, so use with caution and take care with hot foods after administration.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2024. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>No documented food interactions however avoid administration of sertraline with grapefruit juice.²</p> <p>Can crush and mix with food as described in general principles</p> <p>² Sertraline 100 mg Film-coated Tablets, Flamingo Pharma (UK) Ltd. Last updated 29/04/22. Accessed at https://www.medicines.org.uk/emc/product/13524/smpc# on 21/08/24</p> |
| Simvastatin | <p>Consider need</p> <p>The tablets can be crushed and mixed with water for administration. Crush well as the drug is practically insoluble. Use immediately (light sensitive)¹.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated August 2024. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>Avoid grapefruit juice when taking simvastatin². No other documented food interactions. Absorption not altered by food.</p> <p>Can crush and mix with food as described in general principles</p> <p>²Simvastatin 80mg, Aurobindo Pharma - Milpharm Ltd. Last Updated 31/07/23. Accessed at Simvastatin 80mg Tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 21/08/24</p> |
| Sodium valproate | <p>The crushable tablets can be crushed and mixed with a small amount of soft food, e.g yogurt or jam. They have an extremely bitter taste</p> <p>Epilim Chronosphere® and Episenta® granules can be mixed with soft food or a cold drink, and should be swallowed whole without chewing. This method may not be appropriate for patients with limited understanding or impaired ability to follow instructions.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated December 2019. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>The MHRA has issued guidance recommending that (where possible) patients on sodium valproate (when used for seizures) are maintained on a specific manufacturer's product, due to variability in product characteristics which may lead to a loss of seizure control when switching between brands / manufacturers. When managing patients with enteral tubes or swallowing difficulties it may not be possible to maintain the patient on their previous preparation due to the need to change to an appropriate formulation. However all product switches should be carried out with care and close monitoring, and where possible patients should be maintained from then onwards on a single manufacturer's product.^(see end references)</p> |
| Tamsulosin | <p>The capsules contain granules which should not be crushed. If no alternative is suitable, they may be mixed with cold water and swallowed whole (only</p> | <p>Absorption of tamsulosin hydrochloride is reduced by a recent meal. Uniformity of absorption can be promoted by</p> |

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| | <p>suitable for patients able to follow the instruction not to chew).¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2017. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>the patient always taking tamsulosin after the same meal².</p> <p>²Zentiva XL 400 micrograms capsules, Accord-UK Ltd. Last updated 15/08/24 Accessed at Tamsulosin hydrochloride Zentiva 400 microgram prolonged-release hard capsules - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 21/08/24</p> |
| Temazepam | <p>Review need.</p> <p>Tablet may be crushed but will take > 2 minutes to disperse in liquid.¹</p> <p>¹NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2015. Accessed at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.stch.org.uk%2Fwp-content%2Fuploads%2Fneemmc-guidelines-for-tablet-crushing-april-2015.docx on 21/08/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Trazodone | <p>1st choice - Use the liquid¹.</p> <p>2nd choice - Use the special suspension¹.</p> <p>Opening the capsules is not recommended but there are reports of this being done. The content of the capsules tastes unpleasant¹.</p> <p>There is no information available about crushing the tablets, so this is not recommended¹.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2021. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>Absorption is somewhat enhanced by food².</p> <p>Can mix with food as described in general principles.</p> <p>MH wards within NHS GG&C: Trazodone liquid will only be supplied for doses below 50mg unless exceptional circumstance pertain and the ward clinical pharmacist agrees with the need for liquid to be supplied.</p> <p>Trazodone, appropriate formulation choice and use guide</p> <p>²Trazodone Hydrochloride 50mg/5ml Oral Solution, Zentiva. Last updated 14/06/22. Accessed at Trazodone Hydrochloride 100mg/5ml Oral Solution (17780/1004) - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) # on 21/08/24</p> |
| Trihexyphenidyl | <p>The tablets can be crushed and will disperse in water for administration¹.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2021. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Valproic acid | <p>Convert to valproate. A slightly higher dose (approximately 10%) of sodium valproate is used.¹</p> | |

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| | <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated November 2015. Accessed at www.newtguidelines.com on 13/08/24</p> | |
| Venlafaxine | <p>The tablets can be crushed and mixed with water or jam for administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2023. www.newtguidelines.com Accessed 13/08/24</p> | Can crush and mix with food as described in general principles |
| Warfarin | <p>The tablets can be crushed and mixed with water for administration. Without crushing they disperse in two to five minutes¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2021. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>Consider if conversion to newer agent is possible (see haematology for advice)</p> <p>Avoid cranberry and grapefruit. No sudden diet changes².</p> <p>Can crush and mix with food as described in general principles</p> <p>²Marevan 0.5mg Tablets (warfarin), ADVANZ Pharma. Last updated 07/11/23. Accessed at Marevan 0.5mg Tablets - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) on 21/08/23</p> |
| Zolpidem | <p>The tablets can be crushed and mixed with water for administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2021. Accessed at www.newtguidelines.com on 13/08/24</p> | <p>No clinically significant food interactions</p> <p>Can crush and mix with food as described in general principles</p> |
| Zopiclone | <p>The tablets are film-coated to protect the active drug, which is sensitive to light and practically insoluble in water, from degradation. They are not suitable for crushing or dissolving, and should not be used. They also have a bitter taste.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2021. Accessed at www.newtguidelines.com on 13/08/24</p> | Review need. If required change to zolpidem. |

Additional references

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