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Medicines Information

A GUIDE FOR PHARMACISTS



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FOREWORD

To achieve the ultimate goal of improving overall health status of the population of Myanmar, we have formulated a well-integrated, cohesive and compact National Health Plan (NHP) (2017-2021). NHP has underlined medicines as one of the pillars for progress of UHC. The SDGs too recognized that without access to essential medicines for all will not be able to progress towards achieving health related SDGs.

To ensure equitable access to good quality essential medicines and their rational use by health care providers and consumers to support better health services , and to improve health outcomes for the people of Myanmar, Myanmar Medicines Policy and Implementation Plan (2018-2021) was developed through identification of five strategic areas. Rational Use of Medicines is one of the strategic areas in Medicines Policy Implementation.

Rational use of Medicines is vital for high quality health care and outcomes. Health care delivery system is now facing with non-adherence to prescription writing. It is high time to promote patient counseling at the time of drug dispensing when the patients are discharged from the hospitals. This will promote adherence to treatment and thereby mitigating drug resistance and side effects of medicines prescribed.

Patient counseling is a key component of pharmacy-based health care and it is crucial that pharmacists are in a position to give appropriate, reliable and trusted information to patients regarding their usage of prescribed medicines.

Pharmacists have the duty to care for their patients and must act at all times in the best interest of their patients, and must ascertain that patients have sufficient understanding of how to use medicines rationally and improving adherence to treatment.

I strongly emphasized that this Medicines Information Booklet for patients to be used by pharmacists could also be used for proper counseling to patients both in health facilities not only for promoting rational use among health care providers and consumers but also for implementing Good Dispensing Practices.

MH
21.9.20

Dr Myint Htwe

Union Minister

Ministry of Health and Sports

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Department of Medical Services

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Introduction

Patient counselling is an interpersonal communication between the pharmacists and the patient/ patient party regarding the disease, medications and lifestyle modifications.

If used medicinal products correctly, it can greatly enhance the health and wellbeing of patients. However, if used incorrectly or inappropriately, medicinal products have the potential to do great harm. Patient counselling by pharmacists has a prime place in the ever evolving role of pharmacists. There are two types of counselling –

(1) Counselling regarding disease:

The patients should be told that the disease will not spread to their neighbours and will not affect the children. It will also not spread through eating in the same plates, using the same utensils, etc. If the medications are taken properly, the progression of the disease can be prevented and hence the outcomes may be better and they will be symptom free.

(2) Counselling regarding medication:

The counselling regarding medication depends upon the type of medications. In order to achieve the safe, effective and appropriate use of medicines, healthcare professionals must be able to use the BNF effectively, and keep up to date with significant changes in the BNF that are relevant to their clinical practice.

Objectives

The main aims of effective patient counselling are-

- (1) To enable and encourage the safe and proper use of medications by patients in order to achieve the required therapeutic outcomes.
- (2) To achieve such positive results, a pharmacist may undertake to counsel the patient or his/her representative on the following matters-
 - the nature and use of the medicinal product
 - how to take/administer it
 - duration of treatment
 - special regard for food or drink
 - which other medicinal products to avoid
 - what to do if they think the medicinal product is not working
 - what to do in the event of a missed dose
 - what to do in the event of an overdose
 - the correct use of therapeutic devices (including demonstration, if applicable)
 - what to do with any previously dispensed medicinal product(s), no longer required (i.e. disposal of medicinal product)

Importance of Rational Use of Medicines (RUM)

Definition of rational use of medicines

"Patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community." (WHO, 1985).

A major global problem

Irrational use of medicines is a major problem worldwide. WHO estimates that more than half of all medicines are prescribed, dispensed or sold inappropriately, and that half of all patients fail to take them correctly? The overuse, underuse or misuse of medicines results in wastage of scarce resources and widespread health hazards.

WHO advocates 12 key interventions to promote more rational use:

- Establishment of a multidisciplinary national body to coordinate policies on medicine use
- Use of clinical guidelines
- Development and use of national essential medicines list
- Establishment of drug and therapeutics committees in districts and hospitals
- Inclusion of problem-based pharmacotherapy training in undergraduate curricula
- Continuing in-service medical education as a licensure requirement
- Supervision, audit and feedback
- Use of independent information on medicines
- Public education about medicines
- Avoidance of perverse financial incentives
- Use of appropriate and enforced regulation
- Sufficient government expenditure to ensure availability of medicines and staff.

Advantages of Rational Prescribing-(a) better therapeutic outcome

(b) less burdens on patients(physical,mental,financial)

(c) less wastage (money, man power)

WHO concerning rational prescribing which consists of 6 steps-

STEP 1. Define the patient's problem. Is drug therapy necessary?

STEP 2. Specify the therapeutic objective.What changes do you expect to achieve?

STEP 3. Verify the suitability of your P-treatment.Is the drug capable of producing them?

Check efficacy, safety & affordability

STEP 4. Start the treatment (prescription writing)

STEP 5. Give information, instructions and warnings

STEP 6. Monitor and decide when to stop the treatment

Correct Use of medicines based on routes of administration & Dosage Forms

Frail elderly patients may have difficulty swallowing tablets; if left in the mouth, ulceration may develop. They should always be encouraged to take their tablets or capsules with enough fluid, and whilst in an upright position to avoid the possibility of oesophageal ulceration. It can be helpful to discuss with the patient the possibility of taking the drug as a liquid if available.

How to use Transdermal patch correctly

1. Read all instructions that come with patch. The instructions will tell you where to place the patch, how long to wear it, and when to remove and replace it.
2. Wash your hands with soap and water. If water isn't available, you can use hand sanitizer instead.
3. If you have an old patch on your body that contains the same drug, remove it.
4. Open the package carefully by tearing it open or using scissors. Avoid tearing or cutting the patch itself. If you do tear or cut the patch, don't use it. Fold the patch in half with the sticky sides pressed together & throw away the damaged patch
5. Take the patch out of the packaging. Remove the protective liner on the patch as directed by the patch instructions. Be careful not to touch the sticky side of the patch.
6. When placing a patch, choose a spot where the patch will attach well. Avoid skin that has open cuts or sores, creases, gets sweaty, gets rubbed a lot, has a lot of hair, was recently shaved (wait three days after shaving before applying a patch to an area), will be covered by a belt or clothing seam.
7. Keep in mind that the skin isn't the same everywhere on your body.
8. Rotate the locations where you apply your patch because placing a new patch in the same place as the old one may irritate your skin.
9. If you're using more than one patch at a time, don't overlap them.

How to Use Rectal Suppositories

1. Gently squeeze the suppository to check if it is firm enough to insert. If it's not, let it harden by holding it under cold water or place it in the refrigerator for a few minutes.
2. If possible, go to the bathroom and empty your bowels.
3. Wash your hands with soap and water.
4. Remove your clothing to expose your buttocks.
5. Remove any wrapping from the suppository. If you need to cut the suppository, carefully cut it lengthwise with a clean, single-edge razor blade.
6. To moisten the tip of the suppository, apply a lubricating jelly such as K-Y Jelly. If you don't have lubricating jelly, apply a small amount of water to your rectal area.
7. Sit or lie with your legs closed for 15 minutes and avoid exercise or lots of movement for one hour.

How to Use Nasal Spray

Using a nasal spray

1. Close the nostril that is not receiving the medication. Do this by gently pressing on that side of your nose.
2. Gently insert the bottle tip into the other nostril.
3. Breathe in deeply through that nostril as you squeeze the bottle. Remove the bottle and sniff once or twice.
4. Repeat if directed. Wait at least 10 seconds between sprays.
5. If directed, repeat steps 1- 4 for the other nostril.

Using a pump nasal spray

1. Hold the bottle with your index and middle fingers on each side of the bottle and your thumb on the bottom of the bottle.
2. Prime the bottle. This is typically done by spraying the product one or more times into the air or into a tissue. See the product label for specific instructions.
3. Tilt your head slightly forward.
4. Close the nostril that is not receiving the medication. Do this by gently pressing on that side of your nose.
5. Insert the tip of the bottle into the other nostril.
6. Breathe in deeply through that nostril as you press down on the pump with your index and middle fingers. Remove the bottle and sniff once or twice. Repeat if directed. Wait at least 10 seconds between sprays.
7. If directed, repeat steps 3–6 for the other nostril.
8. Don't allow the spray tip to touch anything besides the inside of your nose.
9. Don't share your nasal spray with anyone else.

How to Use Vaginal Suppositories

1. To keep your suppositories from melting before use, store them in a cool place.
2. Wash your vaginal area and hands with mild soap and warm water
3. Get into position. You can either lie on your back with your knees bent, or you can stand with your knees bent and your feet a few inches apart.
4. Gently insert the applicator into the vagina as far as it will comfortably go.
5. Press the applicator's plunger as far as it goes. This will push the suppository far back into your vagina.
6. Remove the applicator from your vagina.

How to Use Eye Drops

1. Wash your hands with soap and water and dry them .
2. If directed on the label, gently shake the bottle.

3. Remove the cap from the bottle and place it on its side on a clean surface.
4. Check the dropper tip to make sure it's clean. If it's dirty, throw the bottle of drops away and get a new one.
5. Tilt your head back or lie down flat on your back. Pull your lower eyelid down with your finger to form a pouch or pocket where the eye drop will go.
6. Hold the bottle over your eye, with the dropper tip facing down. The dropper tip should be as close to your eye as possible without touching your eye.
7. Look up. Squeeze the bottle so that a single drop falls into the pouch you made with your lower eyelid.
8. Close your eye gently and tilt your face toward the floor for two to three minutes. Try to avoid blinking, moving your eyeball, or squeezing your eyelids tightly shut.
9. While your eye is closed, use one finger to apply gentle pressure to the inside corner of the eye. This stops the medication from draining into your nasal passages and getting into your mouth or throat.
10. Use a tissue or other cloth to wipe away any excess liquid from around your eyes.
11. If you need to put a second eye drop into the same eye, wait at least five to 10 minutes after putting in the first drop.
12. Wait at least 15 minutes after using the drops before putting in contact lenses. If you're using moisturizing eye drops for use with contacts, though, you don't need to wait.
13. Don't share eye drops with another person.

How to use eye ointment

1. Wash your hands thoroughly before administration.
2. Remove the cap from the tube and hold the tube as if you are holding a pen.
3. Tilt your head slightly backwards and look up.
4. Using the index finger of your free hand, gently pull down your lower eyelid to form a pouch and with a sweeping motion, squeeze the tube to apply about 0.5 – 1cm of the ointment inside the lower eyelid. Ensure that the tip of the tube does not touch your eye, eyelid or eyelashes to avoid contamination.
5. Release your finger and blink your eye gently. You may gently wipe away excess ointment from your cheeks with a clean piece of tissue paper. Do not dab at your eye directly.
6. Recap the tube and store it either in a cool place or as instructed on the label.
7. Eye ointments can cause blurred vision for a few minutes, as the medication is quite viscous. You should remain safely and comfortably seated until this has resolved.
8. Many eye products are only for single-use, or have a maximum shelf life of 4 weeks after opening.

9. Do not store opened bottles/tubes of eye products in your refrigerator in an attempt to increase the shelf life.
10. Please wait 5 minutes between each application of different types of eye drops. You should wait 10 minutes between applying eye suspensions, gels or ointments.
11. For contact lens wearers, please remove your contact lens before each application of medication, and wait for 30 minutes before putting the lens back.

How to use topical corticosteroid cream or ointment

1. Wash the affected area(s) of skin well and rinse away all traces of soap or cleanser.
2. Pat the skin dry rather than rubbing it.
3. Apply the cream or ointment thinly and evenly to the affected area(s).
4. Gently massage the cream or ointment into the skin until it has all disappeared.
5. Replace the cap on the tube.
6. Wash your hands after applying the cream or ointment, unless the hands are the affected area.
7. Topical corticosteroids should not be applied more than twice a day and once a day may often be sufficient.
8. If you have other creams, ointments or lotions to use on the same area of skin you should try and leave about half an hour between applying each one so that they don't mix on the skin.
9. Only use topical corticosteroids on the affected areas of skin.
10. If you get the cream or ointment in your eye, rinse it out immediately with warm water and consult your doctor if there is any on-going irritation.
11. Don't give your medicines to anyone else to use, even if they have the same symptoms as you. They may be harmful to other people

How to take Oral Rehydration Salts

Oral powder:

1. Put the contents of the ORS packet in a clean container. Check the packet for directions and add the correct amount of clean water. Too little water could make the diarrhoea worse
2. Stir well until all the powder has gone and the mixture is clear or just slightly cloudy.
3. If they cannot drink it all in one go, they can drink it over about 30 minutes.
4. Do not keep the solution for more than one hour at room temperature. If you keep it in a fridge you can keep it for 24 hours.
5. Add water only. Do not add ORS to milk, soup, fruit juice or soft drinks. Do not add sugar.
6. Stir well, and feed it to the child from a clean cup. Do not use a bottle.

Made at home: ORS Solution A special drink for diarrhea

Ingredients:

- Six (6) level teaspoons of Sugar
- Half (1/2) level teaspoon of Salt
- 1 L of clean drinking or boiled water and then cooled

Preparation Method:

- Stir the mixture till the salt and sugar dissolve.

How to use inhalers

Metered-dose inhaler (MDI):

1. Shake vigorously
2. Remove cap
3. Hold upright
4. Breathe out gently, not fully
5. Start breathing in slowly and deeply
6. Actuate during inspiration
7. Continue slow inhalation
8. No aerosol loss is visible
9. Hold breath for 10 sand the next dose after 1 min

Key counselling points regarding common anti-asthma medications

Short-acting bronchodilators	<ul style="list-style-type: none">• If taken along with a steroid inhaler, first the bronchodilator should be taken
Long-acting bronchodilators	<ul style="list-style-type: none">• This medicine is not helpful during an emergency• It is recommended in children before exercise
Steroids	<ul style="list-style-type: none">• The patients should be advised regarding rinsing mouth after the inhalation• Should be advised not to stop this medicine abruptly• This drug is not helpful during an asthma attack
Theophylline	<ul style="list-style-type: none">• Should not be chewed if it is a controlled-release preparation
Anticholinergics	<ul style="list-style-type: none">• May cause anticholinergic side effects• May not be beneficial during an attack

Don't Crush tablets or capsules with special modifications

Special modifications:	word/ letter	Type of product
	CR/ Chrono/ CRT	Controlled release
	EC/ EN	enteric coated
	LA	Long Acting
	MR/ Retard	Modified Release
	SR/ Dur/ Dural	Sustained Release
	SA	Sustained Action
	XL	Extended Release

The tablets and capsules with the above words/letters in their names should never be crushed, opened, chewed or sucked. These special modifications can be destroyed by crushing and the tablet might have a different effect and may cause side effects if it is crushed. You really can't tell just by looking at a tablet or capsule if it does have one of these special modifications or coatings.

Each of the modifications or coatings is there for a different reason and will be damaged by crushing.

Sugar or film coating – surrounds the tablet to make it taste better. Crushing these types of tablets may make them to taste very unpleasant.

Enteric coating – tablets with an enteric coating should **never** be crushed. The coating is designed to hold the tablet together in the stomach and may be there to protect the stomach from the medicine, protect the medicine from the acid in the stomach or to release the medicine after the stomach e.g. in the intestine.

Modified release – this means the medicine has been modified so it is released slowly and doesn't need to be taken so often. The amount of medicine in the body increases slowly so that the chance of side effects is reduced. These tablets should **never** be crushed as this would release all of the medicine very quickly which could be harmful.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
A.	Analgesics, Antipyretics, NSAID, Medicines used to treat gout and rheumatoid disorders							
1.	Acetaminophen	Tablets, I.V drip bottle, Suppositories, oral syrup	Para-amino phenol derivative	Pain, antipyretic	Fever	0.5-1g every 4 to to 6 hours, maximum 4g/day, 2g if taking warfarin.	Stomach pain, nausea, Long term use-liver failure	-Consider the total daily dose of acetaminophen from all sources. -Caution due to hepatotoxicity and angioedema
2.	Allopurinol	Tablets, I.V drip bottle	Xanthine OxidaseInhibitor	Decrease high blood uric acid levels	Gout, Hyperuricaemia	Start with 100mg daily after an acute gout,mild; 100-200mg daily, moderate; 300-600mg daily, severe; 700-900mg daily in divided dose.	Vomiting,GI disorders, kidney problems, rash	Ensure adequate fluid intake (2-3 L/ day) for hyperuricaemia associated with cancer therapy.You should not use allopurinol you have ever had serious allergic reaction.Taken after food.
3.	Amitriptyline	Tablets, IV Drip bottle	Tricyclic Anti-depressant	Major depressive disorder	Anxiety, Neuropathic pain, depressive illness, migraine prophylaxis	Initially 10mg once daily, increase to 75mg once daily, 75mg daily in divided dose	Drowsiness or dizziness	Avoid alcohol use during therapy,risk of overdose causing Cardiovascular death and arrhythmias,caution for suicidal ideation. Taken at night.
4.	Celecoxib	Tablets	COX-2 selective NSAIDS	pain,inflam-mation in osteoarthritis	Rheumatoid arthr-itis, ankylosing spondylitis, painful menstruation	400mg as single dose on the first day and 200mg twice daily on following days. May take up to 5 days	Abdominal pain,nausea and diarrhea	-Cautions for Cardiovascular risk like all NSAIDS, Not safe for renal function but may be slightly safer for GI bleeding risks.
5.	Colchicine	Tablets	Inflamma-tory Mediator	Anti-inflammatory agent	Gout, Prevention of pericarditis	Low dose - 1.8 mg in 1 hour , high dose - 4.8 mg over 6 hrs	Gastrointest-inal upset, diarrhea, neutropenia	Long term therapy require blood work. No more than 3 tablets for an acute attack with similar efficacy to 8 tablets but with much less risk of GI toxicity
6.	Diclofenac sodium	Tablets, IV drip, Suppo-sitories, Liquid	NSAIDS	Pain	Analgesic	50 mg to 100 mg in 8 to 12 hours intervals. No more than 225 mg in a day	abdominal pain, nausea, dizziness, headache and swelling	Take with food. Cardiovascular and renal risks. Enteric coated diclofenac sodium, slow onset not for PRN pain, greater risk of hepatotoxicity.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
7.	Febuxostat	Tablet	Xanthine Oxidase Inhibitor	Decrease high blood uric acid levels	Gout	Initial dose 40 mg PO q Day, May increase to 80 mg PO q Day after 2 wk if serum uric acid <6mg/dl is not achieved	liver problems , nausea, vomiting and a rash	increased risk death as compared with allopurinol, Stevens-Johnson syndrome and anaphylaxis
8.	Gabapentin	Tablet	Anti-convulsant	partial seizures, hot flashes and restless legs syndrome	Neuropathic Pain	25-150 mg /day	Drowsiness, sleepiness, dizziness, weight gain	Avoid alcohol. Caution in diabetes mellitus, elderly, high dose of oral solution in adolescents, adult with low body weight, history of psychotic illness, mixed seizures (including absence)
9.	Hydroxy-chloroquine	Tablet	Antimalarial	Modifying antirheumatic drug	Active rheumatoid arthritis, systemic and discoid lupus erythematosus, dermatological condition caused by sunlight	200mg- 400mg daily Max; 6.5mg/ kg/ day	Vomiting, headache, Changes in vision and muscle weakness, pruritis, rashes , skin reaction	Allergic reaction, make worse myasthenia gravis and psoriasis
10.	Ibuprofen	Tablets, Oral liquid	NSAIDS	Analgesic, Anti-pyretic, Anti-inflammatory	painful menstrual periods, migraines and rheumatoid arthritis	Initial dose; 200 mg orally every 4 to 6 hours. Maximum dose- 1200mg /day	nausea, dyspepsia, diarrhea, constipation, GI ulceration, headache, dizziness, rash, salt and fluid retention and high blood pressure	Drinking alcohol when taking ibuprofen may increase the risk of stomach bleeding.
11.	Ketorolac Tromethamine	Tablet, under the tongue, IV, IM, eye drops	NSAIDS	Analgesic, Anti-inflammatory	Severe Pain	Weight 50 kg or more; 20 mg orally once followed by 10 mg every 4 to 6 hours. Maximum dose; 40 mg/day	Sleepiness, dizziness, abdominal pain, swelling and nausea	Take with food, monitor for sign/symptom of GI bleed, very high risk of GI bleeding limits this drug to 5 days max of therapy. CV and renal risks

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
12.	Meloxicam	Tablet	NSAIDS	Anti-inflammatory	Rheumatic disease, Osteoarthritis , pain and inflammation, musculo-skeletal disorder in children	7.5 mg once daily	Abdominal pain,dizziness, swelling,headache and rash.	-Acute porphyria, photo-sensitivity, psoriasis lesions aggravated by UV radiation, diarrhoea. -Extreme caution in blood disorder, peptic ulceration, risk of accumulation in pleural effusion or ascites, ulcerative colitis, ulcerative stomatitis, uncontrolled hypertension
13.	Methotrexate	Tablet, IM, IV,SC, Intra-theal	Immuno suppressant	anti-rheumatic	Cancer, auto-immune diseases, ectopic pregnancy,medical abortions , psoriasis, rheumatoid arthritis, Crohn's disease.	Initial -15 mg / week	nausea,feeling tired,fever, low WBC counts and mouth sores	Monitoring blood count, liver and pulmonary toxicity. It is not safe during pregnancy & breastfeeding. In patient with kidney problems, lower doses may be needed.
14.	Morphine Sulfate	Tablet,IV, Rectally, Inhalation, IM,SC	Opioid Analgesic	narcotic analgesic	moderate to severe pain	10-30mg 4 hourly. The minimum dose lethal dose of morphine is 120 mg.	Drowsiness,vomiting and constipation	To avoid constipation: increase your daily intake of fiber. When used during pregnancy or breast feeding may affect the baby. A large overdose can cause asphyxia and death by respiratory depression .
15.	Pregabalin	Tablet	r-Amino butyric acid analogue	Neuropathic Analgesic	diabetes neuropathy , post-herpetic neuralgia, seizure	Initial dose : 75mg BD Maximum dose : 600mg/ day	headache, dizziness, sleepiness, confusion, trouble with memory, poor coordination,dry mouth, problem with vision and weight gain, constipation	-Do not stop suddenly,even if you feel fine,can cause withdrawal symptoms. -Severe allergic reaction when pregabalin is taken at high doses over a long period of time, addiction may occur.
16.	Tramadol	Tablet,I.V ,Liquids, Syrups, Drops, Elixirs, Powder	Serotonin-norepinephrine reuptake inhibitor (SNRI)	Opioid analgesic	moderate to severe pain	Initial dose: 50mg-100mg/ day Maximum-400 mg/day	Constipation, drowsiness itchininess and nausea, malaise	-Do not breast-feed while taking tramadol. -avoid alcohol -Caution in GI effects, increased seizure risk

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points			
						Dosing Interval	CommonUntoward Effects	Cautions	
B.	Medicines used for Central Nervous System(CNS)								
1.	Alprazolam	Tablet	Benzodia- zepine	Anxiolytics	Short term used in anxiety	0.25-0.5mg given 3 times daily.	sleepiness, depression, headache,tired,dry mouth	Do not exceed prescribed dose,do not take with alcohol, may cause drowsiness, dizziness,do not operate heavy machinery,avoid abrupt discontinuation, respiratory disease, muscle weakness	
2.	Carbamazepine	Modified released tablet, oral suspension, suppository	Anti- epileptics	Antiepileptics	Focal & secondary generalized tonic-clonic seizures. Primary generalized tonic-clonic seizures. Adjunct in acute alcohol withdrawal	100mg-200mgbdor daily in divided dose up to 7days (by rectum) 100mg QID up to 200mg 3-4 times a day (by mouth)	Allergic skin reaction, blood disorders, blurring vision, dermatitis, dizziness, drowsiness, dry mouth, fatigue,anemia, headache, nausea, vomiting	Take with food , avoid alcohol, serious and sometimes fatal dermatologic reactions	
3.	Citalopram	Tablet, Oral drop	Selective serotonin reuptake inhibitor (SSRI)	Anti-depressant	Depressive illness. Panic disorder	Adult; 20mg OD;max- 40 mg per day. Elderly; 10-20 mg once daily; max; 20mg per day. By Mouth Using Oral Drops; Adult: 16mg OD, maximum 32 mg /day day Elderly: 8-16 mg daily; max 16 mg perday	Taste disturbances,abnormal dream , aggression amnesia,bradycardia,confusio n,coughing	Oral drops should be mixed with water, orange juice,apple juice before taking. Should not be driven if it is taken.	
4.	Clonazepam	Tablet , Oral solution,Or al drops	benzodia- zepine	Hypnotics, sedatives & anxiolytics agent	All forms of epilepsy. Panic disorders with or without agoraphobiaresistant to depressive illness	For panic disorders, 0.25 mg orally every 12 hours initially; may increase to 1 mg/day after 3 days For seizure disorder, 1.5 mg/ day orally divided every 8 hours; increase by 0.5-1 mg every 3 days	Amnesia, bronchial hyper-secretion, coordination disturbances, confusion, dependence, salivary hyper-secretion in infants and small children.	-may decrease significantly after weeks or months of continous therapy	

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
5.	Diazepam	Tablet, Oral suspension, Solution for Injection, Enema	Benzo-dizepine	Hypnotics, sedatives & anxiolytics agent	Insomnia associated with anxiety, Premedication. Status epileptics, muscle spasm of varied oetiology, tetanus.	5-30 mg daily in divided dose	Amnesia, Ataxia, confusion, dependence, drowsiness and light headedness the next day. muscle weakness. paradoxical increase in aggression	Muscle weakness; organic brain changes. Parenteral administration, personality disorder may increase risk of depend-ence. High risk of venous thrombophlebitis with IV use -should not be drive
6.	Duloxetine	Tablet	Selective Serotonin Reuptake Inhibitor	Anti-depressant	Major depressive disorder. Generalized anxiety disorder .Diabetic neuropathy . Moderate to severe stress , urinary incontinence	Intial dose; 20 mg orally twice a day	Abdominal pain, abnormal dreams , anorxia, anxiety, constipation, decreased appetitis, diarrhoea, diziness, drowsiness, dry mouth, dyspepsia, fatigue, flatulence, headache, hot flush	Bleeding disorders, cardiac disease, elderly history of mania, history of seizures, hypertension
7.	Levodopa/ Carbidopa	Tablet, Modified release tablet, Gel	Dopami-nergic drugs/ dopamine precursor	Anti-parkinson agent	Parkinson 's disease	Intial dose; 25mg-100 mg orally 3 times a day	-Abnormal dreams, anorexia, anxiety, arrhythmias, chorea, confusion, dementia, depression, dizziness, drowsiness, dry mouth, dystonia, euphoria, fatigue, insomnia, nausea, palpitation	Cushing's syndrome, endocrine disorders, history of convulsions, myocardial infraction with residual arrhythmia, peptic ulcer, hyper-thyroidism, osteomalacia, phaeochromocytoma. Avoid product containing B6 as they reduce the effectiveness of levodopa, may be taken with food/milk if GI upset occurs. -caution in pregnancy and breast feeding.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
8.	Lorazepam	Tablet, Injection	Benzo-diazepine	Antianxiety	Short term used in anxiety, insomnia, seizures, agitation	The usual range is 2 to 6 mg/day given in divided dose, the largest dose being taken before bedtime, but the daily dosage may vary from 1-10mg/day. For anxiety, initial dose of 2-3mg/day divided dose. For insomnia due to anxiety or transient situational stress, a single daily dose of 2-4mg at bed time.	Amnesia, ataxia, confusion, drowsiness the next day, muscle weakness, paradoxical increase in aggression, low blood pressure, sleepiness, decrease effort to breath.	Do not exceed prescribed dose, do not take with alcohol may cause drowsiness, dizziness. Do not operate heavy machinery
9.	Memantine	Tablet, oral solution	Glutamate receptor antagonist	Moderate to severe dementia in Alzheimer's disease	Used to treat moderate to severe Alzheimer's disease	Adult; Initially 5mg once daily, increased in steps of 5mg at weekly intervals; maximum 20 mg per day.	Constipation, dizziness, drowsiness, dyspnoea, headache, hypertension	-history of convulsions -take in the evening to prevent dizziness and agitation possible. -Set realistic expectations. Take without regard to food
10.	Olanzapine	Tablet, dispersible tablet	Atypical anti-psychotic	Anti-psychotic	Schizophrenia and bipolar disorder	Adult: 10mg daily, adjusted according to response, usual dose 5-20mg daily, doses greater than 10mg daily only after reassessment, Maximum; 20mg /day	Weight gain, movement disorder, dizziness, feeling tired, constipation and dry mouth	use caution when operating heavy machinery, diabetes and dyslipidemia
11.	Ondansetron	Tablet, Oral Solution, ampoule	5-HT3 antagonist	Antiemetic, Anticonvulsant	To prevent nausea & vomiting caused by chemotherapy & radiation therapy, after surgery	For moderately emetogenic chemo; 8mg started 30mins before chemo For highly; 24mg started 30mins before chemo For radiation- prophylaxis - total body radiation therapy; 8mg PO 1-2 hrs before radiation	-Constipation, flushing, Headache, injection site reaction, tiredness	-headache, fatigue -dissolve ODT under the tongue, store in original container until ready to use
12.	Phenobarbital	Tablet, oral solution, solution for injection	Barbiturate	Sedative hypnotic	all type of seizures, except absence seizures	By mouth; Child 1 month - 11years; Initially 1-1.5mg/kg twice daily, then increased in steps of 2mg/kg daily as required; maintenance 2.5-4mg /kg . 1-2times a day. Above 12years; 60-180 mg once daily, dose to be taken at night	Allergic skin reactions, ataxia, behavioural disturbances, depression, drowsiness, hallucinations, hyperactivity particularly in the elderly and in children, hypotension, impaired memory, respiratory depression	Avoid in acute porphyrias, history of alcohol abuse and drug abuse, respiratory depression (avoid if severe)

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
13.	Quetiapine	Tablet, Modified-release tab	2 nd generation antipsychotic	Atypical antipsychotic	Treatment of schizophrenia, bipolar disorder, major depressive disorder	Usual adult dose of schizophrenia- <u>Immediate – release tab:</u> initial dose-25 mg 2 times a day maintainance dose-150-750 mg per day in divided doses maximum dose-750 mg/day <u>Extended-release dose:</u> initial dose-300mg once a day maintainance dose-400-800 mg OD maximum dose-800mg/day Usual adult dose for bipolar disorder- initial dose-50 mg 2 times a day maintainance dose- 400-800mg in divided dose maximum dose:800mg/day	-sleepiness, constipation, weight gain, dry mouth, headache	-initially may cause dizziness -use caution when operating heavy machinery due to drowsiness
14.	Risperidone	Tablet, dispersible tab, oral solution, powder & solvent for suspension for injection	2 nd generation antipsychotic	Atypical antipsychotic	-to treat schizophrenia, bipolar disorder, irritability associated with autism	Acute and chronic psychosis - initial dose; 2mg daily 1-2 divided doses -maximum dose; 16mg/day Elderly: initial dose-500mcgs twice daily Mania- same as above	-Extrapyramidal effects, dizziness, tiredness, drowsiness, fatigue, fever, weight gain, headache, dry mouth, anxiety, nausea, vomiting, constipation, sore throat, skin rash	-first doses may cause fainting -may impair judgement -avoid alcohol use -not approved for the treatment of patients with dementia – related psychosis
15.	Sertraline	Tablet (Oral)	Selective Serotonin Reuptake inhibitor (SSRI)	Anti-depressant agent	Major depressive disorder in adults, obsessive compulsive disorder, panic disorder, post traumatic stress disorder	-Depressive illness / obsessive–compulsive disorder Initially 50 mg daily, maximum 100mg / day -Panic Disorder; Initially 25mg daily for 1 week, then increased to 50mg daily; maximum 100mg / day	Diarrhoea, sexual dysfunction, troubles with sleep	-May cause drowsiness or dizziness, avoid alcohol use during therapy.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
16.	Topiramate	Tablet, Capsule	Antiepileptic, Anti-convulsant	Antiepileptic, migraine prophylactic	To treat epilepsy & prevent migraines	-Short dose-25-50 mg / day -usual dose for epilepsy -100-200mg/ day taken as 2 doses -migraines:50-100mg taken as 2 doses. -maximum dose-200mg/day	-abdominal pain, aggression, agitation, anaemia, anxiety, appetite changes, arthralgia, confusion, constipation, depression, diarrhea, dry mouth, nausea, vomiting, headache	-avoid in acute porphyrias -may cause drowsiness or dizziness -avoid alcohol use during therapy
17.	Trihexylphenidyl	Tablet, Oral Solution	Anti-muscarinic	Antiparkinsonism agent	Used to treat symptoms of Parkinson's diseases.	Initial: 1 mg PO first day, then increase by 2mg, 3-5 days until reach 6-10mg/ day.	Dizziness, constipation flushing, nausea, nervousness, blurred vision, dry mouth	-Tablets Should be taken with or after foods. -Avoid in breast-feeding
C. Endocrines and Autacoids								
1.	Alendronate	Tablets, Effervescent Tablet, Oral Solution	Calcium metabolism modifiers; Biphosphonate derivatives	Anti-osteoporosis Agent	Osteoporosis caused by menopause, steroid use, Paget's disease of bone	Adult (female)-10 mg daily, alternatively 70 mg once weekly. Adult (Male); 10mg daily	Abdominal pain, constipation, diarrhoea, dyspepsia, Flatulence, headache, oesophageal reactions, upset stomach, nausea, muscle and joint pain.	Take on an empty stomach with full glass of water, must sit or stand for 30 mins following the dose, osteonecrosis of jaw and atypical fractures. -Calcium or iron Supplements, antacids, coffee, tea, soda, mineral water can decrease the absorption of alendronate
2.	Carbimazole	Tablet	Sulfur-containing imidazole	Anti-thyroid Drug	Used to treat hyperthyroidism	Generally starts at a high dose of 15-40 mg daily continued until the patient has normal thyroid function, and then reduced to maintenance dose of 5-15 mg; Treatment is usually given for 12-18 months followed by a trial withdraw.	Arthralgia, fever, headache, Jaundice, malaise, nausea, pruritus	-recognizing bone marrow suppression induced by carbimazole and the need to stop treatment promptly. -Carbimazole should be stopped promptly if there is clinical or laboratory evidence of neutropenia. -Take with food.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
3.	Dexamethasone	Tablet, Oral solution, Ampoule	Cortico-steroid	Anti-inflammatory agent	-arthritis, blood/hormone/immune system disorders, allergic reactions, certain skin & eye conditions, breathing problems, certain bowel disorders & certain cancer	Inflammation; Adult-0.75 - 9mg/day IV/IM/Oral divided every 6-12 hrs Paediatric-0.08-0.3mg/kg/day IV/IM/Oral divided every 6-12 hrs Multiple Sclerosis-30mg/day orally for 1 week Cerebral Edema-1-6mg/day IV once or 40mg IV every 2-6hrs as needed	-stomach upset, headache, dizziness, menstrual changes, trouble sleeping, increased appetite or weight gain	-talk to doctor right away if u have more than one of these symptoms while using this medicine: blurred vision, dizziness or fainting, a fast, irregular or pounding heartbeat, increased thirst or urination, irritability or unusual tiredness or weakness
4.	Clobetasol	Foam, liquid, cream, ointment, shampoo	cortico-steroid	Topical use Cortico-steroid	Eczema, contact dermatitis, seborrheic dermatitis, psoriasis	To the skin, Child: Apply 1-2 times a day for upto 4 weeks Adult: Apply 1-2 times a day for up to 4 weeks to be applied thinly, maximum 50mg of 0.05% preparation per week	Dry or cracking skin thinning or softening of your skin, Skin rash or irritation around mouth, temporary hair loss, nausea, vomiting	-Applied thinly -Use a sparing amount, avoid application on face and around eyes.
5.	Clomiphene Citrate	Tablet	Anti-oestrogen	Ovulation stimulant	Used to treat infertility in women who do not ovulate	Adult(female): 50mg daily for 5 days, to be started within about 5 days of onset of menstruation (preferably on 2 nd day) or at any time (normally preceded by a progestogen induced withdrawal bleed) if cycles have ceased, followed by 100mg daily if required for a further 5 days	Hot flashes, headaches, bloating, mood swings, breast tenderness, abdominal discomfort, convulsions, depression, dizziness, hair loss, insomnia, vomiting, weight gain	-Ectopic pregnancy, incidence of multiple births increased (consider ultrasound monitoring), ovarian hyperstimulation syndrome, polycystic ovary syndrome (cysts may enlarge during treatment, also risk of exaggerated response to usual doses), uterine fibroids
6.	Clotrimazole/ Betamethasone Dipropionate	Cream	Antifungal/ Anti-inflammatory/severe cortico-steroid	Fungus infection	To treat a variety of inflamed fungal skin infections such as ringworm athlete's foot and jock itch	Apply a thin film topically to the affected area twice a day for one week	Itching, skin irritation, dry skin, changes in skin color, increased acne, burning/ tingling/ stinging skin	This medication is not recommended for children <17 years or for diaper rash. Use a sparing amount, avoid application on face and around eyes. Do not apply more often or use longer than prescribed

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
7.	Ethinyl Estradiol/ Levonorgestrel	Tablet	Combined Hormonal Contraceptives	Oral Contraceptive	To prevent pregnancy	-21days Preparation -28days,everyday preparation	-Raise blood pressure	-Don't use this medication if you smoke cigarettes/ use tobacco & over 35yr old.Smoking raises your risk of stroke,heart attack,blood clots &high blood pressure from hormonal birth control (such as the pill,patch,ring). Take everyday, counsel on missed dose protocol,caution with antibiotics, risk of hyperkalemia.
8.	Isotretinoin	Capsule, gel	Retinoid	Acne treatment	Severe acne(severe recalcitrant nodular acne)	0.25-0.5 mg / kg orally BD (Max; 2mg / kg/ day) up to 20 weeks Apply once or twice a day	Dry skin, itching, rash, dry nose, nose bleeds, cracks in the corner of the mouth, dry mouth, dry lips,peeling skin, dry eyes, joint pain, back pain,dizziness, drowsiness, nervousness, or changes in nails	Must not use in pregnancy or become pregnant. There is an extremely high risk that severe birth defects will result if pregnancy occurs, while taking isotretinoin in any amount,even for short periods of time.
9.	Levothyroxine	Tablet,Capsule,Oral solution	Synthetic thyroxine T4	Thyroid hormone	Thyroid hormone deficiency	<u>Adult 18-49 yrs-</u> initial dose; 50-100mcg OD maintainance dose; 100-200mcg OD, <u>Adult 50 yrs & over-</u> initial dose; 25 mcg once daily Maintainance dose; 50-200 mcg once daily	-hair loss,headache, anginal pain, insomnia, nervousness,irritability, fever,hot flashes,sweating, appetite or weight loss, abdominal pain,nausea, vomiting,diarrhea	-should not be used for weight loss or to treat obesity, taking doses higher than recommended can lead to serious or even life-threatening effects. -take on an empty stomach in the morning with full glass of water at least 30 mins prior to food -do not take close to calcium
10.	Metformin	Tablet, modified release tablet,	Biguanides	Antihyperglycaemic agent	First line medication for the treatment of type II diabetes	-Initial dose: 500mg orally BD or 850mg orally OD with meals, increase every two weeks. -maintenance dose: 1500-2550mg/day taken orally divided once every 8-12 hrs with meal. - Not to exceed 2550mg/day.	Abdominal pain, anorexia, diarrhea (usually transient), nausea, taste disturbance, vomiting	may lead to B12 deficiency related neuropathy , to avoid heavy alcohol use.Should not use in severe kidney disease , metabolic acidosis , diabetic ketoacidosis.If you need X-ray or CT scan, will need to temporarily stop taking metformin.Caution in congestive heart failure, fever, trauma, surgery, elderly,renal &hepatic impairments.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
11.	Glimepiride	Tablet, eye drop, oral suspension	Sulfonyl-urea	Antidiabetic	Type II Diabetes mellitus	-Initially; 1mg daily adjusted according to response in -1mg steps at 1-2week interval; -usual max; 4mg daily (exceptionally, up to 6mg daily may be used); -taken shortly before or with first main meal	GI Disturbances	-encourage weight gain & should be prescribed only if poor control & symptoms persist despite adequate attempts at dieting; metformin is considered the drug of choice in obese patients. -caution is needed in Elderly & in patient with G6PD Deficiency -Take with breakfast, counsel on hypoglycemic risk
12.	Methyl-prednisolone	Tablet, powder, vial	Adreno-cortical steroid	Immuno-suppressive agent and anti-inflammatory drug	Inflammatory conditions such as arthritis, lupus, psoriasis, ulcerative colitis, allergic disorders, endocrine disorders	By mouth, adult: usual dose 2-40mg daily	Headache, nausea, vomiting, weight gain, confusion, excitement and restlessness, swelling of ankles, feet or hands, skin problems such as acne, thin skin, shiny skin, increased thirst, high blood pressure, muscle weakness, depression	Take with food to lessen an upset stomach. Take early in the day. Drinking alcoholic beverages should be avoided. Should also limit caffeine intake (colas, tea, coffee and chocolate etc), these beverages may irritate your stomach.
13.	Mometasone	cream, ointment, lotion & nasal spray	Cortico-steroids	Allergic Rhinitis-Nasal Steroid	To treat -certain skin condition (such as eczema, psoriasis, allergies & rash) -hay fever -asthma	- apply a thin cream to the affected skin areas once daily -initially 220mcg once daily in the evening by oral inhalation. -max; dose - 440mcg /day / 220mcg twice daily	-skin rash, itching, burning, dryness, thinning or softening of your skin, rash or irritation around your mouth, changes in color of treated skin, blurred vision	-Systemic absorption of topical can produce reversible hypothalamic pituitary. adrenal (HPA) axis suppression with the potential for glucocorticosteroid insufficiency. -Manifestations of Cushing's syndrome, hyperglycemia & glucosuria can also be produced in some patients by systemic absorption while on treatment. -May cause dysgeusia (taste distortion), effects seen after several days of therapy, nasal irritation & bleeding

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
14.	Pioglitazone	Oral	Thiazolidine-dione type also called glitazone	Antidiabetic	Diabetes mellitus type 2 together with metformin, a sulfonylurea, or with both, or with insulin -Use is recommended together with a proper diet & exercise program	-15mg/30mg/45mg -Once daily by mouth with or without food	-GI Disturbances, weight gain, oedema, anaemia, headache, visual disturbances, dizziness, heart failure, fracture of bone, sore throat, muscle pain, bladder cancer	-monitor liver function, cardiovascular disease or in combination with insulin (risk of heart failure) -can pass into breast milk. -may increase the risk of bone fracture in women -can cause changes in the menstrual cycle (promote ovulation) & increase the risk of becoming pregnant. -increase risk of chronic heart failure -Cancer risk & Bladder cancer -pregnancy & lactation
15.	Prednisolone	Oral, IV, Topical	Corticosteroids	Steroid Anti-inflammatory	-Arthritis -blood problems -Immune system disorder -Skin & eye condition -Breathing problems -Cancer -Severe allergies	-1 to 4 times a day or single dose everyday with food or milk to prevent stomach upset	-nausea, increased sweating, heart burn, headache, dizziness, menstrual period changes, trouble sleeping or acne	-dizzy, stomach bleeding -may slow down a child's growth in long term used -can pass into breast milk
16.	Sitagliptin+ Metformin	Oral	Antidiabetic drugs	Antidiabetic Dipeptidyl peptidase IV Inhibitor	Type 2 diabetes mellitus not controlled by metformin alone or by metformin combination with either a sulfonylurea, pioglitazone or insulin	1 tablet twice daily	Abdominal pain, anorexia, diarrhoea (usually transient), nausea, taste disturbance, vomiting	-Determine Renal function before treatment; increased risk of lactic acidosis -Take without regard to food, risk of pancreatitis
17.	Triamcinolone	-Oral -Injection -Lotion -inhalation	-Corticosteroid -To treat certain skin disease, allergies, rheumatic disorders among others	Topical corticosteroid	To treat a variety of skin condition (eg. Eczema, dermatitis, allergies, rash)	Usually applied 2 to 4 times a day	-skin redness, burning, itching, irritation, excessive dryness, peeling, thinning of your skin, blistering skin, stretch marks & acne	-Avoid prolonged use of topical on the face, extreme caution is required in dermatoses of infancy including nappy rash, treatment should be limited to 5-7 days, used in psoriasis can result in rebound relapse, development of generalised pustular psoriasis, local & systemic toxicity

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
D.	Anti-infective Agents							
1.	Acyclovir	Oral, Injection, lotion	Antiviral	Antiviral against HSV(Herpes Simplex Virus)	Treatment for herpes simplex and varicella zoster (shingles) ,chickenpox	Dose adjustment based on dosage form & specific virus infection	abdominal pain , diarrhoea, fatigue,headache ,nausea, photosensitivity, pruritus, rash, urticaria, vomiting	-Elderly (risk of neurological reaction),maintain adequate hydration (especially with infusion or high doses) -Avoid intercourse during herpes outbreak -Interacts with herpes zoster vaccine
2.	Albendazole	Tablet,Oral Suspension	Anthelmin-tics	for the treatment of a variety of parasitic worm infection	is indicated for the treatment ofparenchymal neurocystic-ercosis due to active lesions caused by larval forms of the pork tapeworm, Taenia solium -cystis hydatid disease of the liver ,lung & peritonium, caused by the larval form of the dog tapeworm , Echinococcus granulosus	based on body weight & specific infection	-nausea , vomiting, abdominal pain, headache or temporary hair loss	-Risk of bone marrow suppression -monitoring of blood counts at the beginning of each 28days cycle of therapy is needed. -Risk of hepatotoxicity, monitoring of liver enzymes before the start of each treatment cycle & at least every 2weeks during treatment is needed. -Risk of teratogenic effects-caution is needed in pregnant women
3.	Amoxicillin	-Capsule -Oral suspension	Broad spectrum penicillins	Penicillin antibiotic	-urinary tract infection -otitis media -sinusitis -bronchitis_low or moderate severity community acquired pneumonia	-Adult- by mouth 500mg 8 hourly - 1 month to 1yr 125mg 8hourly -1 to 5yr 250mg 8hourly	Nausea, vomiting, diarrhoea, rash (discontinue treatment)	-should not be used for hospital patient without checking sensitivity -maintain adequate hydration with high dose -finish course as prescribed. -may cause GI upset; take with food. -may decrease efficacy of oral contraceptives. -Secondary vaginal yeast infection may develop. -Shake suspension well & keep refrigerated, note exp; date after reconsitution.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
4.	Amoxicillin + Clavulanate	-Capsule -Oral suspension -Injection	Broad spectrum penicillins	Penicillin antibiotic	Infection due to beta-lactamase producing strain (where amoxicillin alone not appropriate), including respiratory tract infection, bone & joint infection, genito-urinary & abdominal infections, cellulitis and animal bites	based on body weight & specific infection	Cholestatic jaundice, hepatitis, nausea, vomiting	-history of allergy; erythematous rashes common in glandular fever; increased risk of erythematous rashes in cytomegalovirus infection & acute or chronic lymphocytic leukaemia - maintain adequate hydration with high dose -risk of crystalluria (particularly during parenteral therapy) -Cholestatic jaundice is more common in patients above the age of 65yr and in men need to monitor liver function in liver disease.
5.	Azithromycin	-Capsule -Oral suspension -Eye drop	Macrolide antibiotic	Macrolide antibiotic	-Prevention of secondary case of invasive group A streptococcal infection in patients who are allergic to penicillin -Respiratory tract infections, otitis media, skin & soft tissue infection -Uncomplicated genital chlamydial infection, non-gonococcal urethritis -Uncomplicated gonorrhoea -Lyme disease (under expert supervision) -Mild to moderate typhoid due to multiple-antibacterial resistant organisms -Community acquired pneumonia -Trachomatous conjunctivitis caused by Chlamydia trachomatis	500mg OD for 3 days	-blurred vision, ocular burning, ocular discomfort, ocular pruritus -Anorexia, arthralgia, disturbances in taste, dizziness, dyspepsia, flatulence, headache, malaise, paraesthesia, reversible hearing loss (sometimes tinnitus) after long term therapy	Macrolide should be used with caution in patients with a predisposition to QT interval prolongation (including electrolyte disturbances & concomitant use of drugs that prolong the QT interval). Macrolides may aggravate myasthenia gravis.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
6.	Cefuroxime	Oral Injection	Cephalosporin antibiotic, 2nd generation	Anti-bacterial	Used for treatment of septicaemia, pneumonia, meningitis, biliary tract infection, peritonitis, urinary tract infection due to sensitive gram positive & negative bacteria, surgical prophylaxis, haemophilus influenzae; Lyme disease	based on body weight & specific infection	-diarrhoea (rarely anti-biotic associated colitis), nausea, vomiting, abdominal discomfort, headache, allergic reaction, serum- sickness like reaction with rashes, fever and arthralgia -anaphylaxis; Stevens- Johnson syndrome, toxic epidermal necrolysis -disturbances in liver enzymes, transient hepatitis and cholestatic jaundice	-hypersensitivity reaction -false positive urinary glucose (if tested for reducing substances) -false positive Coombs' test -Finish course as prescribed. -May cause GI upset. -May decrease absorption of oral contraceptives.
7.	Cefixime	Oral	Cephalosporin antibiotic, 3rd generation	Anti-bacterial	Used for septicaemia pneumonia, meningitis, biliary tract infection, peritonitis, urinary tract infection due to sensitive gram positive & negative bacteria, Lyme disease, antibiotic associated colitis, gonorrhea	-Adult & Child over 10yrs; 200-400mg daily in 1-2 divided dose -Child over 6mths; 8mg/kg daily in 1-2 divided dose or 6mths to 1yr; 100mg daily 5-10 yrs 200mg daily -uncomplicated gonorrhoea; 400mg as a single dose	-diarrhoea (rarely antibiotic associated colitis), nausea, vomiting, abdominal discomfort, headache, allergic reaction, serum- sickness like reaction with rashes, fever and arthralgia -anaphylaxis; Stevens- Johnson Syndrome, toxic epidermal necrolysis -disturbances in liver enzymes, transient hepatitis and cholestatic jaundice	-hypersensitivity reaction -false positive urinary glucose (if tested for reducing substances) -false positive Coombs' test
8.	Cephalexin	Oral	Cephalosporin antibiotic, 1st generation	Anti-bacterial	Used for treatment of septicaemia, pneumonia, meningitis, biliary tract infection, peritonitis, urinary tract infection due to sensitive gram positive & negative bacteria,	-Adult-250mg 6hourly or 500mg 8-12hourly increased to 1-1.5g every 6-8hour for severe infection, Child 25mg/kg daily in divided doses, double for severe infection, max; 100mg/kg daily; or under 1 year 125mg every 12hours, 1 to 5 years 125mg 8hourly, 5 to 12 years 250mg 8hourly	-diarrhoea (rarely antibiotic associated colitis), nausea, vomiting, abdominal discomfort, headache, allergic reaction, serum- sickness like reaction with rashes, fever and arthralgia -anaphylaxis; Stevens- Johnson Syndrome, toxic epidermal necrolysis, disturbances in liver enzymes, transient hepatitis and cholestatic jaundice	-hypersensitivity reaction -false positive urinary glucose (if tested for reducing substances) -false positive Coombs' test -Finish course as prescribed. -May cause GI upset. -May decrease absorption of oral contraceptives.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
9.	Ciprofloxacin	Tablet, eye drop, oral suspension	Anti-bacterial quinolone	Fluoro-quinolone antibiotic	-respiratory tract infection (but not for pneumococcal pneumonia), UTI, infection of GI system (including; typhoid fever), bone & joint infection, gonorrhoea, septicemia caused by sensitive organisms.	500mg BD for 5 days	nausea, vomiting, diarrhoea, headache, dizziness, abdominal pain, sleep disturbances, flatulence, pain & phlebitis at injection site	-caution in patients with a history of epilepsy or conditions that predispose to seizures, in G6PD deficiency, myasthenia gravis (risk of exacerbation) -finish course as prescribed, monitor glucose. Do not take within 2 hours of consuming foods or other product containing di- or trivalent cations (ex. milk, calcium antacids, multivitamins & supplements). May cause sun sensitivity & CNS side effect.
10.	Clarithromycin	Oral IV	Macrolide antibiotic	Macrolide antibiotic	Respiratory tract infection mild & moderate skin & soft tissue infection, otitis media, Lyme disease, prevention of pertussis; Helicobacter pylori eradication	based on body weight & specific infection	nausea, vomiting, abdominal discomfort & diarrhoea, dyspepsia, taste disturbances, headache, insomnia, hyperhidrosis	Macrolide should be used with caution in patients with a predisposition to QT interval prolongation (including electrolyte disturbances & concomitant use of drugs that prolong the QT interval) Macrolides may aggravate myasthenia gravis. Finish course as prescribed.
11.	Clindamycin	Oral IV, IM, Topical, vaginal suppository, oral suspension	Lincosamide	Anti-bacterial	Staphylococcal bone & joint infections (osteomyelitis, peritonitis, intra-abdominal sepsis, MRSA in bronchitis, bone & joint infection, skin & soft tissue infection)	based on body weight & specific infection	-IM use (abscess, pain) -IV use (thrombophlebitis) -Systemic use (abdominal discomfort, anaphylactic reactions, antibiotic associated colitis, diarrhoea (discontinue treatment), Steven-Johnson syndrome)	-Should be swallowed with a glass of water -Oral therapy may cause diarrhoea (discontinue immediately) -Suspension has bitter taste, little flavoring options available. -Avoid in acute porphyrias, middle aged & elderly women, especially after an operation (antibiotic associated colitis more common)
12.	Doxycycline	Oral	Antibacterial/ Tetracycline & Related Drugs	Anti-bacterial	-Susceptible infections (eg. Chlamydia, Rickettsia & mycoplasma) -Severe infections (including refractory urinary tract infection) -Acne	based on body weight & specific infection	Photosensitivity	-Capsule & tablet should be swallowed whole with plenty of fluid while sitting or standing. -Alcohol dependence, do not take within 2 hours of consuming foods or other product containing di- or trivalent cations (eg. milk, calcium antacids & supplements). -may increase sensitivity to sunlight, -hydrate & monohydrate salts not interchangeable.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
13.	Erythromycin	Oral	Macrolide antibiotic	Anti-bacterial	-Susceptible infections in patients with penicillin hypersensitivity;oral infection;campylobacter enteritis, syphilis, nongonococcal urethritis, respiratory tract infections(including Legionella infection),skin infection, chronic prostatitis ,prophylaxis of diphtheria, group A streptococcal infection & pertussis;acne vulgaris & rosacea	based on body weight & specific infection	nausea,vomiting, abdominal discomfort, diarrhoea	-Macrolide should be used with caution in patients with a predisposition to QT interval prolongation (including electrolyte disturbances & concomitant use of drugs that prolong the QT interval) Macrolides may aggravate myasthenia gravis. -Neonate under 2weeks(Risk of hypertrophic pyloric stenosis) ; avoid in acute porphyria
14.	Fluconazole	Oral	Triazole antifungal	Anti-fungal	-candidal balanitis , vaginal candidiasis ,vulvovaginal candidiasis (Recurrent) , mucosal candidiasis (except genital)	based on specific infection & dosage form	abdominal discomfort, diarrhoea,flatulence, headache, nausea, rash	-Finish course as prescribed.Susceptibility to QT interval prolongation, Caution with concomitant use of hepatotoxic drugs. -Monitor liver function with high dose
15.	Itraconazole	Oral	Triazole antifungal	Anti-fungal	valvovaginal candidiasis, (recurrent),Oral or oesophageal candidiasis that has not responded to fluconazole.	based on specific infection	abdominal pain , diarrhoea,dyspnoea, headache, hepatitis, hypokalemia,nausea, rash, taste, disturbances, vomiting	Active liver disease,history of hepatotoxicity with other drugs, susceptibility to congestive heart failure.
16.	Ketoconazole	oral, topical	Imidazole antifungal	Anti-fungal	vaginal & vulva candidiasis, treatment & prophylaxis seborrhoeic dermatitis & dandruff	based on specific infection	Occasional local irritation ,erythema, hypersensitivity reaction itching ,mild burning sensation	-avoid contact with eyes & with mucous membranes. -Treatment should be discontinued if side effects are severe.
17.	Levofloxacin	Oral,IV, Eye drop,Injection	Quinolone antibiotics	Anti-bacterial	Acute sinusitis, acute exacerbation of chronic bronchitis ,community acquired pneumonia, urinary tract infection, local treatment of eye infection	based on specific infection & specific dosage form	Constipation, flatulence , ocular burning, visual disturbances, excessive and profuse perspiration	Risk factor of QT interval prolongation, acute myocardial infarction, bradycardia & electrolyte disturbances,heart failure with reduced left ventricular ejection fraction, history of psychiatric illness ,history of symptomatic arrhythmias,finish course as prescribed

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
18.	Mebendazole	Chewable tablet	Benzimidazoles	Anthelmintics	Anthelmintics	Single dose of 100mg repeated at least once after an interval of 2 to 4 weeks. 200mg twice daily for 20 to 30 days.	stomach/ abdominal pain, vomiting, diarrhea, headache, dizziness or drowsiness.	Before taking mebendazole, tell your doctor or pharmacist if you are allergic to it.
19.	Metronidazole	Tablet, Suspension, Infusion, gel (topical)	Anti-protozoal	Anti-bacterial, Anti-protozoal	Amoebic dysentery, Trichomonas vaginal infection	over 12 years- 400mg three times daily. under 12 years- 7.5mg per kg body mass three times daily. dose of vaginal tab; approximately 37.5 mg of metronidazole, once or twice a day for 5 days.	gastrointestinal discomfort, anorexia, nausea, dryness of mouth, unpleasant taste, headache & skin rashes, vomiting, diarrhoea, insomnia, drowsiness, darkening of the urine, skin irritation, dryness, redness	caution in patients with a mild leukopenia has been observed but no persistent hematologic abnormalities. Should be used with caution in patients with history of blood dyscrasia and active or chronic severe peripheral & central nervous system disease due to risk of neurological aggravation. Apply and rub in a thin film of metrogel twice daily to affected area after washing.
20.	Norfloxacin	Tablet	2nd Generation Quinolone	Fluoro-quinolone antibiotic	Urinary Tract Infection	Prostatitis caused by susceptible strains E.coli 400mg PO q12 hr for 28-42 days. UTI (cystitis) caused by E.coli, Klebsiella. pneumoniae or Proteus mirabilis-400mg PO q 12 hr for 3 days. Gonorrhea- 800mg PO single dose. Diarrhea- 400mg PO q12 hr for 3 days.	headache with chest pain and severe dizziness, fainting, fast or pounding heartbeats. Dark urine, jaundice. Muscle weakness or trouble breathing. Diarrhea that is watery or bloody.	-changes in ECG (QTc interval prolongation) that norfloxacin should be used with caution in subjects receiving drugs that effect the QTc interval such as cisapride, erythromycin, antipsychotics & tricyclic antidepressants.
21.	Mupirocin	Cream	Topical Antibiotic	Topical anti-biotic	Skin Infection	Impetigo; 2% ointment to affected area q 8hr, if no response in 3-5 days, for secondary skin infection, q 8hours for ten days Intranasal : Apply one-half of ointment from a single-use tube into each nostril q12hr for 5 days	burning, stinging, pain, itching, rash, redness, dryness, tenderness or swelling, nausea, increased oozing at the infection site.	If hypersensitivity reaction or chemical irritation occurs, treatment should be discontinued. Avoid using around your eyes, nose, mouth or on large areas of damaged or broken skin unless otherwise directed by your doctor.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
22.	Nystatin	Suspension, Vaginal Tab (combination)	Polyene macrolide antifungal	Anti-fungal	Candidiasis	Children & Adults dose- 400000 to 600000 units (4- 6 ml) PO rinsed in the mouth four times daily (one half of dose in each side of mouth) continue treatment for at least 48 hours after symptoms are resolved. Guidelines recommend treatment for 7 to 14 days. Infants- 2ml (200000 units nystatin)QID (1ml in each side of mouth)	Bitter taste , nausea, skin irritation, itching, redness.	Use of pipette, hold in mouth , after food
23.	Penicillin V Potassium	Tablet	Phenoxy-methyl penicillin	Penicillin antibiotic against gram positive gram	Rheumatic fever	250 to 500mg PO every 6 to 8 hours for mild to moderate infections. Adult- 4-6 tablets/ two or three times a day. Children- 10000-50000IU/kg/day. (1mg= 1600IU)	Hypersensitivity reactions especially skin rashes. Anaphylactic reactions. Transient nausea & diarrhoea.	Patients with impaired renal functions or heart failure. High dose of pen V should be used with caution in patients receiving potassium containing drugs or potassium- sparing diuretics. Oral penicillin are not indicated in patients with severe illness or with a GI diseases.
24.	Sulfamethoxazole + Trimethoprim	Tablet, Suspension	Competitive antagonist of PABA	Sulfonamide antibacterial	To prevent serious infections in patient with an under active immune system. Bronchitis, Prostatic infection, Urinary tract infection	Tablet-480mg and 960mg Suspension - Sulfamethoxazole 200mg& Trimethoprim 40mg/5ml	Nausea, rash, changes in skin color, chest pain, diarrhea, dizziness, headache, loss of appetite.	Caution in pregnancy, skin sensitive to sunlight.
25.	Terbinafine	Oral, Topical	Allylamines	Antifungal	Superficial Skin Infection, jock itch, athlete's foot, ringworm	250mg PO OD 6 weeks (fingernails) 12 weeks for (toenails), 1% topical	by mouth- nausea, diarrhea, headache, rash elevated liver enzyme. Severe- liver problem, allergic reactions. Topically- itchiness (well tolerated)	Avoid coffee, tea, cola energy drinks or other sources of caffeine. Terbinafine topical can make sunburn more easily.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
26.	Tobramycin	Eye Drop	Amino-glycoside Antibiotic	Pseudomonas gram negative infection/ Anti Inflammatory	Eye Infection	8 hourly(sometimes up to 12 hourly)	ototoxic, cause hearing loss or a loss of equilibration. Nephrotoxic	narrow therapeutic index. Seriously allergic reactions (rarely) but fatalities have been reported.
27.	Zidovudine + Lamivudine	Tablet	Nucleoside Reverse transcriptase inhibitor	Antiviral	HIV, HBV, HCV	Lamivudine 150mg, Zidovudine 300mg, 12 hourly. Take with other HIV medicines.	headache, tiredness, loss of appetite, nausea, vomiting, diarrhea, trouble sleeping, dizziness.	allergic to either drug or any other allergies. Tell the medical history (kidney, liver problems). Alcohol use, low red/ white blood cell count. Avoid driving if you feel dizziness.
E. Medicines used for Cardiovascular Diseases								
1.	Aspirin	Tablets, IV or IM	NSAID	Pain, Fever or Inflammation, antiplatelet effect	Secondary prevention of thrombotic cerebro-vascular or cardiovascular disease	75-325 mg OD. High dose-ringing in the ears.	Stomach Ulcers, bleeding and worsening asthma.	-Be aware of hypersensitivity reactions -avoid in children due to risk of Reye syndrome
2.	Warfarin Sodium	Tablet	Thrombo-embolism	Anticoagulant	Prophylaxis of embolisation in rheumatic heart disease & arterial fibrillation.	Initial dose 5-10mg. Dosing is adjusted according to the INR blood test results,	Unusual bruising, nose bleeding, coughing up cough, nausea, loss of appetite, abdominal pain may occur.	can cause birth defects, miscarriage or death of fetus, serious bleeding in overdose.
3.	Fenofibrate	Capsule	Fibric acid	Antihyper-lipidemic	To treat high cholesterol level	Capsule-Initially 200mg daily, increased if necessary to 267mg daily.	Abdominal distension, runny nose, headache, back pain, nausea, myalgia , joint pain	Correct hypothyroidism before initiate treatment. Taking with statin can cause severe muscle break down (rhabdomyolysis)
4.	Methyldopa	Tablet	Central Sympatholytic agent	Anti-hypertensive	antihypertensive during pregnancy	250mg two or three times a day in the first 48 hours, then may be increased or decreased, not less than two days, until an adequate response is achieved.	Dizziness, fainting, temporary drowsiness at first take, drowsiness, headache, weight gain. Psychological (depression, anxiety , apathy etc)	Blood disorder warning; haemolytic anaemia can lead to death. Patients with liver diseases, if edema. Progresses or signs of heart failure occur, should not be continued using drugs.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
5.	Furosemide	Tablet, Injection	Loop Diuretic	Antihypertensive	Diuretic , Antihypertensive	20-80mg orally divided every 12 hr ; may be increased by 20-40mg every 6-8 hours, not to exceed 600mg/day.	Feeling lightheadedness while standing, ringing in ear, can cause gout, hypokalemia	Take with potassium or potassium sparing diuretics. Take at the day time. dizziness
6.	Hydrochloro-thiazide (aka HCTZ)	Tablet	Thiazide Diuretic	Antihypertensive	Congestive heart failure, symptomatic edema, renal tubular acidosis, diabetes insipidus, Antihypertensive	Adult- 25mg once per day orally, BP high 50mg /day single or two divided doses.	hypokalemia, imbalance in electrolytes , gout, weight gain	Take with potassium supplement or potassium sparing diuretics.
7.	Indapamide	Tablet	Thiazide Diuretic	Antihypertensive	Antihypertensive , Congestive Heart Failure	Edema-2.5mg PO/day initially ; May increased to 5mg per day Hypertension-1.25mg PO AM initially May increased at 4 weeks interval upto 5mg	Hypotension, Palpitation, Flushing, Dizziness, Light headedness, Vertigo, Headache, Weakness, Drowsiness, Fatigue, Lethargy, Anorexia, Blurred vision, polyuria, pruritus	Hypotension, DM, fluid or electrolyte imbalance, hyperuricaemia or gout, SLE, liver disease, renal disease, severe cases of hyponatremia have been reported with recommended dose in elderly female
8.	Isosorbide Mononitrate	Tablet	Nitrate	Anti-anginal	Heart failure, Angina	immediate release-5/10mg orally twice daily initially given each dose 7 hr apart, increased to 10mg orally every 12hr by day 2 or 3, maintenance; 20mg orally every 12 hr Extended release -30/60mg orally once daily in the morning initially; may be increased to 120mg orally once daily; wait at least 3 days between increased; if warranted may increased up to 240 mg orally once daily	Abdominal pain, abnormal hair texture, abnormal heart rhythm, breast pain, bronchitis, cardiac failure, depression, diarrhoea, dry mouth, flushing, headache, impaired concentration, insomnia, kidney stone , migraine, muscle inflammation	Use Caution in Acute Myocardial infarction, alcohol use, hyperthyroidism, hypertrophic cardiomyopathy, increased intracranial pressure, increased intraocular pressure, postural hypotension, volume depletion, congestive heart failure and low systolic blood pressure Treat drug induced headache with acetaminophen or aspirin

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
9.	Labetalol	Tablet, Injection	Non selective alpha & beta blocker	Antihypertensive	Anti-hypertensive, pregnancy induced hypertension associate with preeclampsia	initially-100mg Po 12hr increased by 200mg 12hr every 2-3days Usual dose range-200-400mgPO 12hr; not to exceeded 2400mg/day	Dizziness, lightheadedness, nausea, tingling of sensation of scalp, fatigue, ventricular arrhythmia	Use with caution in anaesthesia or surgery (Myocardial depression), bronchospastic disease, Cerebrovascular insufficiency, DM, hyperthyroidism, hepatic impairment, renal impairment, peripheral vascular disease, heart failure
10.	Losartan	Tablet	Angiotensin II receptor blocker	Antihypertensive	Antihypertensive	initial dose; 50mg orally OD increased to ;100mg orally once aday	asthenia, chest pain, diarrhoea, fatigue, hypoglycaemia, hyperkalemia, hypotension, orthostatic hypotension	Not used in pregnancy. Angioedema, volume depletion, severe congestive heart failure, hepatic or renal impairment
11.	Metolazone	Tablet	Thiazide Diuretic	Antihypertensive	Antihypertensive, Congestive Heart Failure	Hypertension-2.5-5mg Orally once Daily; may be increased to 20mg once daily as needed In adults -2.5-10mg orally once daily initially; may be gradually increased to 20mg once daily	Excessive volume depletion, syncope, dizziness, fatigue, vomiting, nausea, diarrhoea, loss of appetite, headache, constipation, hypokalaemia, hyponatraemia, hyperuricaemia, hypochloraemia, hypochloraemic alkalosis, hyperglycaemia, increased in serum urea nitrogen or Creatinine.	Severe allergic reaction, anuria, hepatic coma or percoma

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
12.	Metoprolol Succinate	Tablet	Beta 1 Selective blocker	Anti-hypertensive	Treat chest pain, heart failure, essential hypertension	Hypertension – 25-100mg daily in single dose. Angina pectoris -100mg daily given in a single dose.	tiredness,dizziness,depression, mental confusion,short term memory loss,headache,nightmares,insomnia,shortness of breath, bradycardia,cold extremities, palpitation,congestive heart failure, hypotension,digestive tract disorder, gastric pain	Caution in patient with hyperthyroidism or thyrotoxicosis.Caution in patient with impaired hepatic function & with DM.
13.	Nifedipine	Tablet	Dihydropyridine , Calcium Channel Blocker	Anti-hypertensive	Antihypertensive, to treat angina	Initial dose;30-60mg orally once a day Maintenance dose; 30-90mg orally OD, Maximum dose; Up to 120mg/day	lightheadedness,headache,tiredness, leg swelling, cough,shortness of breath, low BP or heart failure;	Use with caution in myocardial infarction, congestive heart failure, advanced aortic stenosis, peripheral edema,symptomatic hypotension,unstable angina,hepatic impairment, renal impairment
14.	Rosuvastatin	Tablet	HMG CoA reductase inhibitor	Anti-lipidemic agent	To prevent cardiovascular disease,to treat several type of high cholesterol,used to treat	Initial dose 5-10mg once daily. The maximum dose of 40mg should only be used for patients who have not achieved their LDL-C goal utilizing the 20mg dose.	Proteinuria,headache, muscle pain, abdominal pain, weakness, nausea, dizziness, hypersensitivity reactions (including rash, pruritus, hives, swelling , pancreatitis).	liver disease, kidney disease, alcohol use, surgery, older patients, pregnancy and breast-feeding, allergies
15.	Ezetimibe	Tablet	Cholesterol absorption inhibitor	Antihyperlipidemia	Used to treat high blood cholesterol & lipid abnormalities	10mg once a day	fever, fatigue,GI disturbance,headache, muscle pain, runny nose, sore throat.	mild hepatic impairment or severe renal impairment cholelithiasis when coadministered with fibrin acid derivatives. Pregnancy and breast feeding
16.	Verapamil	Tablet , Injection	Phenyl-alkylamine , Calcium Channel blocker	Anti-hypertensive	Supraventricular tachycardia,Antihypertensive ,Antianginal agent	Initial dose 80mg PO q8hr,maximum 480mg	constipation, dizziness, headache, indigestion, hypotension, nausea, edema, swollen gums, sleep disturbance.	Acute phase of myocardial infarction (avoid if bradycardia,hypotension, left ventricular failure),alcohol, pregnancy, breast-feeding

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
17.	Amiodarone	Tablet , Injection	Antiarrhythmic	Anti-arrhythmic	Antiarrhythmic, Venricular tachydysrhythmias	Initiate treatment with a loading dose of 800 to 1600 mg/day for 1-3 weeks until response; once adequate arrhythmia control achieved or if side effects become prominent, reduce dose to 600 to 800mg/day for 1 month and then to the maintenance dose, usually 400mg/day	Bradycardia, hyperthyroidism, hypothyroidism, jaundice, tremor, sleep disorder, nausea, vomiting, constipation, weight loss, fatigue, pulmonary fibrosis, heart block, heart failure	Avoid concomitant use unless other antiarrhythmics cannot be given, breast-feeding (long term use), in elderly patients, hepatic impairment, QT prolongation, implantable cardiac device, surgery, pulmonary disease, thyroid disease, hypertensive to iodine, cardiogenic shock.
18.	Amlodipine	Tablet	Dihydropyridine , Calcium Channel Blocker	Anti-hypertensive	Antihypertensive, prophylaxis in angina	usual initial dose is 5mg once daily which may be increased to a maximum dose of 10 mg depending on the individual response	swelling ,pulmonary edema, headache, fatigue, palpitation, dizziness, nausea, flushing, abdominal pain, drowsiness, itching, skin rash ,muscle cramps, muscle weakness, sleepiness, arrhythmia	congestive heart failure , symptomatic hypotension , acute myocardial infarction, peripheral edema ,hypertrophic cardiomyopathy, pregnancy , breast feeding ,patients with severe aortic stenosis
19.	Atenolol	Tablet	Selective Beta 1 blocker	Anti-hypertensive	Antihypertensive, prophylaxis in migraine	-25-50mg once a day either alone or added to diuretic therapy. Dosage should be increased to 100mg once a day.	tiredness, constipation, indigestion, dizziness , Dry mouth, Impotence, cold extremities hand and feet, confusion, depression, insomnia, nightmares, lightheadness, nausea.	Don't stop using atenolol suddenly. Use in caution in anaesthesia or surgery,
20.	Atorvastatin	Tablet	HMG CoA Reductase inhibitor	Lipid lowering agent	Hyperlipidemia, to prevent cardiovascular disease	Initially 10 or 20mg PO once daily. Patients who required alert reduction LDL-C (more than 45%) may be 40mg once daily. After initiation and/ or upon titration, lipid levels should be analyzed within 2 to 4 weeks and dosage adjusted accordingly.	diarrhea, runny nose, joint pain, muscle pain, fever, headache, drowsiness ,insomnia, urinary tract infection, nausea, loss of appetite, stomach discomfort or pain	Pregnancy & breast feeding, heavy alcohol use, renal impairment, caution in elderly; risk of myopathy, hypothyroidism, recent stroke, history of liver disease

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
21.	Bisoprolol	Tablet	Selective Beta-1 blocker	Anti-hypertensive agent	Hypertension, angina, adjunct in heart failure	5-10mg OD , maximum 20mg per day	Bradycardia, Dizziness, Dyspnea	Caution with acetylcholine esterase inhibitors which may enhance the bradycardic effects. Avoid getting up too fast from a sitting or lying position to prevent dizzy.
22.	Candesartan	Tablet	Angiotensin II receptor blocker	Anti-hypertensive agent	Hypertension, Congestive heart failure	For hypertension, Initial dose; 16mg OD Maintenance dose; 8-32mg OD, Maximum; 32mg/ day For congestive heart failure, Initial; 4mg OD	Upper respiratory tract infection, dizziness, back pain, pharyngitis, rhinitis	Avoid in pregnancy because drug that act directly on renin-angiotensin system can cause injury or death to developing fetus.
23.	Carvedilol	Tablet, extended release capsule	Beta Blocker, nonselective; Alpha-1 blocker	Anti-hypertensive agent	Hypertension with pheochro-mocytoma, hypertensive emergency, to control hypertension during surgery (IV)	For Hypertension, <u>Immediate-release tablets:</u> Initial dose- 6.25mg oral BD Maximum dose – 50mg BD <u>Extended-release capsules:</u> Initial dose- 20mg orally OD Maximum; 80mg orally OD	Chest pain, hypotension, slow heart beat, blunt or mask signs and symptoms of hypoglycaemia in patients under antidiabetic treatment	-should not take if you have asthma, bronchitis, emphysema, severe liver disease. -Avoid alcohol & alcohol containing medicines or other products within 2 hours before or after taking extended-release carvedilol.
24.	Clonidine	Tablet, transdermal patch	Selective alpha II agonist	Anti-hypertensive	-mild to moderate hypertension, - to treat opiate withdrawal signs&symptoms -Transdermal application for sustained action	For Hypertension, <u>Oral:</u> Initial dose- 0.1mg BD Maintenance dose-0.2-0.6mg BD, Maximum dose- 2.4mg BD <u>Transdermal patch:</u> 0.1mg / 24hr patch	Constipation, drowsiness, dizziness, feeling tired, dry mouth, loss of appetite, dry eye, nightmares	-avoid in breast-feeding -Do not stop suddenly due to unpleasant withdrawal symptoms. -Avoid alcohol drinking and driving operating machinery.
25.	Clopidogrel	tablet	Platelet Inhibitor	Antiplatelet agent	Acute coronary syndrome, Ischemic stroke, myocardial infarction	75mg orally once a day	-Chest pain -collection of blood under the skin -deep , dark purple bruise - red or purple spots on the skin	-taking clopidogrel within 1 week before childbirth can cause bleeding in the mother. -may need to stop using clopidogrel for a short time before a surgery, medical procedure, or dental work.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
26.	Digoxin	Tablet, capsule	Cardiac glycoside	Anti-arrhythmic agent	-heart failure -atrial fibrillation	<u>Tablets:</u> Initial- 500 to 750mcg <u>Capsules</u> Initial- 400 to 600mcg with max; effect in 2 to 6 hrs	Nausea, diarrhoea, dizzy, headache, anxiety, depression	-should not use if you have ventricular fibrillation. - should not stop taking suddenly.
27.	Diltiazem	Tablet, extended release tablet	Calcium Channel Blocker: Benzo-thiazepin	Anti-hypertensive agent	-hypertension, -angina -certain heart rhythm disorders	30-60mg BD or TDS orally	Swelling, dizziness, weakness, headache, nausea, rash	-should not stop taking suddenly. -Avoid alcohol, grapefruit and grapefruit juice which may interact with drug.
28.	Enalapril	Tablet	ACE Inhibitor	Anti-hypertensive Agent	-hypertension, -congestive heart failure	Initial dose; 5mg orally OD Maximum dose: 40mg/ day In combination with diuretics; Initial dose; 2.5mg OD	Dizziness, feeling tired, cough, feeling light-headed	-Don't use in pregnancy. -should not use if you have angioedema. -don't take enalapril within 36 hrs before or after taking any medicine that contains sacubitril. -don't use with medication that contains aliskiren, in diabetes patients. -Avoid getting up too fast, may feel dizzy.
29.	Potassium Chloride	Tablet	mineral	Electrolyte supplement	To prevent or treat hypokalemia,	40 to 100 mEq per day orally, in 2 to 5 divided doses. Maximum daily dose; 200m Eq	-uneven heartbeat, muscle weakness, severe stomach pain, numbness or tingling in your hands, feet .	-should not use KCl if have hyperkalemia or taking drug that causes hyperkalemia. -take with full glass of water due to too little water may lodge in oesophagus and ulceration.
30.	Nitroglycerin or Glyceryl-trinitrate (GTN) or Trinitro-glycerin (TNG)	Tablet, sublingual tablet, patch, Spray, ointment, ampoule (i.v)	1,2,3-trinitroxypropane	Anti-anginal agent	Angina pectoris, heart failure, high blood pressure, anal fissure	2.5mg, 6.5mg, 9mg 6 to 8 hourly	Headache, low blood pressure, reflux tachycardia	-Carry your GTN spray or tablets with you at all times. GTN sprays contain flammable ingredients. Please keep away from any fire when using the spray. GTN patches may need to be removed before operation or dental treatment. Development of drug tolerance is very high if this medicine is taken very regularly.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
31.	Ramipril	Capsule, Tablet	Angiotensin converting enzyme inhibitor (ACEI)	Anti-hypertensive agent	High blood pressure and congestive heart failure	1.25mg, 2.5mg, 5mg , 10mg orally once/day or divided every 12 hours	Non-productive tickling cough, bronchitis, sinusitis, dyspnea Gastrointestinal inflammation, digestive disturbances, abdominal discomfort, dyspepsia, diarrhoea, nausea, vomiting	-must not be used with aliskiren-containing medicinal products in patients with diabetes mellitus or with moderate to severe renal impairment (creatinine clearance <60ml/min). Blood potassium increased
32.	Perindopril	Tablet	Long-acting ACEI	Anti-hypertensive agent	high blood pressure, heart failure or stable coronary artery disease	Initial dose; 4mg OD for 2 weeks, Maintenance dose; 8mg OD Maximum; 16mg/day	-body aches & pain, back pain, cough, headache, nasal congestion, runny nose, sore throat	Don't take if you are pregnant. Don't take within 36 hrs before or after taking any medicine that contains sacubitril. Don't use with medication that contains aliskiren , in diabetes patients.
33.	Doxazosin Mesylate	Tablet, Extended release	Alpha-adrenergic blocker	Anti-hypertensive Agent	Hypertension, to improve urination in men with benign prostatic hyperplasia (BPH)	Initial dose; 1mg orally OD, Maintenance dose; 1 to 16mg orally OD Extended release tablet; 4mg OD Maximum; 8mg OD	-dizziness, fatigue, vertigo, symptomatic orthostatic hypotension, malaise.	-Avoid getting up too fast from a sitting or lying position.
34.	Spirolactone	Tablet	Potassium-sparing diuretic	Anti-hypertensive agent	To treat heart failure, high blood pressure , hypokalemia, cirrhosis, nephrotic syndrome, oedema	25 to 200mg orally in single or divided doses	-nausea , vomiting , diarrhea, dizziness, breast swelling, impotence	-should not use if you have Addison's disease (an adrenal gland disorder), are unable to urinate. -should not breast-feed while using this medicine.

Medicines used in the most common diseases

Medicines used in the most common diseases								
No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
F.	Medicines used for Gastrointestinal Diseases							
1.	Loperamide	Tablet	Non-specific, opiates derivative	Antidiarrheal	Diarrhea, also used to reduce the amount of stool in people with ileostomy	<u>Adult</u> : 4mg orally after the first loose stool, then 2mg orally after each unformed stool Max; 16mg/day <u>Pediatric dose</u> : 2-5yrs: 1mg tds 6-8yrs: 2mg BD 9-12yrs: 2mg tds	Constipation, dizziness, drowsiness, nausea, stomach cramps	-should not use if you have ulcerative colitis, bloody or tarry stools, diarrhea caused by antibiotic medication, diarrhea with high fever. -taking too much loperamide can cause serious heart problems or death. -don't give to a child younger than 2years old.
2.	Metoclopramide	Tablet	5HT ₄ receptor agonist	Antiemetic	Heartburn, gastroparesis, to prevent nausea & vomiting caused by chemotherapy or surgery	10 – 15mg up to QID, 30minutes before meal.	Diarrhea, drowsiness, muscle pain, restlessness	-never use in larger amounts than recommended or for longer than 12 weeks. -should not use tardive dyskinesia (a disorder of involuntary movements). -may harm unborn baby during late pregnancy.
3.	Orlistat	Capsule	Lipase inhibitor	Fat absorption inhibitor	Adjunct in obesity	Adult-120mg up to three times a day	Abdominal destension, Abdominal pain,Anxiety,faecal incontinence,faecal urgency,flatulence,Headache,Liquid stool,oily leakage from rectum,oily stool	Dose to be taken immediately before ,during or up to 1 hour after each main meal.If a meal is missed or contains no fat, the dose of orlistat should be omitted.Vitamin supplementation(especially of vit D)may be considered if there is concern about deficiency of fat soluble vitamin.
4.	Pantoprazole	Injection/ Tablet	Proton pump inhibitor	Proton pump inhibitor	Gastric ulcer,Duodenal ulcer,Gastro-oesophagel reflux disease,prophylaxis of NSAID associated reflex diseases	>15kg to <40 kg:20mg , > 40kg:40 mg Once daily for up to 8 weeks	Headache,diarrhea, stomach pain,nausea or vomiting,gas,dizziness, joint pain, very low risk of subacute cutaneous lupus erythematosus	It should be taken 30 minutes before a meal.Do not crush,chew or break the tablet.Swallow it whole.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
5.	Polyethylene Glycol	Oral powder	Osmotic Laxative	Laxative	Occasional constipation	usually once daily	severe or bloody diarrhea, bleeding from your rectum, blood in your stool, severe and worsen stomach pain, cramping or bloating	safe for daily use, one heaping teaspoon (17 g) of powder dissolved in 120 to 240ml of fluid once daily as needed. Stop taking and show your doctor at once if you have any of serious side effect occur.
6.	Rabeprazole	tablet	Proton pump inhibitor	Proton pump inhibitor	Gastric ulcer, Duodenal ulcer, Gastro-oesophageal reflux disease	20mg orally once a day up to 4 to 8 weeks	Atrophic gastritis, unpleasant taste, constipation, diarrhea, heartburn, runny nose, abdominal pain, low serum magnesium level in addition to B12 deficiency	It should be taken in the morning before eating. Swallow tablet whole with a drink of water
7.	Ranitidine	Injection/ Tablet	H2 receptor antagonist	Anti-histamine	peptic ulcer disease, gastroesophageal reflux disease, and Zollinger–Ellison syndrome	150 mg orally every 12 hrs or 50mg IM/ IV every 6-8 hours	headaches and pain or burning	Do not exceed 14 days of OTC therapy unless directed by doctor
8.	Drotaverine	Injection/ Tablet/ Oral suspension	Anti-cholinergic	Anti-spasmodics	Pain reliever and to combat various types of pain	20-40 mg (3-4) times daily, Max dose is 80 mg/dose	Fainting, nausea, vomiting, dry mouth, dizziness, headache, allergic skin reaction	This medicine should not be taken with diclofenac, atropine, diazepam, levodopa to avoid the adverse effect
9.	Domperidone	Injection/ Tablet/ Oral suspension	Peripherally selective dopamine D2 receptor antagonist (prostaglandin)	Antiemetic, Gastro-prokinetic, Galactagogue	Nausea, vomiting, To promote lactation (breast milk production), functional dyspepsia	child (Bw up to 35kg): 250mcg/kg up to t.d.s Adult (Bw 35kg and above): 10 mg tds	dry mouth, abdominal cramp, diarrhea, nausea, rash, itching, hives, hyperprolactinemia, drowsiness	Contraindication with CYP3A4 inhibitors (e.g. triazole antifungal medications such as ketoconazole), macrolides antibiotics such as erythromycin, grapefruit juice

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
10.	Misoprostol	Tablet(by mouth, vaginal, sublingual)	Prostaglandin E1 analogue	Antiulcer agent, Abortifacient agent	Duodenal,gastric and NSAID induced ulceration , prophylaxis of NSAID induced ulceration, induction of labour, prevention and treatment of serious postpartum hemorrhage	NSAID induced ulcer :100-200mcg PO q 4-6 hr,Induction of labour :25mcg intravaginally interval not to exceed q 3-6 hr,prophylaxis or treatment of postpartum hemorrhage:600-800mcg PO within 1 minute of delivery	Diarrhea, abdominal pain, headache	Take with food, Avoid in pregnancy, avoid taking antacids that contain magnesium
G. Medicines used for Respiratory Diseases								
1.	Desloratadine	Tablet	H1 antagonist	Anti-histamine	Sneezing,runny nose,watery eyes,hives,skin rash,itching,other cold or allergy problem	10mg orally once a day(max; 10mg/day),2-5 yr;5mg PO once a day	Drowsiness,dizziness, dry mouth	Should avoid driving or operatingmachinery until the full effect of the drug are seen.
2.	Budesonide	Inhalation suspension/ Nasal spray	Steroid	Anti-asthmatic	to prevent and treat seasonal and year-round allergy symptoms (such as stuffy/runny nose, itchy eyes/nose/throat, sneezing)	Adult-200-800mcg once daily (max per dose 800mcg) to be taken in the evening	Nose/throat dryness or irritation, cough, sneezing, nosebleeds, or unpleasant taste/smell	may slow down a child's growth if used for a long time. Should avoid in pregnancy
3.	Cetirizine	Tablet	2nd generation H1	Anti-histamine	to relieve allergy symptoms such as watery eyes, runny nose, itching eyes/nose, sneezing , hives,and itching	10 mg tablet once daily	Drowsiness, dizziness, dry mouth	do not take more than one 10 mg tablet in 24 hours.
4.	Fexofenadine (PSE)	Tablet	2nd generation H1	Anti-histamine	seasonal allergic rhinitis and chronic urticarial	180 mg orally once a day OR 60 mg orally 2 times a day ,Maximum dose is 180 mg/day	Drowsiness, may cause insomnia	Take it in morning, do not take with fruit juice
5.	Fluticasone	Inhaler/ nasal spray	Anti-asthmatic steroid	Anti-asthmatic, Allergic rhinitis	prophylaxis of asthma	Inhalation of powder, aerosol;Initially 100-500 mcg BD according to severity of asthma. Inhalation of nebulised suspension; 0.5-2mg twice daily.	Severe or ongoing nosebleeds,noisy breathing,runny nose or crusting around nostrils; redness,sores or white patches in mouth or throat; blurred vision,eye pain or seeing halos around lights	try to be used at around the same time every day. Not to be used for rescue.Do not use fluticasone aerosol inhaler near an open flame or a heat source,the inhaler may explode if it is exposed to very high temperature.

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
6.	Fluticasone/ Salmeterol	Inhaler/ nasal spray	Antiasthmatic-steroid/ LA B2 agonist	Anti-asthmatic	Treats constriction of the airways. The combination of both is meant to be used as 8.maintenance.	Starting dose is based on prior asthma therapy and disease severity; 1 inhalation of 50mcg/500mcg PO q12hr	Thrush,headache and cough. Serious side effects may include worsening asthma, anaphylaxis, seizures	Do not shake after activating, not to be used for rescue
7.	Ipratropium Bromide	Inhaler/ nebulizer	Anti-cholinergic	Anti-brochospasm and antisecretory	used to treat the symptoms of chronic obstructive pulmonary disease and asthma	child 1 month-17yr;20-40mcg 3 times a day, Adult;250-500mcg 3-4 times a day,severe 500mcg every4-6 hr	dry mouth,cough and inflammation of the airway,sedation,skin flashing ,nausea, headache	Shake well, hold breath for 10 sec after acutation,wait 1 minute for 2nd inhalation
8.	Loratidine	Tablet	2nd generation H1	Antihistamine	Allergic rhinitis,hives,hay fever,conjunctivitis, eczema,used for reaction to insect bites and stings and for some food allergies	10mg once a day	Drowsiness,dizziness, dry mouth,headache	Contraindication with CYP3A4 inhibitors(e.g.triazole antifungal medications such as ketoconazole,macrolites antibiotics such as erythromycin, grapefruit juice)
9.	Mometasone	Topical application/ inhaler/ nasal spray	Corticosteroid	Glucocorticoid	certain skin conditions (eczema,psoriasis, allergies,rash), hay fever,asthma,	Adult;initially 400mcg daily in 1-2 divided dose reducedto 200mcg once daily in evening	In application;burning,itching or stinging may occur when apply this medication but usually only lasts a short time .If these effects persist or worsen tell your doctor.For asthma;headache,sore throat,thrush. In the nose;upper respiratory tract infection and nose bleeds	Use sparing amount,avoid application on face and around eye.There are 5 disease interactions with mometasone topical include;diabetes,diaper rash,hyperadrenocorticism, infections,ocular toxicities.
10.	Acetylcysteine	Injection, Tablet, suspension, eye drop	N-acetylcysteine amino acid	Antidote, Mucolytic	paracetamol overdose,to loosen thick mucus, chronic obstructive pulmonary disease, Tear deficiency	Eye drop;apply 3 times a day, Antidotes;Injection initially 150mg/kg over 1hr, then 150mg/kg over 4hr and then 100mg/kg over 16hr	nausea ,vomiting ,skin rash, itching	Asthma (side effect for management of asthma but do not delay acetylcysteine treatment), atropy, may slightly increase INR, may slightly increase prothrombin time

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
11.	Montelukast	Tablet	Leukotriene receptor antagonist	Anti-asthmatic - Leukotriene inhibitor	prophylaxis of asthma,symptomatic relief of seasonal allergic rhinitis in patient with asthma	10 mg once daily to be taken in the evening	abdominal pain,headache, hyperkinesia (in young children),thirst	Granules may be swallowed or mixed with cold,soft food (not liquid) and taken immediately.
H. Medicines used for Genitourinary Diseases								
1.	Alfuzosin	Tablet	alpha adrenoceptor blocker	selective alpha blocker	Benign prostatic hyperplasia, acute urinary retention	Immediate released tablet; 2.5mg 3times a day, max: 10mg , Modified released tablet;10 mg once daily	orthostatic hypotensive effect	Take prior to bedtime to avoid orthostatic hypotensive effect
2.	Dutasteride	Tablet	5 alpha reductase inhibitor	5 alpha reductase inhibitor	Benign prostatic hyperplasia	BPH;500mcg daily (may require several months treatment before benefit is obtained)	breast enlargement,breast tenderness,decreased libido,ejaculation disorders,impotence	Capsule should not be handled by women,takes time for shrinkage of prostate
3.	Oxybutynin	Tablet, Oral solution,trans-dermal patch	Anti-cholinergic	Anti-muscarinics	Urinary frequency, urinary urgency,	Initially 5mg once daily, increased in steps of 5mg every week, adjust according to response;maximum 15mg per day	dry mouth;dry eyes ,blurred vision, mild constipation , dizziness drowsiness	Avoid alcohol use
4.	Sildenafil	Tablet	Phosphor-diesterase 5 blocker	Vasodilator	Erectile dysfunction, pulmonary arterial hypertension	25-50-100mg per day,30 min to 4hr before sexual activity	headache,heartburn, flushed skin	Avoid nitroglycerine use
5.	Tamsulosin	Capsule	Selective alpha blocker	selective alpha blocker	Benign prostatic hypertrophy	0.4mg-0.8mg orally once daily	Dizziness,drowsiness, weakness,nausea, diarrhoea, headache, chest pain	Take 30 min after the same meal every day
6.	Finasteride	Tablet	5 alpha reductase inhibitor	5 alpha reductase inhibitor	Benign prostatic hyperplasia	BPH; 5mg daily (may require several months treatment before benefit is obtained)	breast enlargement,breast tenderness, decreased libido, ejaculation disorders,face swelling, impotence, lip swelling , pruritus, rash, testicular pain	Obstructive uropathy. Pregnant women should not handle

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Thera- peutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
I.	Medicines used for Ophthalmic diseases							
1.	Brimonidine	Ery drop	Alpha 2 adrenoceptor agonist	Anti- glaucoma	Glaucoma	apply twice daily	dizziness,drowsiness,dry mouth,eyelid inflammation,visual disturbances	Cerebral insufficiency,coronary insufficiency,postural hypotension
2.	Neomycin/ polymyxin/ hydro- cortisone	Ear drop	antibiotic	Otic antibiotic	outer ear infection	adding a few drops of the medicine to the cotton every 4 hr,replace the cotton at least every 24 hr up to 10 days.	skinning thinning,small white or red bumps on the skin, unwanted hair growth	should not use if you have a hole in your ear drum or an ear infection caused by chickenpox or herpes infection. Do not use in pregnant or plan to become pregnant and nursing mother.
3.	Moxifloxacin	Tablet/ eye drop	Quinolone derivatives	Antibiotic	local treatment of infection	apply 3 times a day continue treatment for 2-3 days after infection improve	hyperaemia, ocular discomfort, ocular dryness,ocular irritation,ocular pain, taste disturbances	Review if no improvement within 5 days.
4.	Timolol	Tablet, Eye drop,Topi cal gel	Beta adrenoceptor blocker	Antihypert ensive, Anti- glaucoma	Glaucoma	apply once daily to twice daily	Anaphylaxis ,blepharoconjunctivitis,burning,corne al disorders, dry eyes,erythema, itching,ocular stinging, pain	Contraindication with systemically administered beta blocker(bradycardia- heart block).do not used in asthma.
5.	Dorzolamide/ Timolol	Eye drop	Carbonic anhydrase inhibitor/Beta blocker	Anti- glaucoma	Glaucoma	apply twice daily	Asthenia, bitter taste, blurred vision, conjunctivitis, eyelid inflammation, headache, lacrimation, nausea ,ocular irritation,superficial punctatekeratitis	Chronic coneal defects.history of intra ocular surgery
6.	Olopatadine	Eye drop	Antihistamine	Anti- allergy	Seasonal allergic conjunctivitis	apply twice daily for maximum 4 months	local irritation,dizziness dry eye,headache,asthenia	refer to eye drop technique
7.	Travoprost	Eye drop	prostaglandin analogues	Anti- glaucoma	Raised intra- ocular pressure in open- angle glaucoma, ocular hypertension	apply once daily preferably in the evening	blepharitis,blood pressure changes, conjunctival disorders, corneal erosion,darkening,thickening and lengthening of eye lashes,headache,ocular discomfort	risk factor for cystoid macularoedema,risk factor for iritis, risk factor for ureitis

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
J.	Vitamins and Minerals							
1.	Cholecalciferol	Tablet	Fat soluble vitamin	Vitamin D3 supple-ment	preventing or curing rickets, vit D deficiency	prevention of vit D deficiency;400 units daily,Treatment of vit D deficiency;800 units daily,higher doses may be necessary for severe deficiency	Symptoms of overdosage include anorexia, lassitude, nausea, vomiting,diarrhoea, constipation,weight loss, polyuria, sweating, headache, thirst,raised concentration of calcium and phosphate in plasma and urine	Take with food to decrease GI problem.Monitor plasma-calcium concentration in patients receiving high doses.
2.	Ascorbic acid	Injection/ Tablet/Oral suspension	water soluble vitamin	Vitamin C supplement	scurvy, ameliorates colds and promotes wound healing	prevention of scurvy;25-75mg daily,Treatment of scurvy;not less than 250mg daily in divided doses	redness and warm feeling of the skin or flashing,headache, nausea, vomiting ,diarrhoea	severe scurvy (gingival swelling and bleeding margins as well as petechiae on the skin).Patient with this sign is more likely to have leukaemia, investigation should not be delayed by a trial period ofvitamins treatment
3.	Multivitamin and Mineral Preparations	Injection, Capsule, Tablet, Syrup	Multivitamins and Mineral	Multi-vitamins and Mineral supplements	prevention of vitamin deficiency	Once daily or two times per day depending on constituents	tooth staining, increased urination, stomach bleeding,uneven heart rate, confusion and muscle weakness	To avoid pontential toxicity, the content of all vitamin preparations, particularly vitamin A, should be considered when used together with other supplements.
4.	Pyridoxine (B6)	Injection/ Tablet	water soluble vitamin	vitamin B6 supplement	vit B6 deficiency, prophylaxis and treatment of isoniazid-induced neuropathy, idiopathic sideroblastic anaemia, premenstrual syndrome	vit B6 deficiency;20-50mg 1-3 times a day, prophylaxis of isoniazid-induced neuropathy ;10-20mg daily, treatment of isoniazid-induced neuropathy; 50mg 3 times a day, idiopathic sideroblastic anaemia; 100-400mg daily in divided doses, premenstrual syndrome; 50-100mg daily	sensory neuropathy (with high doses when given for extended periods)	Prolong use of pyridoxine in a dose of 10mg daily is considered safe but the long-term used of pyridoxine in a dose of 200mg or more daily has been associated with neuropathy, overdose induces toxic effect

Medicines used in the most common diseases

No	Generic Name	Available Dosage Forms	Specific Category	Therapeutic Category	Common Uses	Counselling Points		
						Dosing Interval	Common Untoward Effects	Cautions
5.	Vitamin K	Injection/ Tablet	Fat soluble vitamin	Haemo-statics	Vit K deficiency, warfarin overdose	5-10mg per day ,IV rate not to exceed 1mg/min	flushing, injection site pain or discomfort, taste disturbances, dizziness	antacid, aspirin, blood thinner antibiotic can interfere with the effect of vit K. IV 10-15mg may cause warfarin resistance.
6.	Hydroxocobalamin (B12)	Injection/ Tablet	water soluble vitamin	vitamin B12 supplement	B12 deficiency, pernicious anemia, cyanide poisoning, hyperhomocysteinemia	For B12 deficiency; 300-10000 mcg daily, For hyperhomocysteinemia; 400-500mcg in combination with folic and B6 has been used	Dizziness, headache, pruritus, with intramuscular use; hypokalaemia, injection site reaction- rash, with intravenous use; Dyspnoea, eye disorder, gastro-intestinal disturbance	For intramuscular use should not be given before diagnosis fully established
7.	Tranexamic acid	Injection, Tablet, Capsule	Anti-fibrinolytics	Anti-Heamorrhagics	Fibrinolysis, Menorrhagia, hereditary angioedema, epistaxis	Menorrhagia; 1 g 3 times a day for up to 4 days, Epistaxis; 1g 3 times a day for 7 days,	diarrhoea, nausea, vomiting	irregular menstrual bleeding, massive haematuria (avoid if risk of ureteric obstruction), patient receiving oral contraceptives (increased risk of thrombosis)
8.	Folic acid	Tablet	Type of vitamin B, B ₉	Haematonic agent	Megaloblastic anemia, folic acid deficiency	400 to 800mcg orally OD Must take higher dose of 5mg tablet until 12 weeks pregnant if they have higher chance of neural tube defects – if baby's father has neural tube defect, if you're taking anti-epilepsy medicine.	No common side effect.	-

Drug-Drug Interactions

No	Drug 1	Drug 2	Interactions
1	Acetazolamide	Alcohol, Amlodipine, Atenolol, Chlorpromazine, Diazepam, Enalapril, Fluphenazine, GTN, Halothane, Hydralazine, Isosorbide dinitrate, Keatmine, Levodopa, Methyldopa, Nifedipine, Nitrous oxide, Propanolol, Sodium nitroprusside, Thiopental, Timolol, Verapamil	Enhanced hypotensive effect
		Amitriptyline, Clomipramine	Increased risk of postural hypotension
		Carbamazepine	Increased risk of hyponatraemia; acetazolamide increases plasma carbamazepine concentration
		Contraceptives, Oral	Antagonism of diuretic effect by estrogens
		Dexamethasone, Hydrocortisone, Prednisolone	Increased risk of hypokalaemia; antagonism of diuretic effect
		Digoxin	Hypokalaemia caused by acetazolamide increases cardiac toxicity of digoxin
		Hydrochlorothiazide, Furosemide	Increased risk of hypokalaemia;
		Salbutamol	Increased risk of hypokalaemia with high doses of salbutamol
		Ibuprofen	Risk of nephrotoxicity of ibuprofen increased; antagonism of diuretic effect
2	Acetylsalicylic acid	Antacids (Aluminium hydroxide, Magnesium hydroxide)	Excretion of acetylsalicylic acid increased by alkaline urine
		Dexamethasone, Hydrocortisone, Prednisolone	Increased risk of gastrointestinal bleeding and ulceration; Drug 2 reduces plasma salicylate concentration
		Enalapril	Antagonism of hypotensive effect; risk of renal impairment when acetylsalicylic acid given in doses of over 300mg daily
		Warfarin	Increased risk of bleeding due to anti-platelet effect
		Ibuprofen	Avoid concomitant use (increased adverse effect); antiplatelet effect of acetylsalicylic acid possibly reduced
		Methotrexate	Reduced excretion of methotrexate (increased toxicity)
		Metochlorpramide	Enhanced effect of acetylsalicylic acid (increased rate of absorption)
		Phenytoin, Valproic acid	Enhancement of effect of Drug 2
		Spironolactone	Antagonism of diuretic effect
3	Aciclovir	Ciclosporin	Increased risk of nephrotoxicity
4	Albendazole	Dexamethasone	Plasma albendazole concentration possibly increased

No	Drug 1	Drug 2	Interactions
5	Allopurinol	Amoxicillin,Ampicillin	Increased risk of rash
		Azathioprine,Mercaptopurine	Effects of drug-2 enhanced and toxicity increased; reduce dose of drug-2
		Ciclosporin	Plasma ciclosporin concentration possibly increased (risk of nephrotoxicity)
		Hydrochlorothiazide	Increased risk of hypersensitivity,especially in renal impairment
		Warfarin	Anticoagulant effect possibly enhanced
6	Amitriptyline	Acetazolamide,Amiloride,Furosemide,Hydrochlorothiazide, Spironolactone	Increased risk of postural hypotension
		Alcohol,Diazepam	Enhanced sedative effect
		Artemether+Lumefantrine	Manufacturer of drug-2 advises avoid concomitant use
		Carbamazepine,Phenytoin, Phenobarbital	Antagonism of anticonvulsant effect (convulsive threshold lowered);accelerated metabolism of amitriptyline(reduced antidepressant effect)
		Chlorphenamine,Promethazine	Increased antimuscarinic and sedative effects
		Chlorpromazine,Fluphenazine	Increased risk of antimuscarinic adverse effects; increased plasma amitriptyline concentration ,possibly increased risk of ventricular arrhythmias
		Contraceptives,Oral	Antagonism of antidepressant effect by estrogens but adverse effects of amitriptyline possibly increased due to plasma concentration of amitriptyline
		Ethosuximide,Valproic acid	Antagonism of anticonvulsant effect (convulsive threshold lowered)
		Glyceryl trinitrate,Isosorbite dinitrate	Reduced effect of sublingual GTN tabs(failure to dissolve under tongue owing to dry mouth)
		Haloperidol	Increased plasma amitriptyline concentration; possibly increased risk of ventricular arrhythmias
		Isoniazid	Increased plasma concentration of isoniazid
		Levothyroxine	Enhanced effects of amitriptyline
		Rifampicin	Plasma concentration of amitriptyline possibly reduced
		Ritonavir,Verapamil	Plasma concentration possibly increased
		Warfarin	Enhanced or reduced anticoagulant effect

No	Drug 1	Drug 2	Interactions
7	Amlodipine	Acetazolamide,Alcohol,Amiloride,Atenolol,Diazepam, Enalapril, Fluphenazine,Furosemide,GTN,Haloperidol, Halothane, Hydralazine, Hydrochlorothiazide,Isosorbite dinitrate,Ketamine, Levodopa, Methyldopa, Nitrous oxide, Propanolol,Sodium nitroprusside, Spironolactone, Thiopental,Timolol,Chlorpromazine	Enhanced hypotensive effect
		Carbamazepine,Phenobarbital,Phenytoin	Probably reduced effect of amlodipine
		Contraceptives,Oral,Dexamethasone,Hydrocortisone,	Antagonism of hypotensive effect
		Ibuprofen,Prednisolone	(by estrogens)
		Mefloquine	Possibly increased risk of bradycardia
		Ritonavir	Possibly increased plasma concentration of amlodipine
8	Amoxicillin	Allopurinol	Increased risk of rash
		Contraceptives,Oral	Contraceptive effect of estrogens possibly reduced (risk probably small)
		Methotrexate	Reduced excretion of methotrexate(increased risk of toxicity)
		Warfarin	Studies have failed to demonstrate an interaction,but common experience in anticoagulant clinics is that INR can be altered by a course of amoxicillin
9	Antacids (Aluminium hydroxide; Magnesium hydroxide)	Acetylsalicylic acid	Excretion of acetylsalicylic acid increased by alkaline urine
		Azithromycin,Chloroquine,Chlorpromazine,Ciprofloxacin, Digoxin,Doxycycline,Enalapril,Fluphenazine,Isoniazid, Levofloxacin,Ofloxacin,Penicilliamine,Phenytoin,Rifampicin	Reduced absorption of drug-2
		Quinidine	Reduced quinidine excretion in alkaline urine (plasma quinidine concentration occasionally increased)
Note:Antacids should preferably not to be taken at the same time as other drugs since they may impair absorption.			
10	Azithromycin	Antacids(Aluuminium hy:.,Mangesium hy:)	Reduced absorption of azithromycin
		Artemether+lumefantrine	Manufacturer of artemether+lumefantrine advises avoid concomitant use
		Ciclosporin	Possible inhibition of metabolism of ciclisporin (increased plasma con;)
		Contraceptives,Oral	Contraceptive effect of estrogen possibly reduced (risk probably small)
		Digoxin	Increased plasma concentration of digoxin (increased risk of toxicity)
		Ritonavir	Plasma concentration of azithromycin possibly increased
		Warfarin	Possibly enhanced anticoagulant effect of warfarin

No	Drug 1	Drug 2	Interactions
11	Calcium salts	Ciprofloxacin, Ferrous salts, Levothyroxine, Sodium fluoride, Zinc Sulfate	Reduced absorption of drug-2
		Dexamethasone, Hydrocortisone, Prednisolone	Reduced absorption of calcium salts
		Digoxin	Large intravenous doses of calcium salts can precipitate arrhythmias
		Hydrochlorothiazide	Increased risk of hypercalcaemia
12	Cefixime	Contraceptives, Oral	Contraceptive effect of estrogens possibly reduced (risk probably small)
		Warfarin	Possibly enhanced anticoagulant effect
13	Ciprofloxacin	Antacids (Aluminium hy:, Magnesium hy:), Calcium salts, Dairy products, Zinc sulfate, Ferrous salts (by oral Fe salts)	Reduced absorption of ciprofloxacin
		Artemether+Lumefantrine	Manufacturer of artemether+lumefantrine advises avoid concomitant use
		Ciclosporin	Increased risk of nephrotoxicity
		Contraceptives, Oral	Contraceptive effect of estrogens possibly reduced (risk probably small)
		Glibenclamide	Possibly enhanced effect of glibenclamide
		Ibuprofen	Possibly increased risk of convulsions
		Morphine	Manufacturer of ciprofloxacin advises avoid premedication with morphine (reduced plasma ciprofloxacin concentration) when ciprofloxacin used for surgical prophylaxis
		Phenytoin	Plasma phenytoin concentration can be increased or decreased by ciprofloxacin
		Warfarin	Enhanced anticoagulant effect
14	Clindamycin	Alcuronium, Vecuronium	Enhanced muscle relaxant effect
		Neostigmine, Pyridostigmine	Antagonism of effects of drug-2
		Suxamethonium	Enhanced effect of suxamethonium
15	Clotrimazole	Simvastatin	Increased risk of myopathy
16	Contraceptives, Oral	Acetazolamide, Amiloride, Furosemide, Hydrochlorothiazide, Spironolactone	Antagonism of diuretic effect by estrogens
		Amitriptyline, Clomipramine	Antagonism of antidepressant effect by estrogens but adverse effects of drug-2 possibly increased due to increased plasma concentration of drug-2
		Amlodipine, Atenolol, Enalapril, GTN, Hydralazine, Isosorbide dinitrate, Methyldopa, Nifedipine, Propanolol, Sodiumnitroprusside, Verapamil	Antagonism of hypotensive effects by estrogens

No	Drug 1	Drug 2	Interactions
	Contraceptives, Oral	Amoxicillin,Ampicillin,Azithromycin,Benzyl penicillin, Cefixime, Ceftazidime,Ceftriaxone,Ciprofloxacin,Doxycycline, Erythromycin,Imipenam+cilastatin,Levofloxacin, Metronidazole, Ofloxacin,Phenoxymethylpenicillin	Contraceptive effect of estrogens possibly reduced (risk probably small)
		Carbamazepine,Griseofulvin,Nevirapine,Phenobarbital, Phenytoin,Rifampicin	Accelerated metabolism of estrogens and progestogens (reduced contraceptive effect)
		Ciclosporin	Plasma ciclosporin concentration increased by progentogens and possibly increased by estrogens
		Dexamethasone,Hydrocortisone,Prednisolone	Oral contraceptives containing estrogens increase plasma concentration of drug-2
		Efavirenz	Efficacy of estrogen containing oral contraceptive possibly reduced
		Fluconazole	Anecdotal reports of failure of estrogen containing contraceptive
		Glibenclamide,Insulins,Metformin	Antagonism of hypoglycaemic effect by estrogens and progestogens
		Nelfinavir	Accelerated metabolism of estrogens reduced contraceptive effect ;nelfinavir possibly reduced contraceptive effect of progestogen
		Warfarin	Antagonism of anticoagulant effect by estrogens and progestogens
		Note:Interaction of combine estrogen and progesterone oral contraceptives may also apply to combine parenteral contraception.	
17	Diazepam	Acetazolamide,Amiloride,Amlodipine,Atenolol,Enalapril,Furosemide ,GTN,Hydralazine,Hydrochorothiazide, Isosorbite dinitrate, Methyldopa,Nifedipine,Propanolol, Sodium nitroprusside, Spironolactone,Timolol,Verapamil	Enhanced hypotensive effect
		Alcohol,Amitriptyline,Clophenamine,Clorpromazine, Clomipramine, Codeine,Fluphenazine,Haloperidol, Halothane, Ketamine, Methadone,Morphine,Nitrous oxide, Promethazine,Thiopental	Enhanced sedative effect
		Isoniazid	Metabolism of diazepam inhibited
		Levodopa	Possibly antagonism of levodopa effect
		Phenytoin	Plasma concentration possibly increased or decreased by diazepam
		Rifampicin	Metabolism of diazepam accelerated reduced plasma concentration
		Ritonavir	Plasma concentration possibly increased by ritonavir (risk of extreme sedation and respiratory depression,avoid concomitant use)

No	Drug 1	Drug 2	Interactions
18	Doxycycline	Antacids(Alu; hy,Mag hy)	Reduced absorption of doxycycline
		Carbamazepine	Accelerated metabolism of doxycycline(reduced effect)
		Ciclosporin	Possibly increased plasma ciclosporin concentration
		Contraceptives,Oral	Contraceptive effect of estrogen possibly reduced (risk probably small)
		Ferrous salts	Absorption of oral ferrous salts reduced by doxycycline, absorption of doxycycline reduced by oral ferrous salts
		Methotrexate	Increased risk of methotrexate toxicity
		Phenobarbital	Metabolism of doxycycline accelerated(reduced plasma concentration)
		Phenytoin	Increased metabolism of doxycycline (reduced plasma concentration)
		Rifampicin	Plasma doxycycline concentration possibly reduced
		Warfarin	Anticoagulant effect possibly enhanced
19	Erythromycin	Artemether+Lumefantrine	Manufacturer of artemether+lumefantrine advises avoid concomitant use
		Carbamazepine	Increased plasma carbamazepine concentration
		Ciclosporin	Increased plasma concentration (inhibition of metabolism of ciclosporin)
		Contraceptives,Oral	Contraceptive effect of estrogens possibly reduced (risk probably small)
		Dexamethasone,Hydrocortisone,prednisolone	Erythromycin possibly inhibits metabolism of drug-2
		Digoxin	Increased plasma concentration of digoxin (increased risk of toxicity)
		Quinidine	Increased risk of ventricular arrhythmias with parenteral erythromycin
		Ritonavir	Plasma concentration possibly increased by ritonavir
		Simvastatin	Increased risk of myopathy
		Valproic acid	Metabolism of valproic acid possibly inhibited (increased plasma concen;)
		Verapamil	possible inhibition of metabolism of verapamil (increased risk of toxicity)
		Vinblastine	Increased toxicity of vinblastine (avoid concomitant use)
		Warfarin	Enhanced anticoagulant effect
20	Ferrous salts	Calcium salts,Doxycycline	Reduced absorption of oral ferrous salts
		Ciprofloxacin,Doxycycline,Levodopa(may be),Levofloxacin, Levothyroxine(give at least 2 hours apart),Ofloxacin, Zinc sulfate,penicilliamine	Absorption of drug-2 reduced by oral ferrous salts
		Dimercaprol	Avoid concomitant use
		Methyldopa	Oral ferrous salts reduce hypotensive effect of methyldopa

No	Drug 1	Drug 2	Interactions
21	Furosemide	Acetazolamide,Amphotericin B,Hydrochlorothiazide	Increased risk of hypokalaemia
		Alcohol,Amlodipine,Atenolol,Chlorpromazine,Diazepam, Enalapril, Fluphenazine,GTN,Halothane,Hydralazine, Isosorbite dinitrate, Ketamine,Levodopa,Methyldopa, Nifedipine,Nitrous oxide, Propanolol,Sodium nitroprusside, Thiopental, Timolol, Verapamil	Enhanced hypotensive effect
		Amikacin,Gentamicin,Paromomycin,Streptomycin, Vancomycin	Increased risk of ototoxicity
		Amitriptyline,Clomipramine	Increased risk of postural hypotension
		Carbamazepine	Increased risk of hyponatraemia
		Cisplatin	Increased risk of nephrotoxicity and ototoxicity
		Contraceptives,Oral	Antagonism of diuretic effect by estrogens
		Dexamethasone,Hydrocortisone,Prednisolone	Antagonism of diuretic effect;increased risk of hypokalaemia
		Digoxin	Hypokalaemia caused by furosemide increases cardiac toxicity of digoxin
		Glibenclamide,Insulins,Metformin	Antagonism of hypoglycaemic effect
		Ibuprofen	Risk of nephrotoxicity of ibuprofen increased;antagonism of diuretic effect
		Lidocaine	Action of lidocaine antagonized by hypokalaemia caused by furosemide (interaction less likely when lidocaine used topically)
		Lithium	Reduced lithium excretion (increased plasma lithium concentration and risk of toxicity) furosemide safer than hydrochlorothiazide
		Quinidine	Cardiac toxicity of quinidine increased by hypokalaemia caused by furosemide
		Salbutamol	Increased risk of hypokalaemia with high doses of salbutamol
22	Glyceryl trinitrate	Acetazolamide,Alcohol,Amiloride,Amlodipine,Atenolol, Chlorpromazine,Diazepam,Enalapril,Fluphenazine, Furosemide,Halothane,Hydralazine,Hydrochlorothiazide, Ketamine,Levodopa,Methyldopa,Nifedipine,Nitrous oxide,Propanolol,Sodium nitroprusside,Spirolactone, Thiopental,Timolol,Verapamil	Enhanced hypotensive effect
		Amitriptyline,Clomipramine	Reduced effect of sublingual glyceryl trinitrate tablets (failure to dissolve under the tongue owing to dry mouth)
		Atropine,Biperiden	Possibly reduced effect of sublingual GTN tablets (failure to dissolve under the tongue owing to dry mouth)

No	Drug 1	Drug 2	Interactions
	Glyceryl trinitrate	Contraeptives Oral(by estrogens), Dexamethasone, Ibuprofen, Prednisolone	Antagonism of hypotensive effect
		Heparin	Anticoagulant effect reduced by infusion of glyceryl trinitrate
23	Haloperidol	Alcohol, Diazepam	Enhanced sedative effect
		Amitriptyline, Clomipramine	Increased plasma drug-2 concentration ;possibly increased risk of ventricular arrhythmias
		Amlodipine, Enalapril, Halothane, Ketamine, Nifedipine, Nitrous oxide, Thiopental, Verapamil	Enhanced hypotensive effect
		Artemether+Lumefantrine	Manufacturer of drug-2 advises avoid concomitant use
		Atropine, Biperiden	Possibly reduced effects of haloperidol
		Carbamazepine, Phenobarbital	Antagonism of anticonvulsant effect (convulsive threshold lowered); metabolism of haloperidol accelerated (reduced plasma concentration)
		Codeine, Methadone, Morphine	Enhanced sedative and hypotensive effect
		Dopamine, Ephedrine, Epinephrine	Antagonism of hypertensive effect
		Ethosuximide, Phenytoin, Valproic acid	Antagonism of anticonvulsant effect (convulsive threshold lowered)
		Fluoxetine	Plasma concentration of haloperidol increased
		Ritonavir	Possibly increased plasma concentration of haloperidol
		Levodopa	Antagonism of effect of levodopa
		Lithium	Increased risk of extrapyramidal effects and possibility of neurotoxicity
		Methyldopa	Enhanced hypotensive effect ;increased risk of extrapyramidal effects
		Metochlorpramide	Increased risk of extrapyramidal effects
		Procainamide, Quinidine	Increased risk of ventricular arrhythmias
		Rifampicin	Accelerated metabolism of haloperidol (reduced plasma haloperidol conc;)
24	Ibuprofen	Acetazolamide, Furosemide, Hydrochlorothiazide	Risk of nephrotoxicity of ibuprofen incresed; antagonism of diuretic effect
		Acetylsalicylic acid	Avoid concomitant use (increased adverse effects); antiplatelet effect of acetylsalicylic acid possibly reduced
		Amiloride, Spironolactone	Risk of nephrotoxicity of ibuprofen incresed; antagonism of diuretic effect; possibly increased risk of hyperkalaemia
		Amlodipine, Atenolol, GTN, hydralazine, Isosorbite dinitrate Methyldopa, nifedipine, propranolol, Sodium nitroprusside, Verapamil	Antagonism of hypotensive effect

No	Drug 1	Drug 2	Interactions
	Ibuprofen	Ciclosporin	Increased risk of nephrotoxicity
		Ciprofloxacin, Levofloxacin, Ofloxacin	Possibly increased risk of convulsions
		Dexamethasone, Hydrocortisone, Prednisolone	Increased risk of gastrointestinal bleeding and ulceration
		Digoxin	Possibly exacerbation of heart failure, reduced renal function and increased plasma digoxin concentration
		Enalapril	Antagonism of hypotensive effect, increased risk of renal impairment
		Fluoxetine	Increased risk of bleeding
		Glibenclamide, Phenytoin	Possibly enhanced effect of glibenclamide
		Penicillamine	Possibly increased risk of nephrotoxicity
		Lithium, Methotrexate	Reduced excretion of drug-2 (increased risk of toxicity)
		Mifepristone	Avoidance of ibuprofen advised by manufacturer of mifepristone
		Ritonavir	Plasma concentration possibly increased by ritonavir
		Warfarin	Anticoagulant effect possibly enhanced
		Zidovudine	Increased risk of haematological toxicity
25	Levofloxacin, Ofloxacin	Antacids (Aluminium hy, Magnesium hy), Ferrous salts, Zinc sulfate	Reduced absorption of levofloxacin
		Artemether+Lumefantrine	Manufacturer of drug-2 advises avoid concomitant use
		Ciclosporin	Increased risk of nephrotoxicity
		Contraceptives, Oral	Contraceptive effect of estrogens possibly reduced (risk probably small)
		Ibuprofen	Possibly increased risk of convulsions
		Warfarin	Possibly enhanced anticoagulant effect
26	Levonogestrel	Carbamazepine, Griseofulvin, Nifedipine, Phenobarbital, Phenytoin, Rifampicin, Ritonavir	Accelerated metabolism of levonogestrel (reduced contraceptive effect)
		Ciclosporin	Inhibition of ciclosporin metabolism (increased plasma ciclosporin conc;)
		Glibenclamide, Insulins, Metformin	Antagonism of hypoglycaemic effect
		Nelfinavir	Contraceptive effect of levonogestrel possibly reduced
		Warfarin	Antagonism of anticoagulant effect
27	Levothyroxine	Amitriptyline	Enhanced effect of amitriptyline
		Calcium salts	Reduced absorption of levothyroxine
		Carbamazepine, Phenobarbital, Rifampicin	Accelerated metabolism of levothyroxine (may increase levothyroxine requirements in hypothyroidism)

No	Drug 1	Drug 2	Interactions
	Levothyroxine	Clomipramine	Possibly enhanced effects of clomipramine
		Ferrous salts	Absorption of levothyroxine reduced by oral ferrous salts (give at least 2 hours apart)
		Phenytoin	Accelerated metabolism of levothyroxine(may increase levothyroxine requirements in hypothyroidism);plasma concentration of phenytoin possibly increased
		Warfarin	Enhanced anticoagulant effect
28	Mebendazole	Carbamazepine,Phenobarbital,Phenytoin	Reduced plasma mebendazole concentration (possibly increase mebendazole dose in tissue infection)
29	Metformin	Alcohol	Enhanced hypoglycaemic effect;increased risk of lactic acidosis
		Atenolol,Propanolol,Timolol	Drug-2 may mask warning signs of hypoglycaemia such as tremor
		Contraceptives,Oral (by estrogens and progestogens) Dexamethasone,Furosemide,Hydrochlorothiazide,Hydrocortisone, Levonogestrel,Medroxyprogesterone, Norethisterone,Prednisolone	Antagonism of hypoglycaemic effect
		Enalapril,Testosterone	Hypoglycaemic effect possibly enhanced
30	Methotrexate	Acetylsalicylic acid,Amoxicillin,Ampicillin,Benzyl penicillin, Ibuprofen,Phenoxymethyl penicillin	Reduced excretion of methotrexate (increased risk of toxicity)
		Ciclosporin	Increased toxicity
		Cisplatin	Risk of pulmonary toxicity
		Dexamethasone,Hydrocortisone,Prednisolone	Increased risk of haematological toxicity
		Doxycycline,Silver sulfadiazine,Sulfasalazine	Increased risk of methotrexate toxicity
		Nitrous oxide,Trimethoprim	Increased antifolate effect (avoid concomitant use)
		Phenytoin	Reduced absorption of phenytoin;antifolate effect of methotrexate increased
		Pyrimethamine	Antifolate effect of methotrexate increased
		Sulfadoxime+Pyrimethamine	Antifolate effect of methotrexate increased;risk of methotrexate toxicity increased
		Sulfamethoxazole+Trimethoprim	Antifolate effect of methotrexate increased;(avoid concomitant use);risk of methotrexate toxicity increased
		Vaccine,Live	Avoid use of live vaccines with methotrexate (impairment of immune response)

No	Drug 1	Drug 2	Interactions
31	Methyldopa	Acetazolamide, Alcohol, Amiloride, Amlodipine, Atenolol, Diazepam, Enalapril, Furosemide, GTN, Halothane, Hydralazine, Hydrochlorothiazide, Isosorbite dinitrate, Ketamine, Nifedipine, Nitrous oxide, Propanolol, Sodium nitroprusside, Spironolactone, Thiopental, Timolol, Verapamil	Enhanced hypotensive effect
		Chlorpromazine, Fluphenazine, Haloperidol	Enhanced hypotensive effect; increased risk of extrapyramidal effects
		Contraceptives, Oral (by estrogens), Hydrocortisone, Ibuprofen, Prednisolone, Dexamethasone	Antagonism of hypotensive effect
		Ferrous salts	Oral ferrous salts reduce hypotensive effect of methyldopa
		Levodopa	Enhanced hypotensive effect; antagonism of antiparkinsonism effect
		Lithium	Neurotoxicity may occur without increased plasma lithium concentration
		Salbutamol	Acute hypotension reported with salbutamol infusion
32	Metochlorpramide	Acetylsalicylic acid	Enhanced effect of acetylsalicylic acid (increased rate of absorption)
		Atropine, Biperiden, Codeine, Methadone, Morphine	Antagonism of effects of metochlorpramide on gastrointestinal activity
		Chlorpromazine, Fluphenazine, Haloperidol	Increased risk of extrapyramidal effects
		Ciclosporin	Plasma ciclosporin concentration increased
		Paracetamol	Increased absorption of paracetamol
		Suxamethonium	Enhanced effects of suxamethonium
33	Metronidazole	Alcohol	Disulfiram-like reaction
		Contraceptives, Oral	Contraceptive effect of estrogens possibly reduced (risk probably small)
		Fluorouracil	Metabolism of fluorouracil inhibited (increased toxicity)
		Lithium	Increased lithium toxicity reported
		Phenobarbital	Metabolism of metronidazole accelerated (reduced plasma concentration)
		Phenytoin	Metabolism of phenytoin inhibited (increased plasma phenytoin concentration)
		Warfarin	Enhanced anticoagulant effect
34	Nifedipine	Acetazolamide, Alcohol, Amiloride, Chlorpromazine, Diazepam, Enalapril, Fluphenazine, Furosemide, GTN, Halothane, Hydrochlorothiazide, Isosorbite dinitrate, Ketamine, Levodopa, Methyldopa, Nitrous oxide, Sodium nitroprusside, Spironolactone, Thiopental	Enhanced hypotensive effect

No	Drug 1	Drug 2	Interactions
	Nifedipine	Atenolol,Propanolol,Timolol	Enhanced hypotensive effect;possibly severe hypotension and heart failure
		Carbamazepine,Phenytoin,Phenobarbital	Probably reduced effect of nifedipine
		Ciclosporin	Possibly increased plasma nifedipine concentration (increased risk of adverse effects such as gingival hyperplasia)
		Contraceptives.Oral(by estrogens),Dexamethasone,Hydrocortisone,Ibuprofen,Prednisolone	Antagonism of hypotensive effect
		Digoxin,Ritonavir	Possibly increased plasma concentration of drug-2
		Grapefruit juice	Increased plasma nifedipine concentration
		Insulins	Occasionally impaired glucose tolerance
		Magnesium(parenteral)	Profound hypotension reported with nifedipine and intravenous magnesium sulfate in pre-eclampsia
		Mefloquine	Possibly increased risk of bradycardia
		Quinidine	Reduced plasma quinidine concentration
		Rifampicin	Accelerated metabolism of nifedipine (plasma concentration significantly reduced)
		Vecuronium	Enhanced muscle relaxant effect
		Vincristine	Possibly reduced metabolism of vincristine
35	Paracetamol	Metochlorpramide	Increased absorption of paracetamol
		Warfarin	Prolonged regular use of paracetamol possibly enhances anticoagulant effects
36	Potassium salts	Amiloride,Ciclosporin,Enalapril(severe),Spironolactone	Increased risk of hyperkalaemia
37	Prednisolone, Dexamethasone	Acetazolamide,Hydrochlorothiazide,Furosemide	Increased risk of hypokalaemia;antagonism of diuretic effect
		Acetylsalicylic acid	Increased risk of gastrointestinal bleeding and ulceration, prednisolone reduces plasma salicylate concentration
		Amiloride,Spironolactone	Antagonism of diuretic effect
		Amlodipine,Atenolol,Enalapril,GTN,Hydralazine,Isosorbite dinitrate,Methyldopa,Nifedipine,Propanolol,Sodium nitroprusside,Verapamil	Antagonism of hypotensive effect
		Calcium salts	Reduced absorption of calcium salts

No	Drug 1	Drug 2	Interactions
	Prednisolone, Dexamethasone	Carbamazepine,Phenobarbital,Phenytoin,Rifampicin	Accelerated metabolism of prednisolone (reduced effect)
		Ciclosporin,Contraceptives ,Ritonavir	Increased plasma concentration of prednisolone
		Digoxin	Increased risk of hypokalaemia
		Erythromycin	Erythromycin possibly inhibits metabolism of prednisolone
		Glibenclamide,Insulins,Metformin	Antagonism of hypoglycaemic effect
		Ibuprofen	Increased risk of gastrointestinal bleeding and ulceration,
		Methotrexate	Increased risk of haematological toxicity
		Salbutamol	Increased risk of hypokalaemia if high dose of salbutamol given with prednisolone
		Warfarin	Anticoagulant effect possibly enhanced or reduced (high dose prednisolone enhances anticoagulant effect)
38	Propanolol, Atenolol , Timolol	Acetazolamide,Alcohol,Amiloride,Amlodipine,Diazepam, Enalapril,Furosemide,GTN,Halothane, Hydralazine, Hydrochlorothiazide, Isosorbite dinitrate, Levodopa, Methyldopa, Nitrous oxide,Sodium nitroprusside,Spirololactone,Thiopental	Enhanced hypotensive effect
		Alcuronium,Suxamethonium,Vecuronium	Enhanced muscle relaxant effect
		Bupivacaine	Increased risk of bupivacaine toxicity
		Chlorpromazine	Concomitant administration may increase plasma concentration of both drugs;enhanced hypotensive effect
		Contraceptive,Dexamethasone, Hydrocortisone,Ibuprofen,Prednisolone	Antagonism of hypotensive effect
		Digoxin	Increased risk of AV block and bradycardia
		Epinephrine	Severe hypertension
		Glibenclamide,Metformin	Propanolol may mask warning signs of hypoglycaemia such as tremor
		Insulins	Enhanced hypoglycaemic effect;propanolol may mask warning signs of hypoglycaemia such as tremor
		Lidocaine	Increased myocardial depression;increased risk of lidocaine toxicity (interaction less likely when lidocaine used topically)
		Mefloquine	Increased risk of bradycardia
		Neostigmine,Pyridostigmine	Antagonism of effect of drug-2

No	Drug 1	Drug 2	Interactions
	Propanolol, Atenolol , Timolol	Nifedipine	Enhanced hypotensive effect;possibly severe hypotension
		Pilocarpine	Increased risk of arrhythmias
		Procainamide,Quinidine	Increased risk of myocardial depression
		Rifampicin	Metabolism of propanolol accelerated (significantly reduced plasma conc;)
		Verapamil	Asystole,severe hypotension and heart failure
39	Salbutamol	Acetazolamide,Dexaamethasone,Furosemide, Hydrochlorothiazide,Hydrocortisone,Prednisolone	Increased risk of hypokalaemia with high doses of salbutamol
		Digoxin	Possibly reduced plasma concentration of digoxin
		Methyldopa	Acute hypotension reported with salbutamol infusion
40	Spironolactone	Acetylsalicylic acid,Contraceptives,Dexamethasone, Hydrocortisone,Prednisolone	Antagonism of diuretic effect
		Alcohol,Amlodipine,Atenolol,Chlorpromazine,Diazepam,GTN, Isosorbite dinitrate,Levodopa,Methyldopa,Nifedipine, Nitrous oxide, Propanolol,Sodium nitroprusside,Thiopental Timolol, Verapamil	Enhanced hypotensive effect
		Amitriptyline,Clomipramine	Increased risk of postural hypotension
		Carbamazepine	Increased risk of hyponatraemia
		Ciclosporin,Potassium salts	Increased risk of hyperkalaemia
		Cisplatin	Increased risk of nephrotoxicity and ototoxicity
		Digoxin	Plasma concentration of digoxin increased
		Enalapril	Enhanced hypotensive effect;increased risk of severe hyperkalaemia (monitor plasma potassium concentration with low-dose spironolactone in heart failure)
		Ibuprofen	Risk of nephrotoxicity of ibuprofen increased;antagonism of diuretic effect;possibly increased risk of hyperkalaemia
		Lithium	Reduced lithium excretion (increased plasma conc; and risk of toxicity)
41	Sulfamethoxa- zole + Trimethoprim	Azathioprine,Marcaptopurine	Increased risk of haematological toxicity
		Ciclosporin	Increased risk of nephrotoxicity;plasma ciclosporin concentration possibly reduced by intravenous trimethoprim
		Dapsone	Plasma concentration of both dapsone and trimethoprim may increase with concomitant use

No	Drug 1	Drug 2	Interactions
	Sulfamethoxazole + Trimethoprim	Digoxin	Plasma concentration of digoxin possibly increased
		Lamivudine	Plasma concentration of lamivudine increased
		Methotrexate	Antifolate effect of methotrexate increased(avoid concomitant use);risk of methotrexate toxicity increased
		Phenytoin	Antifolate effect and plasma phenytoin concentration increased
		Procainamide	Increased plasma procainamide concentration
		Pyrimethamine,Sulfadoxine+pyrimethamine	Increased antifolate effect
		Thiopental	Enhanced effect of thiopental
		Warfarin	Enhanced anticoagulant effect
42	Tamoxifen	Warfarin	Enhanced anticoagulant effect
43	Tenofovir	Lopinavir	Plasma concentration of tenofovir increased
44	Valproic acid	Acetylsalicylic acid	Enhancement of effect of valproic acid
		Amitriptyline,Chlorpromazine,Clomipramine,Fluphenazine, Haloperidol	Antagonism of anticonvulsant effect (convulsive threshold lowered)
		Carbamazepine,Phenobarbital	May be enhance toxicity without corresponding ,increase in antiepileptic effect;plasma concentration of valproic acid reduced; plasma concentration of active metabolite of drug-2 increased
		Chloroquine	Possibly increased risk of convulsions
		Erythromycin	Metabolism of valproic acid possibly inhibited (increased plasma conc;)
		Ethosuximide	May be enhanced toxicity without corresponding increase in antiepileptic effect;plasma concentration of ethosuximide possibly increased
		Mefloquine	Antagonism of anticonvulsant effect
		Phenytoin	May be enhanced toxicity without corresponding ,increase in antiepileptic effect
		Warfarin	Anticoagulant effect possibly enhanced
		Zidovudine	Plasma concentration of zidovudine possibly increased (risk of toxicity)
45	Zinc sulfate	Calcium salts	Reduced absorption of zinc sulfate
		Ciprofloxacin,Levofloxacin,Ofloxacin	Reduced absorption of drug-2
		Ferrous salts	Absorption of zinc and oral ferrous salts reduced

Drug-Food Interactions

Drug	Food/ Nutrient	Interaction	Recommendations/ Precautions
Alendronate	Food or beverages (other than water)	If you take alendronate with food or with any drink other than water, your body will not absorb all of the alendronate and the drug will not work as well.	Take alendronate at least thirty minutes before eating /drinking the first food, beverage or medication of the day. Take with plain water only. Don't lie down for at least 30 minutes after taking alendronate , so that the medicine has a chance to go to your stomach and is less likely to hurt your esophagus(swallowing tube)
Allopurinol	1)Avoid low protein diet 2)Lack of fluids is not good.	1)Eating a low protein diet while on this medication will result in higher blood levels of this medication. 2)You should drink plenty of fluids while taking this medication.	1) Don't drastically reduce dietary protein intake while on allopurinol therapy. 2) It is advised to drink greater than 10 to 12 glasses of fluid per day.
Antacids	Avoid high protein meals	High protein meals may lead to a decrease in the neutralizing capacity of the antacid	Avoid high protein meals while taking these agents. Maintain normal diet.
Calcium Channel blockers	Avoid grapefruit Juice and ginger	By drinking grapefruit juice,may have higher than desired blood levels. Ginger increase calcium uptake by heart muscle,may alter Ca ²⁺ channel blocker effect.	Avoid grapefruit juice during therapy with a calcium channel blocker. These higher levels may actually be harmful and cause adverse effects.Avoid ginger containing preparation(i.e ginger wine..)
Carbamazepine	Avoid grapefruit juice	By drinking grapefruit juice, may have higher than desired blood levels of the medications which you are taking. These higher levels may actually be harmful and cause adverse effects.	Avoid grapefruit juice during therapy with this agent, unless otherwise directed by your doctor.
Cephalosporins	Avoid Alcoholic beverages	When ingesting alcohol, can develop a very severe reaction called a “ disulfiram reaction”.This adverse effect is characterized by flushing , vomiting, very fast breathing and very fast heart rate.	Avoid: all beverages and over the counter products containing alcohol (i.e cough and cold products containing alcohol)
Disulfiram	Avoid alcoholic beverages	When ingesting alcohol, can develop a very severe reaction called a “ disulfiram reaction”.	Avoid: all beverages and over the counter products containing alcohol (i.e cough and cold products containing alcohol)
Doxycycline	Avoid dairy products, food & drugs high in Ca ²⁺ , Mg ²⁺ or iron	Taking this medication with dairy products and food and drugs high in calcium, magnesium or iron may result in lower than desired doxycycline blood levels and therefore the drug may not work as well as it can.	Take doxycycline at least 2 hours before or after eating / drinking dairy products, antacids or iron containing preparations.
Efavirenz	Avoid high fat meals	If you take around eating a high fat meal, may develop higher than desired blood levels &adverse effects.	Efavirenz may be taken with meals containing normal amount of fat content, but high-fat meals should be avoided
Iron	1)Consume foods high in vitamin C 2)Don't take dairy products	1) You may enhance the amount of iron your body absorbs by eating/ drinking foods/ drinks high in vitamin C 2) When taken with food, the amount of iron your body absorbs may be reduced.	1) Good sources of vitamin C include: orange juice, broccoli, peppers,tomatoes,strawberries, potatoes 2) Iron- containing products should not be administered together with dairy products.

Drug-Food Interactions

Drug	Food/ Nutrient	Interaction	Recommendations/ Precautions
Fluoro-quinolones	Avoid Ca ²⁺ -rich foods,mineral supplements and caffeine	You may decrease the amount of drug your body absorbs if taken together with calcium and other minerals, which bind to form insoluble complexes. Avoid coffee and colas.	Take medication on an empty stomach or at least one to two hours before or after a meal.
HMG-COA reductase inhibitors	Avoid grapefruit juice	By drinking grapefruit juice with this medication you may have higher than desired blood levels of the medications which you are taking. These higher levels may actually be harmful and cause serious adverse effects.	Avoid grapefruit juice during therapy with this agent, unless otherwise directed by your doctor. Orange juice may be substituted.
Isoniazid	1)Avoid tyramine containing foods 2) Avoid alcoholic beverages	1) If you take with any tyramine containing food, may experience an adverse reaction resulting in flushing, chills, increase in BP, increased heart rate, abnormal heartbeats, restlessness and insomnia. 2) When ingesting alcohol, can develop a very severe reaction called a “disulfiram reaction”.	1) Avoid tyramine containing foods such as aged cheeses, aged meats, smoked fish, yeast, red wine(alcoholic & non-alcoholic), figs, avocados, bananas, caffeine, chocolate, ginseng. 2) Avoid : all beverages and over the counter products containing alcohol.
Itraconazole	1)Dosage forms <u>Capsules:</u> Take with food <u>Oral solution:</u> Take on an empty stomach 2) Grape fruit juice	1) It is important to note that the capsule form should be taken with food, whereas the solution must be taken on an empty stomach. 2) By drinking grapefruit juice with this medication you may have higher than desired blood levels of the medications which you are taking.These higher levels may actually be harmful and cause adverse effects.	1) <u>Capsules</u> - It is recommended that itraconazole capsules be taken with meals to assure optimal blood levels are achieved. <u>Oral solution</u> - However, itraconazole oral solution should be administered on an empty stomach in order to absorb the drug for its desired effect. 2) Avoid grapefruit juice during therapy with this agent.
Ketoconazole	Avoid alcoholic beverages	When ingesting alcohol with this medication you develop a very severe reaction called a “disulfiram reaction”.	Avoid: all beverages and over the counter products containing alcohol.
Levodopa	1)Avoid protein-rich diets 2)Pyridoxine (vit B6)	1)High protein meals may lead to a decreased response (decreased drug effect) to levodopa 2)If one ingests more than or equal to 5mg/ day of vit B6 while taking levodopa, the vitamin may actually reverse levodopa’s drug effects	1) Limit foods containing vitamin B6: avocado, bacon, beans, beef, liver, dry skin milk, pork, peas, sweet potato,tuna and certain health foods
Metronidazole	Avoid alcohol	When ingesting alcohol, can develop a very severe reaction called a “disulfiram reaction”.	Avoid: all beverages and over the counter products containing alcohol.
Oral diabetes agents	Avoid alcohol	When ingesting alcohol, can develop a very severe reaction called a “disulfiram reaction”.	Avoid: all beverages and over the counter products containing alcohol.
Phenytoin suspension	Enteral formulas (i.eEnsure, Enrich, Similac)	If phenytoin suspension is taken within hours of either enteral feeds or infant formulas, it may not become absorbed and therefore may not reach desired blood levels for the drug to be able to work.	If the patient can receive intermittent feedings, it is crucial that phenytoin doses be administered at least two hours following a feeding and that the next feeding be delayed until at least two hours after the phenytoin dose is administered.

Drug-Food Interactions

Drug	Food/ Nutrient	Interaction	Recommendations/ Precautions
Potassium depleting diuretics- Furosemide Hydrochlor -thiazide	Consume foods high in potassium	Due to the fact that these medications may allow your body to lose more potassium than normal it may be wise to add some potassium-rich foods to your diet .	Maintain consistent consumption and have K ⁺ levels checked regularly. Good sources of potassium: oranges, orange juice, tomatoes, bananas, potatoes...
Tetra-cycline	Avoid dairy products and food and drugs high in calcium, magnesium , or iron	Taking this medication with dairy products and food and drugs high in calcium, magnesium or iron may result in lower than desired doxycycline blood levels and therefore the drug may not work as well as it can.	Take doxycycline at least 2 hours before or after eating/ drinking dairy products, antacids or iron contain-ing preparations.
Thyroid preparations	1)Avoid using soybean/ enteral formulas 2)Limit intake of goitrogenic foods	1)Taking these two agents together can lead to a decrease in effectiveness of levothyroxine	1)Space the administration of soybean formulas and thyroid medications 2) Maintain normal diet.Limit intake of asparagus, cabbage, peas,broccoli, spinach, soybeans,soybean flour, walnuts and dietary fiber which may decrease absorption of levothyroxine.
High blood pressure medication	1)Licorice 2) Garlic	1)Natural licorice (not candy licorice) can raise blood pressure 2) Garlic decrease BP, may potentiate BP medications.	Avoid: Licorice containg products,(i.e licorice containing traditional medicines..) and garlic containing preparations.
Warfarin	1)Vitamin K rich foods 2) Ginseng 3) Grapeseed extract & Garlic 4) Gingko biloba	1)If you eat these foods, may alter the blood thinning response to warfarin. 2)Ginseng may interact by decreasing the efficacy of warfarin or reversing the drug' effects. 3)Grapeseeds & garlic reduce platelet aggregation and increase fibrinolytic activity and therefore monitor bleeding times 4) Gingko acts as blood thinner and therefore,with other blood thinning agents could increase the risk for excessive bleeding.	1)Maintain consistent diet. Limit foods high in vitamin K (i.e Dark green leafy vegetables, spinach, cabbage, green tea, soybean and vegetable oil, beef liver, raw cauliflower). 2) Avoid coadministration with ginseng containing multi-vitamins, garlic and gingko.
Anti-arrhythmic (Beta blockers)	Caffeine	Caffeine increases the risk of irregular heartbeat.	Avoid: caffeine and caffeine containing products.
Cimetidine, Sucralfate	Caffeine,high protein foods	Caffeine and high protein foods increase stomach acidity.	Avoid: high protein foods, caffeine and caffeine contain -ing products.
Benzo-diazepines	Alcohol and caffeine	have a synergistic depressant effect on the CNS. Caffeine increases anxiety and reduce drug's effectiveness.	Never take with alcohol. Avoid: caffeine and caffeine containing products.
Antiinflam-matory (i.e ibuprofen..)	Alcohol	Increases risk for liver damage or stomach bleeding	Avoid: alcohol and alcohol containing preparations

Sulfur Containing Drugs and Sulfur Allergy

No	Drug Groups	Cross – Reactivity
1	Sulfonamides antibiotics (sulfonylarylamines) Sulfamethoxazole Sulfadiazine Sulfadoxine Sulfacetamide Sulfasalazine(contains sulfapyridine)	Allergic cross – reactivity within this group is possible
2	Sulfonamide antiretrovirals (sulfonylarylamines) Amprenavir Fosamprenavir	Allergic cross-reactivity with sulfonamide antibiotics is likely on structural grounds but has not been established
3	Non- antibiotic sulfonamide drugs (non- sulfonylarylamines) Frusemide Hydrochlorothiazide Gliclazide Celecoxib	Current evidence suggests that allergy to sulfonamide antibiotics is not associated with increased risk of allergy to these drugs
4	Sulfhydryl drugs Penicillin Piroxicam Captopril	No relationship to sulfonamide allergy
5	Sulfate drugs Morphine sulfate Heparin sulfate Hydroxychloroquine sulfate Glucosamine sulfate	No relationship to sulfonamide allergy

DRUGS TO AVOID IN G6PD DEFICIENCY

DEFINITE RISK OF HAEMOLYSIS		POSSIBLE RISK OF HAEMOLYSIS				
Pharmacological Class	Drugs	Pharmacological Class	Drugs			
Anthelmintics	<ul style="list-style-type: none">• β-Naphthol• Niridazole• Stibophen	Analgesics	<ul style="list-style-type: none">• Acetylsalicylic acid (Aspirin)• Acetanilide• Paracetamol (Acetaminophen)• Aminophenazone (Aminopyrine)• Dipyrone(Metamizole)• Phenacetin• Phenazone(Antipyrine)• Phenylbutazone• Tiaprofenic acid			
Antibiotics	<ul style="list-style-type: none">• Nitrofurans<ul style="list-style-type: none">- Nitrofurantoin- Nitrofurazone• Quinolones<ul style="list-style-type: none">- Ciprofloxacin- Moxifloxacin- Nalidixic acid- Norfloxacin- Ofloxacin• Chloramphenicol• Sulfonamides<ul style="list-style-type: none">- Co-trimoxazole (Sulfamethoxazole + Trimethoprim)- Sulfacetamide- Sulfadiazine- Sulfadimidine- Sulfamethoxazole- Sulfanilamide- Sulfapyridine- Sulfasalazine (Salazosulfapyridine)- Sulfisoxazole (Sulfafurazole)		Antibiotics	<ul style="list-style-type: none">• Furazolidone• Streptomycin• Sulfonamides<ul style="list-style-type: none">- Sulfacytine- Sulfaguanidine- SulfamerazineSulfamethoxypyridazole		
			Anticonvulsants	<ul style="list-style-type: none">• Phenytoin		
			Antidiabetics	<ul style="list-style-type: none">• Glibenclamide		
			Antidotes	<ul style="list-style-type: none">• Dimercaprol (BAL)		
			Antihistamines	<ul style="list-style-type: none">• Antazoline (Antistine)• Diphenhydramine• Tripeleennamine		
			Antimalarials	<ul style="list-style-type: none">• Mepacrine• Pamaquine• Pentaquine• Primaquine	Antihypertensives	<ul style="list-style-type: none">•Hydralazine•Methyldopa
					Antimalarials	<ul style="list-style-type: none">•Chloroquine&derivatives• Pyrimethamine• Quinidine& Quinine
Anti-methemoglobinaemic	<ul style="list-style-type: none">• Methylene blue					

DEFINITE RISK OF HAEMOLYSIS		POSSIBLE RISK OF HAEMOLYSIS	
Pharmacological Class	Drugs	Pharmacological Class	Drugs
Antimycobacterials	<ul style="list-style-type: none"> • Dapsone • Para-aminosalicylic A • Sulfones <ul style="list-style-type: none"> - Aldesulfone sodium (Sulfoxone) - Glucosulfone - Thiazosulfone 		
		Antimycobacterials	• Isoniazid
		Antiparkinsonism Agents	• Trihexyphenidyl (Benzhexol)
		Cardiovascular Drugs	• Dopamine (L-dopa)
Antineoplastic Adjuncts	<ul style="list-style-type: none"> • Doxorubicin • Rasburicase 		• Procainamide
Genitourinary Analgesics	• Phenazopyridine (Pyridium)		• Quinidine
		Diagnostic Agent for Cancer Detection	• Toluidine blue
Others	<ul style="list-style-type: none"> • Acetylphenylhydrazine • Phenylhydrazine 	Gout Preparations	• Colchicine
			• Probenecid
		Hormonal Contraceptives Nitrates	• Mestranol
			• Isobutyl nitrite
		Vitamin K Substance	• Menadiol Na sulfate
			• Menadione
		Vitamins	• Menadione Na bisulfite
			• Phytomenadione
		Others	• Ascorbic acid (Vit C) (rare)
			• Berberine (in Coptis chinensis)
			• Fava beans
			• Naphthalene (in mothballs)
			• Para-aminobenzoic acid

Drugs that induced fetal damage during Pregnancy

No	Contraindicated drugs in Pregnancy	Results
1	Thalidomide	Phocomelia, heart defects, seal-like limbs
2	Penicillamine	Loose skin, fetal abnormalities reported rarely, avoid if possible.
3	Warfarin	Saddle nose, multiple birth defects. Babies of mothers who taking warfarin at the time of delivery need to be offered immediate prophylaxis with IM K ₁ injection.
4	Phenytoin	Cleft palate
5	Valproate	Spinal bifida, nervous system defects, neural tube defects
6	Carbamazepine	Retardation of foetal head girdle
7	Methotrexate	Hydrocephalus
8	Aminoglycosides	Deafness
9	Tetracycline	Staining of teeth and bone
10	Ethanol	Foetal alcohol syndrome
11	ACE Inhibitors	Birth defects, growth retardation, fetal death Oligohydramnios, renal failure
12	Statins (i.e atorvastatin, rosuvastatin....etc)	Lead to depletion of cholesterol in the body which is need by the foetus for development.
13	Vitamin A and its derivatives	Miscarriage and birth defects
14	Testosterone	Birth defects
15	Danazol	Malformations in sex organs of the foetus
16	Finasteride	Though finasteride is normally not prescribed to women, pregnant women should not handle broken or crushed tablets since it can get absorbed through the skin and affect the sex organ development of the male foetus.
17	Oral Contraceptives	Birth defects
18	Isoniazid	Neuropathy and seizures in the foetus and damages liver in the mother.
19	Lithium	Affects fetal thyroid, heart and other abnormalities
20	Chloramphenicol	Gray baby syndrome
21	Morphine	Immediately prior to labour or in labour can lead fetal asphyxia.
22	Sulfonamides	Increase bilirubin levels leading to kernicterus.
23	NSAIDS (aspirin, diclofenac, ibuprofen.....etc)	During 3 rd trimester, effects on fetal cardiovascular system. (Closure of ductus arteriosus)
24	Isotretinoin	an abnormally shaped skull, abnormal looking ears, including small or absent ear canals, eye abnormalities, facial disfigurements, cleft palate, severe brain damage, possibly affecting the ability to move, talk, walk, breathe, speak, or think , severe intellectual disability, heart issue

Drugs used during lactation

WHO Model List of Essential drugs provides the following classification of drugs to be prescribed during lactation.

(1) Avoid: breast feeding is contraindicated.

- Anticancer drugs (antimetabolites)
- Radioactive substances
- Lithium avoids breast feeding unless levels can not be measured.

(2) Avoid if possible: may inhibit lactation

- Estrogens, estrogen containing contraceptives
- Thiazides diuretics
- Ergometrine

(3) Avoid if possible: monitor infant for side effects

- Jaundice and haemolysis (avoid in premature or less than one month old infant and
- G-6PD deficient infant) e.g sulfonamides, nalidixic acid
- Drowsiness, restlessness or weakness e.g psychiatric drugs, anticonvulsant
- Use alternative drugs if possible

e.g chloramphenicol → risk of bone marrow depression

Tetracycline → risk of staining the infant's teeth

Aspirin → high dose may produce significant concentration in breast milk

(4) Compatible with breast feeding: monitor infant for side effects

- NSAIDs: Short courses of paracetamol, aspirin, ibuprofen → bleeding
- Antituberculosis: Isoniazid → Jaundice, skin rashes, pyridoxime deficiency developing in infants
- Antihypertensives: atenolol, propranolol → neonatal bradycardia, cyanosis
- Antiepileptics: carbamazepine, diazepam → poor suckling
- Antispasmodic: atropine → dryness of secretion, temperature elevation

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Abbreviations

Abbreviation	Meaning
Q	each, every (from Latin <i>quaque</i>)
q2wk	once every 2 weeks
q6h q6°	once every 6 hours
q.a.d.	every other day (from Latin <i>quaque altera die</i>)
QALY	quality-adjusted life year
q.AM	every day before noon (from Latin <i>quaque die ante meridiem</i>)
q.d.	each day (from Latin <i>quaque die</i>) (deprecated; use "daily" instead. See the do-not-use list)
q.d.s.	four times each day (from Latin <i>quater die sumendus</i>)
q.h.	each hour (from Latin <i>quaque hora</i>)
q.h.s.	every bedtime (from Latin <i>quaque hora somni</i>)
q.i.d.	four times each day (from Latin <i>quater in die</i>) (not deprecated, but consider using "four times a day" instead. See the do-not-use list)
QIDS	Quick Inventory of Depressive Symptoms
q.l.	as much as you like (from Latin <i>quantum libet</i>)
q.m.t.	every month
q.n.	every night
QNS q.n.s.	quantity not sufficient
q.o.d.	every other day (from Latin <i>quaque altera die</i>) (deprecated; use "every other day" instead. See the do-not-use list)
QOF	Quality and Outcomes Framework (system for payment of GPs in the UK National Health Service)
q.o.h.	every other hour
q.s.	as much as suffices (from Latin <i>quantum satis</i> or <i>quantum sufficit</i>)
Qt	quart
q.v.	which see (from Latin <i>quod vide</i>); as much as you please (from Latin <i>quantum vis</i>)
q.wk. also qw	weekly (once a week)

