

'Specials' Alternatives Guidance

The guidance document contains a list of commonly prescribed medicines and alternative methods of administration for patients with swallowing difficulties, feeding tubes or for patients prescribed unlicensed 'specials' medication. Each entry takes into account alternative medicines, formulations, cost and licensing. This list is not exhaustive and will be reviewed and updated accordingly.

Is a 'special' really needed?

Consider deprescribing, 'drug holidays', alternative treatments, and licensed administration of oral formulations. 'Specials' should be reserved for those who truly cannot take tablets or capsules in their solid form.

This guide has been produced to provide prescribers with information to support prescribing and to inform product choice. Where alternative suggestions for administration have been offered, evidence and clinical experience detailed in reputable sources e.g., NEWT guidelines (peer reviewed guidelines designed to support administration of medication to patients with enteral feeding tubes or swallowing difficulties) have been referenced confirming that formulation manipulation of this nature can take place without compromising the effectiveness of the medicine.

Please note:

- This document is subject to clinical interpretation and judgement on an individual basis and the specific needs and best interests of the individual patient should be taken into account.
- Administering medicines via a route other than that included in the Summary of Product Characteristics (SPC) e.g., via a feeding tube or manipulating licensed products other than described in the product SPC renders a product unlicensed.
- Many medicines are routinely administered for off-licence indications with sound clinical evidence to support their use in these indications.
- Consideration should be given to encouraging children to swallow oral solid dose forms (tablets or capsules) where possible. [Medicines for Children](#) has useful guides on how to give medicines, including giving [tablets](#) and [capsules](#). [KidzMed](#) is an e-Learning resource from Health Education England for healthcare professionals teaching children to swallow pills.

For formulary statuses of medications please refer to local prescribing information.

Administration notes:

Crushing tablets: Crush tablet (do one at a time, do not do different medicines together) using a suitable device (e.g., tablet crusher, pestle and mortar, or between two metal spoons) and transfer into a medicine cup/pot. Mix well with 15 to 30ml water and administer to the patient immediately. Rinse the device with water and administer this also. Take care to ensure the whole dose is administered.

Opening capsules: Gently ease open the capsule to release its contents into a medicine cup/pot (do one at a time, do not do different medicines together). Mix with 15 to 30ml water and administer to the patient immediately. Rinse the medicine cup/pot with water and administer this also. Take care to ensure the whole dose is administered.

Enteral administration: Licensed oral formulations are only licensed if administered via the oral route. All other routes are unlicensed unless specified in the monograph. Specialist Pharmacy Service (SPS) useful link on how enteral feeding tubes affect medicines: <https://www.sps.nhs.uk/articles/how-enteral-feeding-tubes-affect-medicines/>

Food or thickened fluids: Specialist Pharmacy Service (SPS) useful link: [Giving medicines safely with food or thickened fluid – SPS - Specialist Pharmacy Service – The first stop for professional medicines advice](#)

If additional support to manage alternatives routes of administration is required, please contact the NHS Hertfordshire and West Essex Integrated Care Board Pharmacy and Medicines Management Team (HWE ICB PMOT): hweicbhv.medicinesoptimisationteam@nhs.net

Drug	Alternative
Alendronic Acid	<ul style="list-style-type: none"> Assess clinical need - consider withholding if swallowing difficulty/feeding tube is temporary. Do not crush the tablets, risk of oesophageal damage (NEWT, May 2017) Alendronic acid 70mg effervescent tablets sugar free (LICENSED) Alendronic acid 70mg/100mL oral solution unit dose sugar free (LICENSED, LESS COST-EFFECTIVE)
Allopurinol	<ul style="list-style-type: none"> Crush and disperse tablets in water, (UNLICENSED*, LOW COST) (NEWT, December 2015) Allopurinol oral suspension 100mg/5mL or 300mg/5mL (UNLICENSED, HIGH COST)
Alogliptin	<ul style="list-style-type: none"> No information available. Review indication and consider alternative anti-diabetic agents.
Amiodarone (oral)	<ul style="list-style-type: none"> Crush and disperse tablets in water. May have a bitter taste so can be mixed with juice if desired. (UNLICENSED*, LOW COST) (NEWT, February 2019) Amiodarone 100mg/5ml oral suspension (UNLICENSED, HIGH COST - MOST COST-EFFECTIVE STRENGTH)
Amitriptyline Hydrochloride	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, October 2018) Amitriptyline oral solution sugar free 25mg/5ml or 50mg/5ml (LICENSED, HIGH COST)
Amlodipine	<ul style="list-style-type: none"> Crush and disperse tablets in water. Give immediately as drug is light sensitive (UNLICENSED*, LOW COST) (NEWT, February 2019) Amlodipine 10mg/5mL oral solution sugar free (LICENSED, HIGH COST, MOST COST-EFFECTIVE PREPARATION)
Amoxicillin	<ul style="list-style-type: none"> Amoxicillin suspension, 125mg/5mL sugar free or 250mg/5mL sugar free (LICENSED) Shelf life is 7 days once reconstituted.
Apixaban	<ul style="list-style-type: none"> Crush and disperse tablets in water (LICENSED orally or via nasogastric (NG) tube only, UNLICENSED* for all other routes) (NEWT, Feb 2022 and SPC, 2023)
Aripiprazole (oral)	<ul style="list-style-type: none"> Aripiprazole orodispersible tablets sugar free (LICENSED, HIGH COST) Aripiprazole 1mg/mL solution (LICENSED, VERY HIGH COST)
Atenolol	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, March 2019) Atenolol 25mg/5mL oral solution sugar free (LICENSED, HIGH COST)
Atorvastatin	<ul style="list-style-type: none"> Crush and disperse tablets in water. Tablets are not very soluble, and a residue may be left, potentially blocking enteral feeding tubes. Flush well after dosing and take care to ensure the complete dose is administered (UNLICENSED*, LOW COST) (NEWT, September 2022) Atorvastatin 10mg or 20mg sugar free chewable tablets (LICENSED, HIGH COST) Atorvastatin 10mg/5ml oral solution (UNLICENSED, MOST COST-EFFECTIVE STRENGTH)
Azathioprine	<ul style="list-style-type: none"> CYTOTOXIC – DO NOT CRUSH TABLETS (NEWT, November 2018) Azathioprine 50mg/5mL or 100mg/5mL oral suspension (UNLICENSED, HIGH COST) Note: Carers handling the suspension should wear gloves in case of contact with the medication.
Baclofen	<ul style="list-style-type: none"> Baclofen 5mg/5mL or 10mg/5mL oral solution sugar free (LICENSED) At higher doses the sorbitol content of the liquid may cause diarrhoea. Crush and disperse tablets in water (UNLICENSED*) (NEWT, 2019)
Bendroflumethiazide	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, November 2018) Bendroflumethiazide 2.5mg/5ml oral suspension (UNLICENSED, HIGH COST)
Betahistine Hydrochloride	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, April 2019) Betahistine 8mg/5mL oral suspension (UNLICENSED, HIGH COST)
Bisoprolol Fumarate	<ul style="list-style-type: none"> Consider switching to atenolol 25mg/5ml oral solution sugar free (LICENSED) Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, April 2019) Bisoprolol 5mg/5mL oral suspension (UNLICENSED, HIGH COST - MOST COST-EFFECTIVE STRENGTH)
Bumetanide	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, April 2019) Bumetanide 1mg/5ml oral solution sugar free (LICENSED, VERY HIGH COST)
Candesartan Cilexetil	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, September 2015)
Captopril	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, January 2020) Give tablets sublingually, half dose and give twice as frequently (UNLICENSED, LOW COST) (NEWT, January 2020) Captopril 5mg/5ml or 25mg/5ml oral solution sugar free (LICENSED, HIGH COST)
Carbamazepine	<ul style="list-style-type: none"> MHRA (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change poses a risk of seizures. Carbamazepine 100mg/5mL oral suspension sugar free (LICENSED) Note: Carbamazepine MR tablet 400mg twice daily is equivalent to Carbamazepine liquid 200mg four times a day (NEWT, November 2018) Carbamazepine 125mg or 250mg suppositories (LICENSED, HIGH COST) Note: Carbamazepine 100mg tablet or liquid is equivalent to one carbamazepine 125mg suppository (NEWT, November 2018)
Carbimazole	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, HIGH COST) (NEWT, November 2018) Carbimazole 10mg/ 5ml oral suspension (UNLICENSED, HIGH COST)

Carvedilol	<ul style="list-style-type: none"> Consider switching to atenolol 25mg/5ml oral solution sugar free (LICENSED, LOW COST) Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, April 2019) Carvedilol 5mg/5ml oral suspension (UNLICENSED, HIGH COST) 														
Chlorphenamine Maleate	<ul style="list-style-type: none"> Chlorphenamine 2mg/5mL oral solution sugar free (LICENSED) (NEWT, August 2012) which can be purchased over-the-counter (OTC) 														
Chlorpromazine	<p>Tablets should not be crushed (NEWT, November 2018)</p> <ul style="list-style-type: none"> Chlorpromazine 25mg/5ml or 100mg/5ml oral solution (LICENSED) 														
Ciclosporin eye	<p>To be initiated by specialist for severe keratitis in adult patients with dry eye disease as per NICE TA</p> <ul style="list-style-type: none"> Ciclosporin 0.1% eye drops 0.3ml unit dose x 30 - prescribe as Ikervis® (LICENSED, HIGH COST, preservative free) 														
Citalopram Hydrobromide	<ul style="list-style-type: none"> Citalopram 40mg/mL oral drops sugar free (LICENSED) Note: 8mg (4 drops) is equivalent to 10mg Citalopram tablet (NEWT, November 2018) Crush and disperse tablets in water (UNLICENSED*) (NEWT, November 2018) 														
Clindamycin	<ul style="list-style-type: none"> Open capsules and disperse contents in water. Mix with juice or maple syrup to mask taste. (UNLICENSED*, LOW COST) (NEWT, December 2018) For paediatrics only - Clindamycin 75mg/5ml oral suspension (UNLICENSED, HIGH COST) 														
Clobazam	<p>Prescribe for epilepsy treatment only. MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change poses a risk of seizures.</p> <ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*) (NEWT, April 2019) Clobazam 10mg/5ml oral suspension sugar free (LICENSED, HIGH COST, MOST COST-EFFECTIVE PREPARATION) 														
Clonazepam	<p>MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change poses a risk of seizures.</p> <ul style="list-style-type: none"> Crush and disperse tablets in water. If giving via enteral tube, dilute in at least 30mL of water to prevent binding to the tube (UNLICENSED*, MORE COST-EFFECTIVE) (NEWT, April 2019) Clonazepam 500micrograms/5mL or 2mg/5mL oral solution sugar free (LICENSED, LESS COST-EFFECTIVE) Shelf life is 28 days once opened. Clonazepam Oral Solution by Rosemont is suitable for use with some types of NG and PEG tubes (see SPC for more information, 2023) 														
Clopidogrel	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, May 2019) Clopidogrel 75mg/5mL oral suspension (UNLICENSED, HIGH COST) For paediatrics only - Clopidogrel 1mg/ml oral suspension (UNLICENSED, HIGH COST) 														
Coal tar/Betametasone (topical)	<ul style="list-style-type: none"> Prescribe LICENSED options separately to be used together - Options include: Betamethasone valerate 0.025% cream/ointment (LICENSED) or Betamethasone valerate 0.1% cream/ointment (LICENSED) plus coal tar solution 5% cutaneous emulsion, coal tar 5% shampoo, Coal tar 4% shampoo, coal tar 2.5% scalp lotion or Coal tar extract 2% shampoo (LICENSED) Coal tar solution 5% in Betamethasone valerate 0.025% ointment (UNLICENSED, HIGH COST) 														
Co-Amoxiclav (Amoxicillin/Clavulanic Acid)	<ul style="list-style-type: none"> Co-amoxiclav suspension 125mg/31mg/5mL sugar free, 250mg/62mg/5mL sugar free or 400mg/57mg/5mL sugar free (LICENSED). Shelf life is 7 days once reconstituted. 														
Co-Beneldopa (Benserazide/Levodopa)	<p>SPS guidance on Parkinson's disease medicines in swallowing difficulties</p> <p>Do not open modified release (MR) or immediate release (IR) capsules.</p> <ul style="list-style-type: none"> Co-beneldopa 12.5mg/50mg or 25mg/100mg dispersible tablets (LICENSED) <p>Note: dispersible tablets have a faster onset of action and shorter duration of action than MR capsules and a direct substitution cannot occur. Seek advice from specialist.</p> <p>If changing from IR 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 (NEWT, March 2022)</p>														
Co-Careldopa (Carbidopa/Levodopa)	<p>SPS guidance on Parkinson's disease medicines in swallowing difficulties</p> <p>The modified release tablets should not be crushed - seek advice from specialist for conversion to immediate release.</p> <ul style="list-style-type: none"> Immediate release tablets can be crushed and dispersed in water (UNLICENSED*, LOW COST). If swallowing difficulty/feeding tube is long-term, consider switching to co-beneldopa dispersible tablet as per the dosing guidance in table 1 (NEWT, December 2022). <p>Table 1: Conversion table</p> <table border="1"> <thead> <tr> <th>Sinemet® (co-careldopa)</th> <th>Madopar® (co-beneldopa)</th> </tr> </thead> <tbody> <tr> <td>Sinemet® 62.5mg tablet</td> <td>Madopar® 62.5mg disp. tablet</td> </tr> <tr> <td>Sinemet® 110mg tablet</td> <td>Madopar® 125mg disp. tablet</td> </tr> <tr> <td>Sinemet® Plus 125mg tablet</td> <td>Madopar® 125mg disp. tablet</td> </tr> <tr> <td>Sinemet® 275mg tablet</td> <td>2 x Madopar® 125mg disp. tablet</td> </tr> <tr> <td>Half Sinemet® CR 125mg tablet</td> <td>Seek advice from specialist</td> </tr> <tr> <td>Sinemet® CR 250mg tablet</td> <td>Seek advice from specialist</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Co-careldopa 25mg/100mg/5mL oral suspension (UNLICENSED, HIGH COST – MOST COST-EFFECTIVE STRENGTH) 	Sinemet® (co-careldopa)	Madopar® (co-beneldopa)	Sinemet® 62.5mg tablet	Madopar® 62.5mg disp. tablet	Sinemet® 110mg tablet	Madopar® 125mg disp. tablet	Sinemet® Plus 125mg tablet	Madopar® 125mg disp. tablet	Sinemet® 275mg tablet	2 x Madopar® 125mg disp. tablet	Half Sinemet® CR 125mg tablet	Seek advice from specialist	Sinemet® CR 250mg tablet	Seek advice from specialist
Sinemet® (co-careldopa)	Madopar® (co-beneldopa)														
Sinemet® 62.5mg tablet	Madopar® 62.5mg disp. tablet														
Sinemet® 110mg tablet	Madopar® 125mg disp. tablet														
Sinemet® Plus 125mg tablet	Madopar® 125mg disp. tablet														
Sinemet® 275mg tablet	2 x Madopar® 125mg disp. tablet														
Half Sinemet® CR 125mg tablet	Seek advice from specialist														
Sinemet® CR 250mg tablet	Seek advice from specialist														
Codeine Phosphate	<ul style="list-style-type: none"> Codeine 15mg/5mL linctus sugar free or Codeine 25mg/5ml oral solution (LICENSED) 														

Co-Dydramol (Dihydrocodeine/Paracetamol)	<ul style="list-style-type: none"> Change to individual products (see separate entries for dihydrocodeine and paracetamol).
Colecalciferol	<p>Treatment dose – 10,000 units/mL oral drops (prescribe as <i>Thorens</i>[®], one drop contains 200 units colecalciferol) (LICENSED, LOW COST)</p> <ul style="list-style-type: none"> If malabsorption/compliance issues with oral treatment in adults - ergocalciferol 300,000 units/ml give via intramuscular injection (LICENSED, HIGH COST)
Cyanocobalamin	<p>Consider increasing dietary intake of vitamin B12</p> <ul style="list-style-type: none"> For vitamin B12 deficiency prescribe hydroxocobalamin Injection BP 1mg/ml given intramuscularly (LICENSED) Patients to purchase low dose cyanocobalamin over-the-counter (OTC)
Cyclizine Hydrochloride	<ul style="list-style-type: none"> Consider switching to an alternative anti-emetic e.g., Domperidone 1mg/1ml oral suspension sugar free (LICENSED, HIGH COST) or ondansetron oral solution/orodispersible tablets (LICENSED, HIGH COST) Crush and disperse tablets in water. May have a bitter taste (UNLICENSED*, LOW COST) (NEWT, August 2019) Cyclizine 50mg/5mL oral suspension (UNLICENSED, HIGH COST, MOST COST-EFFECTIVE PREPARATION)
Dabigatran	<p>Do not open the capsules as this may greatly affect the oral bioavailability of the drug, with a risk of increased side effects (i.e., bleeding) (NEWT, January 2013)</p> <ul style="list-style-type: none"> Consider switch to alternative NOAC – edoxaban, apixaban or rivaroxaban. See individual entries.
Dexamethasone	<ul style="list-style-type: none"> Crush and disperse tablets in water. Crush with care to avoid inhalation of dust by the carer (UNLICENSED*, LOW COST) (NEWT, December 2018) Dexamethasone soluble tablets sugar free (LICENSED, HIGH COST) Dexamethasone 2mg/5mL or 10mg/5mL oral solution sugar free (LICENSED, HIGH COST) Dexamethasone Oral Solution by Rosemont is licensed for use with some types of NG and PEG tubes (see SPC for more information, 2023)
Diazepam	<ul style="list-style-type: none"> Diazepam 2mg/5ml oral solution sugar free (LICENSED, HIGH COST). Dilute with water if being administered via a feeding tube (UNLICENSED*, NEWT, December 2018) Diazepam 5mg or 10mg rectal tubes (LICENSED, LOW COST)
Diclofenac Sodium	<p>Diclofenac treatment should only be initiated after careful consideration for patients with significant risk factors for cardiovascular events (MHRA, December 2014)</p> <p>Do not crush / open the enteric-coated or the modified-release preparations (NEWT, January 2020)</p> <ul style="list-style-type: none"> If NSAID is required, consider ibuprofen or naproxen (see individual entries) Diclofenac suppositories (LICENSED, LOW COST) Diclofenac 50mg/5ml oral suspension (UNLICENSED, HIGH COST)
Digoxin	<ul style="list-style-type: none"> Crush tablets and mix with water (UNLICENSED*, LOW COST) (NEWT, September 2019) Digoxin 50micrograms/mL oral solution. Note: one 62.5microgram tablet is equivalent to 50micrograms/mL (LICENSED, LESS COST-EFFECTIVE) (NEWT, September 2019)
Dihydrocodeine Tartrate	<p>Do not crush the modified release tablets (NEWT, December 2018)</p> <p>Consider alternative analgesic such as codeine 15mg/5ml linctus sugar free or codeine 25mg/5ml oral solution or tramadol orodispersible/soluble tablets sugar free (LICENSED).</p> <ul style="list-style-type: none"> Dihydrocodeine 10mg/5mL oral suspension (UNLICENSED, VERY HIGH COST)
Diltiazem (topical)	<ul style="list-style-type: none"> Consider if Glyceryl Trinitrate (GTN) 0.4% ointment is clinically appropriate (LICENSED) Diltiazem 2% ointment or cream (UNLICENSED)
Diltiazem Hydrochloride (oral)	<p>Diltiazem capsules/tablets should be prescribed by brand as bioavailability differs between preparations.</p> <ul style="list-style-type: none"> Open modified release (MR) capsules and mix contents with soft food for administration. Do not crush the capsule contents. May block tubes (UNLICENSED*, LOW COST) (NEWT, July 2019) Switch MR preparation to diltiazem 60mg modified-release tablets total daily dose to be divided to three times daily. Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, July 2019)
Docusate Sodium	<p>Do not open the capsules. Docusate has an unpleasant taste (NEWT, September 2011)</p> <ul style="list-style-type: none"> Docusate 100mg/5mL (MOST COST-EFFECTIVE), 12.5mg/5mL or 50mg/5mL oral solution sugar free (LICENSED)
Donepezil Hydrochloride	<ul style="list-style-type: none"> Crush and disperse tablets in water. Strong, bitter taste (UNLICENSED*, LOW COST) (NEWT, December 2015) Donepezil 5mg or 10mg orodispersible tablets (LICENSED, HIGH COST) Donepezil 1mg/mL oral solution (LICENSED, HIGH COST). Shelf life is 2 months once opened.
Doxazosin Mesilate	<ul style="list-style-type: none"> Assess ongoing clinical need and switch to alternative: Benign prostatic hyperplasia – consider finasteride or tamsulosin (see individual entries for administration information). Doxazosin 1mg/5mL or 4mg/5mL oral solution (UNLICENSED, HIGH COST)
Doxycycline Hyclate	<p>Do not open the capsules as the contents are an irritant.</p> <ul style="list-style-type: none"> Doxycycline 100mg dispersible tablets (LICENSED) Note: when given via enteral tubes, doxycycline binds to calcium ions reducing absorption, so prescribe at the higher end of the standard dosage range (NEWT, September 2019)
Edoxaban	<ul style="list-style-type: none"> Crush and disperse tablets in water or mix with apple puree for swallowing difficulties or crush and disperse in water for enteral tube administration (LICENSED) (NEWT, June 2021 and SPC, 2023)
Enalapril Maleate	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, January 2020) Enalapril 10mg/5mL oral suspension (UNLICENSED, HIGH COST - MOST COST-EFFECTIVE PREPARATION)

Esomeprazole	<ul style="list-style-type: none"> Consider switching to lansoprazole orodispersible tablets. See individual entry. Disperse the gastro-resistant tablets in water and the micro-granules will remain for administration. Do not crush the micro-granules (NEWT, July 2019) (LICENSED, LOW COST) Esomeprazole 10mg gastro-resistant granules sachets for oral suspension (LICENSED, HIGH COST) 										
Ezetimibe	<ul style="list-style-type: none"> Consider an alternative lipid lowering agent 										
Felodipine	<p>Do not crush modified-release (MR) tablets (NEWT, August 2015)</p> <ul style="list-style-type: none"> Review indication. Consider switching to amlodipine (see individual entry) 										
Ferrous Fumarate	<ul style="list-style-type: none"> Ferrous fumarate 140mg/5mL oral solution (LICENSED) 										
Ferrous Sulfate	<ul style="list-style-type: none"> Convert to appropriate dose of ferrous fumarate oral solution. Note: ferrous sulfate 200mg tablets three times a day, is equivalent to 10mL twice daily of ferrous fumarate 140mg/5mL oral solution (LICENSED) (NEWT, April 2017) 										
Fexofenadine Hydrochloride	<ul style="list-style-type: none"> Consider switching to alternative antihistamine in liquid form e.g. Loratadine 5mg/5ml oral solution (LICENSED), which can be purchased over-the-counter (OTC) Crush and disperse tablets in water (UNLICENSED*) (NEWT, June 2014) 										
Finasteride	<ul style="list-style-type: none"> 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 carer contact with the medication). If giving via enteral feeding tube, flush well after each dose as the drug is insoluble (UNLICENSED*, LOW COST). Note: women who are, or who may become pregnant should not handle crushed, broken, or dissolved tablets (NEWT, June 2017) 										
Fluoxetine	<ul style="list-style-type: none"> Open capsules and disperse contents in water (UNLICENSED*) (NEWT, September 2022) Fluoxetine 20mg dispersible tablet sugar free – dispersible and scored (LICENSED) Fluoxetine 20mg/5ml oral solution (LICENSED, HIGH COST) 										
Folic Acid	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, July 2015) Folic acid 2.5mg/5mL oral solution sugar free (LICENSED, HIGH COST, MOST COST-EFFECTIVE STRENGTH) 										
Furosemide	<ul style="list-style-type: none"> Furosemide sugar free oral solution (prescribe as Frusol®) 20mg/5ml, 40mg/5ml & 50mg/5ml (LICENSED) (NEWT, January 2019) 										
Gabapentin	<ul style="list-style-type: none"> Open capsules and disperse capsule contents in water. Contents can be sprinkled on food or given in fruit juice to mask their unpleasant taste (UNLICENSED*, LOW COST) (NEWT, October 2019) Gabapentin 50mg/ml oral solution sugar free (LICENSED, HIGH COST). Shelf life is one month once opened 										
Gliclazide	<p>Do not crush the modified-release (MR) tablets; convert dose to immediate-release (IR). Note: 30mg MR is equivalent to 80mg IR. Switching from MR to IR tablets should be done with careful blood monitoring.</p> <ul style="list-style-type: none"> Crush and disperse the IR tablets in water or orange juice (UNLICENSED*, LOW COST) (NEWT, February 2020) Gliclazide 80mg/5mL oral suspension (UNLICENSED, HIGH COST - MOST COST-EFFECTIVE STRENGTH) 										
Griseofulvin	<ul style="list-style-type: none"> Review indication and switch to alternative antifungal e.g., terbinafine (see separate entry) (NEWT, October 2018) 										
Haloperidol	<ul style="list-style-type: none"> Haloperidol 500microgram capsules can be opened and the contents dispersed in water (UNLICENSED*, LOW COST) (NEWT, October 2018). Haloperidol 10mg/5ml oral solution sugar free (LICENSED, MORE COST-EFFECTIVE) Haloperidol 5mg/5ml oral solution sugar free (LICENSED, LESS COST-EFFECTIVE) 										
Hydrocortisone	<ul style="list-style-type: none"> Crush and disperse immediate release (IR) tablets in water (UNLICENSED*, LOW COST) (NEWT, March 2020) Note: 20mg tablets can be halved and dispersed in water for a 10mg dose. Hydrocortisone 10mg/5mL oral suspension (UNLICENSED, HIGH COST, MOST COST-EFFECTIVE STRENGTH) 										
Hydroxychloroquine Sulfate	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, March 2021) Hydroxychloroquine 200mg/5mL oral suspension (UNLICENSED, HIGH COST) 										
Hyoscine Butylbromide	<ul style="list-style-type: none"> Use 20mg/1ml solution for injection ampoules orally (UNLICENSED*, LOW COST) (NEWT, January 2020) Hyoscine butylbromide 10mg/5mL oral suspension (UNLICENSED, HIGH COST) 										
Ibuprofen	<ul style="list-style-type: none"> Ibuprofen 100mg/5ml or 200mg/5ml oral suspension sugar free (LICENSED) 										
Indapamide	<p>Do not crush the modified-release (MR) tablets; convert dose to immediate-release (IR). Note: 1.5mg MR is equivalent to 2.5mg IR. (BNF)</p> <ul style="list-style-type: none"> Crush and disperse IR tablets in water (UNLICENSED*, LOW COST) (NEWT, March 2020) 										
Irbesartan	<ul style="list-style-type: none"> Crush and disperse immediate release (IR) in water (UNLICENSED*, LOW COST) (NEWT, March 2020) 										
Isosorbide Mononitrate	<p>Do not open capsule contents and do not crush the modified release (MR) tablets (note: if scored, they can be halved) (NEWT, December 2019).</p> <p>MR preparations can be converted to twice daily immediate release (IR) preparations (morning and lunchtime – see below). Most patients can be changed initially on a milligram per milligram substitution of their total daily dose where available preparations allow (PrescQIPP Bulletin 85 Isosorbide Mononitrate Prescribing 2.0, November 2015)</p> <table border="1"> <thead> <tr> <th>Dose of isosorbide mononitrate MR</th> <th>Dose of isosorbide mononitrate IR</th> </tr> </thead> <tbody> <tr> <td>25mg once daily</td> <td>10mg twice daily</td> </tr> <tr> <td>40mg once daily</td> <td>20mg twice daily</td> </tr> <tr> <td>60mg once daily</td> <td>30mg twice daily</td> </tr> <tr> <td>60mg once daily</td> <td>40mg twice daily (monitor for symptom control and adjust dose as required)</td> </tr> </tbody> </table>	Dose of isosorbide mononitrate MR	Dose of isosorbide mononitrate IR	25mg once daily	10mg twice daily	40mg once daily	20mg twice daily	60mg once daily	30mg twice daily	60mg once daily	40mg twice daily (monitor for symptom control and adjust dose as required)
Dose of isosorbide mononitrate MR	Dose of isosorbide mononitrate IR										
25mg once daily	10mg twice daily										
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	<table border="1"> <tr> <td>100mg once daily</td> <td>50mg twice daily</td> </tr> <tr> <td>120mg once daily</td> <td>60mg twice daily</td> </tr> </table> <ul style="list-style-type: none"> The IR tablets can be crushed and dispersed in water (UNLICENSED*, LOW COST) (NEWT, December 2019). They may have an increased rate of absorption and therefore increased side effects. Consider reducing the dose and giving doses more frequently if this occurs. Isosorbide mononitrate 20mg/5mL oral suspension (UNLICENSED, HIGH COST) Consider use of glyceryl trinitrate transdermal patches (LICENSED, HIGH COST) 	100mg once daily	50mg twice daily	120mg once daily	60mg twice daily
100mg once daily	50mg twice daily				
120mg once daily	60mg twice daily				
Lamotrigine	<p>MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change may pose a risk of seizures.</p> <ul style="list-style-type: none"> Lamotrigine dispersible tablets sugar free (LICENSED) (NEWT, January 2019) 				
Lansoprazole	<ul style="list-style-type: none"> Lansoprazole 15mg or 30mg orodispersible tablets (LICENSED) (NEWT, December 2021). For dosing in paediatrics see ICB guidance. 				
Levetiracetam	<p>MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change may pose a risk of seizures.</p> <ul style="list-style-type: none"> Levetiracetam 100mg/mL oral solution sugar free (LICENSED) 				
Levomepromazine	<ul style="list-style-type: none"> Consider switching to alternative antipsychotic if appropriate (e.g., haloperidol, chlorpromazine, sulphiride available as LICENSED liquids). Contact specialist for advice/review. Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, March 2020) For nausea and vomiting – Use one quarter of a scored 25mg tablet for 6.25mg dose. Levomepromazine 2.5mg/5ml oral suspension (UNLICENSED, HIGH COST) 				
Levothyroxine Sodium	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED* LOW COST) (NEWT, June 2021). Patients taking capsules (UNLICENSED, HIGH COST) due to lactose or galactose intolerance - Switch to levothyroxine sodium tablets and note for dispenser for lactose free tablets (Teva, Aristo or Glenmark) (LICENSED, LOW COST) Levothyroxine oral solution sugar free 50micrograms/5mL or 100micrograms/5mL (LICENSED, HIGH COST) 				
Linagliptin	<ul style="list-style-type: none"> No information available. Review indication and consider alternative anti-diabetic agents 				
Liothyronine	<ul style="list-style-type: none"> Switch to liothyronine 20microgram tablets; these can be halved or quartered for part-dosing (UNLICENSED*, HIGH COST) (Common practice advised by local specialists). Alternatively, tablets can be dissolved/dispersed in 20 mL of water for 10 minutes, in a small measuring cup. For part dosing, use a suitable oral syringe to withdraw the amount of liquid corresponding to the dose prescribed (5mL for a 5mcg dose; 10 mL for a 10mcg dose) (LICENSED, HIGH COST) (SPC, December 2022) 				
Liquid paraffin 50%/ Emulsifying ointment 50%	<ul style="list-style-type: none"> Switch to alternative emollient e.g., White soft paraffin 50% / Liquid paraffin 50% ointment (LICENSED). 				
Lisinopril	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, March 2020) Lisinopril 20mg/5mL oral suspension (UNLICENSED, HIGH COST) Lisinopril 5mg/5mL oral solution sugar free (LICENSED, VERY HIGH COST). Shelf life is 28 days once opened. The solution is absorbed to a lesser extent than tablets, monitor blood pressure (BP) and consider dose alteration if necessary (NEWT, March 2020) 				
Lithium Carbonate	<ul style="list-style-type: none"> Seek advice from specialist. 				
Loperamide Hydrochloride	<ul style="list-style-type: none"> Capsules can be opened and the contents mixed with water, jam or yoghurt (UNLICENSED*, LOW COST) (NEWT, June 2023) Loperamide 2mg orodispersible tablets sugar free (LICENSED, HIGH COST) Loperamide 25mg/5mL oral suspension (UNLICENSED MOST COST-EFFECTIVE PREPARATION) 				
Lorazepam	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, March 2020) Give tablets sublingually but the patient must have a sufficiently moist mouth for absorption to occur (UNLICENSED*) (NEWT, March 2020) Lorazepam 1mg/5mL or 500micrograms/5mL oral solution (UNLICENSED, HIGH COST) Lorazepam 1mg/ml oral solution sugar free (LICENSED, VERY HIGH COST) 				
Losartan Potassium	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, January 2019) Losartan 50mg/5mL oral suspension (UNLICENSED, HIGH COST) 				
Lymecycline	<ul style="list-style-type: none"> Consider switching to doxycycline (LICENSED) (see individual entry) 				
Magnesium	<p>Calculate mmol of magnesium and switch to alternative magnesium salt</p> <ul style="list-style-type: none"> Magnesium aspartate 243mg (10mmol magnesium) oral powder sachets (LICENSED) or Magnesium glycerophosphate Chewable Tablets sugar free 97.2mg (4mmol) (LICENSED) Magnesium glycerophosphate 121.25mg/5ml (5mmol/5ml) oral solution (LICENSED) 				
Mebeverine Hydrochloride	<p>Consider an alternative for the symptomatic relief of irritable bowel syndrome and or/other indications. Contact specialist for advice on modified release (MR) capsules. Mebeverine 135mg tablet is equivalent to mebeverine 150mg liquid (NEWT, May 2020)</p> <ul style="list-style-type: none"> In combination with a bulk-forming laxative: Ispaghula husk 3.5g / Mebeverine 135mg effervescent granules sachets sugar free (LICENSED) Mebeverine 50mg/5mL oral suspension sugar free (LICENSED, VERY HIGH COST) 				
Melatonin	<ul style="list-style-type: none"> Crush and disperse Adaflex® tablets in water (LICENSED) Crush Circadin® (LICENSED) tablets and mix with water or give with a small amount of food such as yoghurt - this will change it from a modified-release tablet to immediate-release (UNLICENSED*, LOW COST) For paediatrics only – melatonin 1mg/ml oral solution sugar and alcohol free (Ascomel®). Ascomel® is the liquid preparation of choice as it has been risk assessed as suitable for use in children. Note: Ascomel® has an 8-week expiry once opened (UNLICENSED, HIGH COST) 				

Mercaptopurine	<p>CYTOTOXIC – DO NOT CRUSH TABLETS</p> <ul style="list-style-type: none"> Mercaptopurine 20mg/ml oral suspension (LICENSED, VERY HIGH COST). Oral suspension and tablets are not bioequivalent with respect to peak plasma concentration; Specialist supervision is advised when switching formulations
Mesalazine	<ul style="list-style-type: none"> Mesalazine MR granules sachets sugar free (LICENSED) can be used for patients with swallowing difficulties but not for enteral feeding. Prescribe as <i>Pentasa</i>® or <i>Salofalk</i>® <i>Pentasa</i>® tablets will disperse in water, leaving small beads which must be administered intact (therefore suitable only for large-bore tubes) Do not crush. (UNLICENSED*) (NEWT, May 2020) Consider rectal route (enemas or suppositories) if appropriate to the location of the condition (NEWT, May 2020)
Metformin	<p>Do not crush modified release (MR) tablets. Convert MR to immediate release (IR) tablets. Total daily MR dose (usually once or twice daily) to be converted to equivalent IR dose and given up to three times daily. Monitor blood glucose levels.</p> <ul style="list-style-type: none"> Crush and disperse IR tablets in water (UNLICENSED*, LOW COST) (NEWT, May 2020) Metformin 500mg/5ml oral solution sugar free (LICENSED, HIGH COST, MOST COST-EFFECTIVE STRENGTH)
Methotrexate	<p>CYTOTOXIC – DO NOT CRUSH TABLETS</p> <ul style="list-style-type: none"> Methotrexate 2mg/mL oral solution sugar free (LICENSED, HIGH COST) Consider subcutaneous route of administration
Metolazone	RED drug: Do not prescribe in primary care – Secondary care only
Metoprolol	<p>Do not crush modified release (MR) tablets</p> <ul style="list-style-type: none"> Consider switching to atenolol or propranolol (see individual entries) Refer to indications and dosing in the BNF to convert to immediate release (IR) tablets. IR tablets can be crushed and dispersed in water (UNLICENSED*, LOW COST) (NEWT, February 2019)
Midazolam	<p>Prescribe the same brand as at initiation as strengths vary.</p> <ul style="list-style-type: none"> Buccolam® oromucosal solution 10mg/2ml prefilled oral syringes – various dose sizes available, and Epistatus® oromucosal solution 10mg/1ml prefilled oral syringes
Mirtazapine	<ul style="list-style-type: none"> Mirtazapine orodispersible tablets (LICENSED) Crush and disperse tablets in water (UNLICENSED*, LOW COST). The tablets have a bitter taste and an anaesthetic effect on the mouth (NEWT, August 2020) Mirtazapine 15mg/mL oral solution sugar free (LICENSED, HIGH COST). Shelf life is 42 days once opened.
Montelukast	<ul style="list-style-type: none"> Montelukast chewable 4mg or 5mg tablets sugar free can be dispersed in water (LICENSED, LOW COST) (NEWT, February 2022) Montelukast 4mg oral granules sachets sugar free (LICENSED, HIGH COST) can be administered either directly in the mouth, or mixed with a spoonful of soft food (SPC, November 2020)
Naproxen	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST). Do not crush the enteric coated tablets. (NEWT, October 2021) Naproxen 250mg/5ml oral suspension (LICENSED, HIGH COST, MOST COST-EFFECTIVE STRENGTH) Naproxen 250mg effervescent tablets sugar free (LICENSED, HIGH COST)
Nicorandil	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, May 2010)
Nifedipine	<p>Use of immediate release (IR) nifedipine capsules for blood pressure control is not recommended due to the risk of rebound hypertension and tachycardia.</p> <p><u>For blood pressure control</u></p> <ul style="list-style-type: none"> Consider alternative methods of blood pressure control, e.g., switching to amlodipine (see separate entry) (NEWT, January 2021) Modified release (MR) capsules (e.g., <i>Coracten</i>®) can be opened and contents given, do not crush contents (UNLICENSED*, LOW COST) (NEWT, January 2021) (Dosing is brand specific - BNF, 2020) <p><u>For other indications</u></p> <ul style="list-style-type: none"> IR capsules can be bitten and the contents administered sublingually (UNLICENSED*, LOW COST) (NEWT, January 2021) Nifedipine 10mg/5mL oral suspension (UNLICENSED, HIGH COST, MOST COST-EFFECTIVE STRENGTH)
Nitrofurantoin	<p>Do not open modified release (MR) capsules.</p> <ul style="list-style-type: none"> Open 50mg or 100mg immediate release (IR) capsules and disperse contents in water (UNLICENSED*, LOW COST). Crush and disperse IR tablets in water for enteral feeds only (UNLICENSED*, LOW COST) (NEWT, January 2021) Nitrofurantoin 25mg/5mL oral suspension sugar free (LICENSED, VERY HIGH COST)
Olanzapine	<ul style="list-style-type: none"> Olanzapine orodispersible tablets sugar free (LICENSED, HIGH COST). The tablet can be placed on the tongue or dispersed in water, orange juice, apple juice, milk, or coffee. Olanzapine may be irritant to the skin and eyes, so take precautions to avoid contact (e.g. wear gloves) (NEWT, August 2022) Olanzapine 2.5mg/5mL oral suspension (UNLICENSED, HIGH COST)
Omeprazole	<ul style="list-style-type: none"> Consider switching to lansoprazole (see individual entry). Omeprazole dispersible gastro-resistant tablets (LICENSED) - Disperse tablet in water. Can then mix with orange / apple / pineapple juice, apple sauce, or yogurt (NEWT, January 2023)
Ondansetron	<ul style="list-style-type: none"> Ondansetron orodispersible films sugar free (LICENSED, HIGH COST) Ondansetron oral lyophilisates sugar free (LICENSED, VERY HIGH COST) Ondansetron 4mg/5ml oral solution sugar free (LICENSED, VERY HIGH COST)
Oxybutynin	<p>Do not crush the modified release (MR) tablets. (NEWT, August 2020)</p> <ul style="list-style-type: none"> Crush and disperse immediate release (IR) tablets in water (UNLICENSED*, LOW COST) (NEWT, August 2020) Oxybutynin 3.9mg/24hours transdermal patches (LICENSED, HIGH COST) Oxybutynin oral solution 2.5mg/5ml or 5mg/5ml sugar free (LICENSED, VERY HIGH COST)

Pantoprazole	<ul style="list-style-type: none"> Consider switching to another proton pump inhibitor which is available in a suspension or dispersible form, e.g., lansoprazole or omeprazole. See separate entries (NEWT, January 2015)
Paracetamol	<ul style="list-style-type: none"> Paracetamol 250mg/5ml oral suspension sugar free (LICENSED) Paracetamol 1g effervescent tablets sugar free (LICENSED). Note: These contain high amounts of sodium (NEWT, April 2022). Paracetamol 1g suppositories (LICENSED, HIGH COST)
Paroxetine Hydrochloride	<ul style="list-style-type: none"> Crush and disperse tablet in water (UNLICENSED*, LOW COST). The crushed tablets are bitter and have a slight local anaesthetic effect. (NEWT, October 2020)
Perindopril Arginine	Switch perindopril <i>arginine</i> to perindopril <i>erbumine</i> . Perindopril arginine 2.5mg is equivalent to 2mg perindopril erbumine . See separate entry (NEWT, August 2014)
Perindopril Erbumine	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, January 2021) Perindopril erbumine 4mg/5mL oral solution (UNLICENSED, HIGH COST)
Phenobarbital	<p>MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change poses a risk of seizures. Seek specialist advice.</p> <ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*) (NEWT, January 2021) Phenobarbital 15mg/5ml elixir. The elixir contains 38% alcohol (LICENSED).
Pilocarpine (eye)	<ul style="list-style-type: none"> Confirm whether patient requires preservative free - For preservative free prescribe as Minims Pilocarpine Nitrate 2% w/v, Eye drops solution (LICENSED, VERY HIGH COST)
Pioglitazone	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, August 2019)
Pizotifen	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, October 2020) Pizotifen 250micrograms/5ml oral suspension (UNLICENSED, HIGH COST)
Potassium Chloride	<ul style="list-style-type: none"> Sando-K® (12mmol) effervescent tablets or Kay-Cee- L syrup® 5mmol/5ml (LICENSED)
Potassium Permanganate	<ul style="list-style-type: none"> NOT FOR ORAL USE. Dissolve one potassium permanganate 400mg tablets for cutaneous solution (Permitabs®) (LICENSED) in four litres of water to provide a 0.01% (1 in 10 000) solution. See guidance in BNF
Pravastatin Sodium	<ul style="list-style-type: none"> Crush and disperse tablets in water. (UNLICENSED*, LOW COST) (NEWT, March 2021)
Prednisolone	<ul style="list-style-type: none"> Disperse tablets in water (UNLICENSED*, LOW COST). Do not crush the enteric-coated tablets due to the risk of tube blockage. Prednisolone 10mg/ml oral solution sugar free (LICENSED, HIGH COST) Prednisolone 5mg soluble tablets (LICENSED, HIGH COST) Consider using rectal preparations e.g., Prednisolone 20mg/100ml rectal solution (if appropriate to the location of the condition) (LICENSED) (NEWT, November 2021)
Pregabalin	<p>MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change poses a risk of seizures.</p> <ul style="list-style-type: none"> Open capsule and dissolve contents in water (UNLICENSED* LOW COST). The capsule contents may have an unpleasant taste (NEWT, March 2021) Pregabalin 20mg/mL oral solution sugar free (LICENSED, HIGH COST)
Prochlorperazine Maleate	<ul style="list-style-type: none"> Prochlorperazine 3mg buccal tablets (LICENSED, HIGH COST)
Procyclidine Hydrochloride	<ul style="list-style-type: none"> Procyclidine 2.5mg/5ml oral suspension sugar free or 5mg/5mL oral solution sugar free (LICENSED))
Promethazine Hydrochloride	<ul style="list-style-type: none"> Promethazine 5mg/5mL oral solution sugar free (LICENSED). Shelf life is 28 days once opened.
Propranolol Hydrochloride	<p>Do not crush/open modified release (MR) preparations, switch to immediate release (IR) and give total daily dose as solution in two to three divided doses (NEWT, October 2019)</p> <ul style="list-style-type: none"> Propranolol 10mg/5mL, 40mg/5mL or 50mg/5mL oral solution sugar free (LICENSED)
Quetiapine	<p>Do not crush modified release (MR) preparations – convert to immediate release (IR). Switch from MR to IR tablets at the equivalent daily dose; to maintain clinical response, dose titration may be required (BNF, 2020).</p> <ul style="list-style-type: none"> Crush and disperse IR tablets in water or add to soft food. Crushed tablets taste bitter (UNLICENSED*, LOW COST) (NEWT, October 2019) Quetiapine 25mg/5mL oral suspension (UNLICENSED, HIGH COST, MOST COST-EFFECTIVE STRENGTH) Quetiapine 20mg/ml oral suspension sugar free (LICENSED, VERY HIGH COST)
Quinine Sulfate	<ul style="list-style-type: none"> Crush and disperse tablets well in a large volume (e.g., 200mL) of water. The crushed tablets have a bitter taste which may be masked by mixing with syrup (UNLICENSED*, LOW COST) (NEWT, October 2019) Quinine sulfate oral suspension 200mg/5mL and 300mg/5mL (UNLICENSED, HIGH COST)
Ramipril	<ul style="list-style-type: none"> Open capsule and disperse contents in water. The contents can be placed onto bread or mixed with apple juice/apple sauce or can be placed directly into the mouth, though taste unpleasant (UNLICENSED*, LOW COST) (NEWT, March 2021) Crush and disperse tablets in water (UNLICENSED*, LOW COST) Ramipril 2.5mg/5mL oral solution sugar free (LICENSED, HIGH COST). Shelf life is one month once opened.
Risperidone	<ul style="list-style-type: none"> Risperidone 1mg/mL oral solution sugar free (LICENSED) Risperidone orodispersible tablets sugar free. Dissolve on tongue or disperse in water (LICENSED, HIGH COST)

Rivaroxaban	<ul style="list-style-type: none"> Crush and disperse tablets in water or apple puree for swallowing difficulties. Crush and disperse tablets in water for administration via nasogastric (NG) tube (LICENSED) Not suitable for administration via enteral feeding tubes terminating beyond the stomach (i.e., in the duodenum or jejunum) (NEWT, August 2022; SPC 2023) Rivaroxaban 1mg/ml oral suspension sugar free (LICENCED, HIGH COST) 																		
Ropinirole Hydrochloride	<p>Do not crush the modified release (MR) tablets. Switch MR tablets to immediate release (IR) tablets (Summary of Product Characteristics, February 2022)</p> <table border="1"> <thead> <tr> <th>Ropinirole <i>MR</i> tablets Total daily dose</th> <th>Ropinirole <i>IR</i> tablets Total daily dose</th> </tr> </thead> <tbody> <tr> <td>2mg</td> <td>0.75 - 2.25mg</td> </tr> <tr> <td>4mg</td> <td>3 - 4.5mg</td> </tr> <tr> <td>6mg</td> <td>6mg</td> </tr> <tr> <td>8mg</td> <td>7.5 - 9mg</td> </tr> <tr> <td>12mg</td> <td>12mg</td> </tr> <tr> <td>16mg</td> <td>15 - 18mg</td> </tr> <tr> <td>20mg</td> <td>21mg</td> </tr> <tr> <td>24mg</td> <td>24mg</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Crush and disperse the IR tablets in water for administration via enteral feeding tubes. Crushed tablets may also be mixed with soft food for patients with swallowing difficulties. (UNLICENSED*, LOW to HIGH COST BASED ON STRENGTH) (NEWT, March 2021) 	Ropinirole <i>MR</i> tablets Total daily dose	Ropinirole <i>IR</i> tablets Total daily dose	2mg	0.75 - 2.25mg	4mg	3 - 4.5mg	6mg	6mg	8mg	7.5 - 9mg	12mg	12mg	16mg	15 - 18mg	20mg	21mg	24mg	24mg
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Rosuvastatin Calcium	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, May 2022) Capsules can be opened, and contents administered in applesauce or chocolate/vanilla flavoured pudding. Do not chew. (*UNLICENSED, LOW COST) (NEWT, May 2022) 																		
Salicylic Acid Ointment (topical)	<p>Initiation by specialist for hyperkeratotic conditions only. Review ongoing clinical need.</p> <ul style="list-style-type: none"> Alternatives include: Urea 10%/Lactic acid 5% cream (Calmurid®), Salicylic acid 16.7% / Lactic acid 16.7% paint (Salactol®), Salicylic acid 50% ointment (Verrugon®) (ALL LICENSED, LOW COST) Salicylic acid 5%, 10% and 20% ointment (UNLICENSED, HIGH COST) 																		
Sertraline Hydrochloride	<ul style="list-style-type: none"> Consider switching to SSRI with suitable formulations e.g., citalopram or fluoxetine (LICENSED) (See individual entries). Crush and disperse tablets in water or mix with food. They have a bitter taste and an anaesthetic effect on the tongue – take care with hot foods after administration (UNLICENSED*, LOW COST) (NEWT, November 2019) Sertraline 50mg/5mL oral suspension (UNLICENSED, MOST COST-EFFECTIVE STRENGTH). 																		
Simvastatin	<ul style="list-style-type: none"> Crush and disperse in water. (UNLICENSED*, LOW COST) (NEWT, April 2021) Simvastatin 20mg/5mL or 40mg/5mL oral suspension sugar free (LICENSED, HIGH COST). Shelf life is one month once opened. 																		
Sitagliptin	No information available. Review indication and consider alternative anti-diabetic agents																		
Sodium Bicarbonate	<ul style="list-style-type: none"> Switch to 500mg sodium bicarbonate capsules (6mmol sodium/capsule). Open capsules and disperse contents in water (UNLICENSED*, LOW COST) (NEWT, February 2021) Sodium bicarbonate 420mg/5ml (1mmol/ml) oral solution sugar free (Prescribe as Thamcarb®). Product has 3 days (100ml) and 7 days (500ml) shelf life once opened (LICENSED, VERY HIGH COST) 																		
Sodium Chloride (eye)	<p>Review ongoing clinical need</p> <ul style="list-style-type: none"> Available over the counter. Promote self-care. Sodium chloride 5% eye ointment preservative free (LICENSED, HIGH COST) or sodium chloride 5% eye drops (LICENSED, LOW COST). 																		
Sodium Valproate	<p>MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change poses a risk of seizures.</p> <ul style="list-style-type: none"> Sodium valproate 200mg/5mL oral solution sugar free (LICENSED) Sodium valproate 100mg crushable tablets (LICENSED) can be mixed with soft food e.g., yoghurt or jam to mask the bitter taste. For patients who are stabilised on modified-release formulations, use sodium valproate modified release (MR) granules sachets (LICENSED, LESS COST-EFFECTIVE) for swallowing difficulty only (NEWT, December 2019). Granules can be mixed with soft food or a cold drink, and should be swallowed whole without chewing. 																		
Solifenacin	<ul style="list-style-type: none"> Consider oxybutinin immediate release tablets and tolterodine immediate release tablets can be crushed and dispersed in water (UNLICENSED*, LOW COST) Solifenacin 1mg/ml oral suspension sugar free (LICENCED, HIGH COST) 																		
Sotalol Hydrochloride	<ul style="list-style-type: none"> Consider alternative licensed beta-blocker preparation Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, April 2021) Sotalol 25mg/5mL oral suspension (UNLICENSED, HIGH COST) 																		
Spironolactone	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, December 2019) Spironolactone oral suspension 5mg/5mL, 50mg/5mL or 25mg/5mL (UNLICENSED, HIGH COST) 																		
Sulfasalazine	<ul style="list-style-type: none"> Sulfasalazine 500mg suppositories (if appropriate to the location of the condition) (LICENSED, LOW COST) Sulfasalazine 250mg/5mL oral suspension sugar free (LICENSED, HIGH COST). Shelf life is 28 days once opened. 																		

Sumatriptan Succinate	<ul style="list-style-type: none"> Sumatriptan 10mg or 20mg nasal spray unit dose (LICENSED, HIGH COST)
Tamsulosin Hydrochloride	<ul style="list-style-type: none"> Tamsulosin 400microgram modified-release (MR) capsules can be opened and contents mixed with water. Swallow granules whole. Do not chew (UNLICENSED*, LOW COST) (NEWT, May 2017). Note: tablets are modified release (MR) and should not be crushed. Consider switching to finasteride 5mg tablets (see individual entry) Tamsulosin 400micrograms/5mL oral solution (UNLICENSED, HIGH COST)
Terbinafine	<ul style="list-style-type: none"> Crush and disperse 250mg tablets in water (UNLICENSED*, LOW COST) (NEWT, April 2021) Terbinafine 250mg/5ml oral suspension (UNLICENSED, HIGH COST)
Thiamine Hydrochloride	<ul style="list-style-type: none"> Crush and disperse the tablets in water (UNLICENSED*, LOW COST) (NEWT, May 2020) Thiamine 100mg/5mL oral suspension (UNLICENSED, HIGH COST)
Tolterodine	<ul style="list-style-type: none"> Crush and disperse immediate release (IR) tablets in water (UNLICENSED*, LOW COST) (NEWT, February 2021) For swallowing difficulty, modified release (MR) capsules contain time-release beads which can be removed from the capsule and administered orally whole (UNLICENSED*, LOW COST). Note: beads are not to be chewed (NEWT, February 2021) Tolterodine 2mg/5mL oral suspension (UNLICENSED, HIGH COST)
Topiramate	<p>MHRA guidance (Nov 2017): Care should be taken when switching between formulations in the treatment of epilepsy. A product change poses a risk of seizures.</p> <ul style="list-style-type: none"> Sprinkle capsules can be opened, and contents sprinkled on food or mixed with water for administration (LICENSED) (NEWT, June 2021) Crush and dispersed tablets in water for administration. The crushed tablets have a bitter taste (UNLICENSED*, LOW COST) (NEWT, June 2021) Topiramate 50mg/5ml or 100mg/5ml oral suspension (UNLICENSED, HIGH COST)
Tramadol Hydrochloride	<ul style="list-style-type: none"> Tramadol 50mg soluble tablets or orodispersible tablets sugar free (LICENSED) (NEWT, June 2021) Tramadol 100mg/mL oral drops. Dilute drops with water first. Note: a dose of 50mg is equivalent to 20 drops (LICENSED, LESS COST-EFFECTIVE) (SPC Tramadol 100mg/ml oral drops, June 2020)
Tranexamic Acid	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, June 2021) Tranexamic acid 500mg/5ml oral solution (UNLICENSED, HIGH COST)
Trihexyphenidyl (formerly known as benzhexol)	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, June 2021) Trihexyphenidyl 5mg/5ml oral solution (LICENSED, HIGH COST)
Ursodeoxycholic acid	<ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, April 2021) Ursodeoxycholic acid 250mg/5ml oral suspension sugar free (LICENSED, HIGH COST)
Venlafaxine	<p>Do not crush modified (MR) tablets, switch total daily dose to immediate (IR) tablets and give in divided doses</p> <ul style="list-style-type: none"> Crushed IR tablets can be administered in jam for patients with swallowing difficulties, or in water for patients with enteral tubes (UNLICENSED*, LOW COST) (NEWT, June 2021) Venlafaxine 75mg/5mL sugar free oral solution (LICENSED, HIGH COST).
Vitamin E capsules	<ul style="list-style-type: none"> Purchase multivitamins over-the-counter (OTC) Alpha tocopheryl acetate 500mg/5ml oral suspension (LICENSED, HIGH COST)
Warfarin Sodium	<p>Adult patients – consider switch to NOAC – edoxaban, apixaban or rivaroxaban where appropriate (see separate entries)</p> <ul style="list-style-type: none"> Crush and disperse tablets in water (UNLICENSED*, LOW COST) (NEWT, May 2021). Monitor INR. Warfarin 1mg/mL oral suspension sugar free (LICENSED, HIGH COST)
Zolpidem	<p>Do not prescribe long term – consider clinical need for hypnotic</p> <ul style="list-style-type: none"> Crush and disperse in water (UNLICENSED*, LOW COST) (NEWT, June 2021)
Zopiclone	<p>Do not prescribe long term – consider clinical need for hypnotic</p> <ul style="list-style-type: none"> Do not crush zopiclone tablets (NEWT, June 2021). Consider zolpidem tablets (see separate entry) Zopiclone 3.75mg/5ml or 7.5mg/5ml oral solution (UNLICENSED, HIGH COST)

***Manipulation of a licensed product in this way will be outside of the product’s marketing authorisation. However, there is evidence and clinical experience detailed in reputable sources (e.g., NEWT) confirming that formulation manipulation of this nature can take place without compromising the effectiveness of the medicine. Some formulations should not usually be crushed, and this has been taken into account in the advice outlined above. Decisions should be made on an individual basis and the specific needs and best interests of the individual patient taken into account.**

References

British National Formulary (BNF). (2023). Accessed online: <https://bnf.nice.org.uk/>

NEWT Guidelines for administration of medication to patients with enteral feeding tubes or swallowing difficulties. Wrexham Maelor Hospital - Pharmacy Department. Accessed via www.newtguidelines.com

NHS Business Services Authority (NHSBSA). Drug Tariff (September 2023). Accessed via www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/drug-tariff

Specialist Pharmacy Service (SPS) Preparing medicines for administration to adults with swallowing difficulties (March 2022) Accessed via: <https://www.sps.nhs.uk/articles/preparing-medicines-for-administration-to-adults-with-swallowing-difficulties/>

Summary of Product Characteristics (various monographs), Electronic Medicines Compendium. Accessed via www.medicines.org.uk

Version	1
Developed by	Radhika Kotecha (Pharmaceutical Advisor, Pharmacy & Medicines Optimisation Team)
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