Medication Administration Guidelines:

This section will look at how to administer specific formulations of medicines in more detail. If there is any doubt on how to give medication, refer to the PIL (patient information leaflet) provided with the medicine or ask a more experienced staff member or the pharmacist.

17.1. Tablets and Capsules

**Dispersible/Effervescent Tablets**

* These are designed to dissolve in water.
* They should be placed in a glass of fresh water and allowed to dissolve fully- check the amount of water to be used in the Patient Information Leaflet (PIL) or ask the client for preferences.
* Administer the dissolved tablet.



**Sublingual and Buccal Tablets**

* Sublingual tablets need to be placed under the tongue and allowed to dissolve fully

* Buccal tablets need to be placed between the upper gum and the lip

* Sublingual and buccal tablets should not be swallowed with water

**NB/ Tablets should not be chewed or crushed unless there is written authorisation from the GP or pharmacist because the product license for a tablet becomes invalid; this means that the person who has crushed the tablet becomes responsible if any harm comes to the client. Liquid formulations of a medicine should be considered if a client has difficulty swallowing any tablets. Remember, enteric coated tablets, slow-release tablets, cytotoxic drugs (e.g. methotrexate), hormone preparations and nitrates must never be crushed.**

7.2. Liquid Medication

* Follow the instructions on the bottle with regards to whether or not the liquid should be shaken
* Always use a proper measuring spoon, measure or oral syringe when measuring liquids. Normal teaspoons vary in size and may not give an accurate dose.
* When pouring liquids from a bottle, do so AWAY from the label to prevent the dosage instructions from being worn away. Wipe away any excess from the bottle to stop it from becoming sticky and dirty.
* When using a measuring pot or syringe, place on a flat surface (measure) or keep as straight as possible (syringe), and read the volume at eye level: the liquid will form a ‘meniscus’ which is a curved line in the measure. The correct volume is obtained by adding the liquid until the bottom of the meniscus is at the correct unit level on the measure:

* After giving liquids from a medicine measure, rinse out with water and give to the client (especially important with viscous i.e. thick liquids) to ensure the full dose is given.
* Never mix liquids; always give one at a time to prevent them reacting with each other

17.3. Topical Formulations

These include creams, ointments and lotions. A cream is generally used when the skin is moist or weeping and an ointment is preferred when the skin is dry as it is greasier. Topical formulations are applied directly to the affected area:

* Disposable gloves must be worn when applying any topical preparation
* Ensure the affected area is clean and dry before applying anything
* Apply as gently as possible because the area may be sore or tender; if using a lotion, shake the bottle first
* Use all products sparingly unless otherwise directed and NEVER return any unused product to the original container as this can contaminate the rest of the product with bacteria!
* If more than one topical product is to be applied to the same area, leave approximately 30 minutes between applications to ensure they can all work effectively
* If products are applied to the face, be careful to avoid the delicate eye area
* Remove and discard disposable gloves and wash your hands

Tip: If a tube of cream has not been opened before, it will be sealed when you open the tube. To break the seal, invert the cap and push into the end of the tube to break the seal.

**Topical Corticosteroid creams and Ointments:**

* Examples of these products are Hydrocortisone, Beclomethasone and Clobetasone
* They must be applied THINLY as they can thin the skin (this is especially important in more elderly clients who may already have thinning of the skin)
* A fingertip unit (FTU) is normally used to measure the amount of steroid cream to be used in any particular area; a fingertip unit is illustrated below:

|  |  |  |
| --- | --- | --- |
| Area of skin to be treated (adults) | Size is roughly | FTUs each dose (adults) |
| A hand and fingers (front and back) | About 2 adult hands | 1 FTU |
| Front of chest and abdomen | About 14 adult hands | 7 FTUs |
| Back and buttocks | About 14 adult hands | 7 FTUs |
| Face and neck | About 5 adult hands | 2.5 FTUs |
| An entire arm and hand | About 8 adult hands | 4 FTUs |
| An entire leg and foot | About 16 adult hands | 8 FTUs |

17.4. Eye Drops and Ointment

* ALWAYS WASH AND DRY YOUR HANDS THOROUGHLY FIRST
* Ask the client to tilt their head backwards slightly
* Remove the lid from the eye dropper bottle and ask the client to look upwards
* Pull the lower eyelid gently down and place ONE drop in the space between the eyelid and the eye itself
* It is important to avoid touching the eye with the end of the dropper as this can contaminate the contents and lead to infection
* After the drop has been instilled, release the eyelid and take care not to rub the eye or tightly shut it. Keep closed for a minute or so.
* If more than one drop is to be administered, wait around 5 minutes between drops
* Replace the lid on the dropper bottle immediately and re-wash your hands

**Eye Ointments**

* Follow all of the above instructions except that instead of administering a drop, a small length of ointment is placed in the space between the eye and the eyelid
* The length of ointment should be between ¼ to ½ inch long approximately
* Eye ointments can cause blurring of the vision immediately after being applied; very gently rotate the eye and keep closed for 1-2 minutes and this should subside.
* If there is any excess ointment on the tip of the tube, wipe off with a clean tissue and then replace the cap immediately

Some clients may wish to administer eye drops or ointment themselves; you should be on hand to assist if they experience any difficulty. There are also compliance aids that can help a person to self-administer eye drops more easily; ask your pharmacist.

Discard any unused eye drops or ointment 28 days after opening- remember to record the date of opening on the bottle/tube to help with this!

Sometimes, the GP will prescribe a bottle for each eye- in this case; remember to label which one is for the left and which is for the right eye

17.5. Ear Drops

* WASH AND DRY HANDS THOROUGHLY BEFORE ADMINISTERING
* Ask the client to lie down on their side or tilt their head to the side
* Pull the ear gently upwards and backwards to help the drops enter the ear canal correctly
* Administer the correct number of drops, giving the bottle a gentle squeeze if needed; do not touch the tip of the bottle/dropper to the ear as this can cause contamination with bacteria
* Wipe away any excess liquid from the bottle and replace the cap on the bottle
* Lightly press the ear flap and keep the head tilted in the same position for several minutes to prevent the medicine leaking out of the ear straightaway
* After a few minutes, wipe any excess drops away from the ear with a clean tissue or clean cotton wool
* Repeat the procedure for the other ear if required.
* Discard any unused ear drops 28 days after opening

17.6. Inhalers

There are three main types of inhaler:

* 1. Reliever - these are normally blue in colour and include salbutamol and terbutaline. They are used if a person is short of breath and should alleviate any wheezing or difficulty breathing within a few minutes.
* 2. Preventer - these can be a variety of colours including brown and orange. They contain steroids, which reduce inflammation in the airways, and they need to be used on a regular basis to prevent shortness of breath. It is important to rinse out the mouth after using a steroid inhaler as they can cause oral thrush
* 3. Combination - these normally contain a steroid and a longer acting preventer.

Inhalers also come in a variety of shapes and sizes; the two most common formulations of inhaler are a Metered Dose Inhaler (MDI) and a Dry Powder Inhaler (DPI).

**MDI’s** - these contain tiny particles of the drug in a liquid suspension that act directly on the lungs when inhaled. They should be used as follows:

* First shake the inhaler to distribute the drug evenly in the suspension
* Remove the cap from the mouthpiece and ensure the client is either sitting or standing in an upright position before use
* Ask the client to breathe out gently and then place the inhaler into the mouth so that there is a seal formed all the way around the mouthpiece
* As they breath in slowly, press down on the inhaler cannister simultaneously (you should hear a hissing sound) - the client should continue to breathe in slowly and deeply as the drug is released and then hold their breath for 10 seconds, or as long as they are comfortable, before breathing normally again.
* This is one puff of an inhaler; if more than one puff is to be taken, wait at least a minute before repeating the whole process

MDI’s should be rinsed out once a week to ensure that no dirt is accidently inhaled. If a person is using both a preventer and a reliever, the reliever should be used first to make sure the airways are fully opened before the preventer is used.

If a client has difficulty in using an MDI due to co-ordination problems, a spacer can be used. A spacer is a device that holds the suspended drug inside a chamber to allow maximum inhalation. See the pharmacist or GP for any clients experiencing difficulty. Breath-actuated inhalers are also available; these inhalers automatically release the drug when a person breathes in and can also help with co-ordination problems.

***DPI’s****- these contain the drug in a very fine powder form. They normally need to be ‘loaded’ first by either placing a capsule of the medicine in a device or can be pre-filled and you must activate the inhaler by a mechanism such as a twisting action (read the PIL carefully before administering- this will give you step by step instructions for each different device).*

* Once loaded or actuated, the mouthpiece should be placed into the mouth and a deep breath taken. If the breath is not forceful enough, this can lead to an insufficient delivery of the medicine into the lungs
* The client should hold their breath for 10 seconds or as long as they are comfortable
* Remember, the amount of powder in very tiny and the client may not feel that the inhaler has worked; these devices usually come with a counter device that counts down as each dose is taken for reassurance

17.7 Suppositories

This is a very delicate procedure and should be done with the maximum amount of privacy possible. It is likely that you will not have to carry out this procedure unless you have been specially trained. Explain to the client exactly what is happening throughout the entire procedure to put them at ease.

* Put on an apron and disposable gloves after washing your hands
* Place a sheet of disposable paper on the bed and ask the client to lie down on their left hand side with the knees drawn up to the abdomen
* Remove the suppository from its wrapper and apply a small amount of lubricating jelly to the pointed end
* Gently separate the buttocks and insert the suppository, pointed end first into the anus
* Allow the client to remain in a lying position for a few minutes then discard of any waste hygienically
* Wash your hands again

17.8. Pessaries

Again, the administration of a pessary requires sensitivity and privacy, and it is something to be done only by specially trained members of staff. The procedure is similar to that for administration of suppositories except that:

* The client should be asked to lie on her back with the knees drawn upwards and the legs apart
* The pessary should be inserted gently into the vagina and the client asked to remain lying down for a few minutes
* A sanitary towel should be provided afterwards as there can be some leaking of the pessary as it melts

17.9. Injections

Specially trained members of staff may only carry out administration of injections. As previously mentioned, there are three main types of injection:

1. Intramuscular (IM) injections- injected into the muscle
2. Intravenous (IV) injections- injected directly into the vein
3. Subcutaneous (SC) injections- injected under the skin

When preparing to give any of these injections, the following general protocol should be adopted:

* Wash hands thoroughly before handling any medicine
* Check the MAR chart and/or prescription to ensure that the correct medicine is to be administered at the correct dose
* Wear single-use disposable gloves before administration
* Clean the injection site with 60-70% alcohol and also the top of multi-dose vials if they are being used
* Use a fresh needle/ syringe every time to prevent cross contamination or infection
* Administer the correct dose via the specified route of injection; some injections are supplied in powder form and may need to be reconstituted with a suitable fluid before injections are given. Take care not to touch the needle to any contaminated surfaces
* Discard any used sharps and glass ampoules immediately after using into a suitable sharps container- sharps containers must be replaced when approximately ¾ full
* Remove gloves and wash hands thoroughly again

NB. With some injections, it is important to vary the site of the injection e.g. insulin for diabetics. If this is not done, it can cause unsightly lumps and may affect the way that medicines are absorbed.

Care staff are in an ideal position to be able to monitor a clients condition. It is especially important to monitor any changes in condition after a new medicine has been started or there has been a dose change in an existing medicine. This is because all medication has side effects associated with them.

18.1. Side Effects

These are effects of a medication that are different from the intended effect of a medicine. Although some side effects can be beneficial, we will be looking at adverse effects i.e. undesirable effects of medicines here. The occurrence of side effects differs between patients and vary in severity. Some side effects may present themselves after a new medicine has started but then can wear off as a patient gets used to the medicine e.g. Lisinopril (an ACE inhibitor used to treat high blood pressure) causes dry cough in up to a third of all patients but can wear off after a few months. You are not expected to know all side effects of all medicines! The most commonly occurring adverse effects include:

* Stomach problems including nausea and vomiting- this can affect appetite and lead to dehydration
* Dizziness or drowsiness- this can increase the chances of a fall leading to broken bones
* Diarrhoea- this can also lead to dehydration, especially in the elderly
* Constipation- this can cause pain and bleeding on defecation

If someone is suffering from any of the above, or indeed any adverse affect that you think could be as a result of medication, the GP and/or pharmacist should be contacted for advice. It is also worth noting that it is not only oral medicines that can cause adverse side effects; an example is topical Ibuprofen gel that can cause stomach problems as a small amount of the drug can be absorbed into the blood. Also, topical formulations can cause redness and irritation of the skin and make any skin problems worse.

You may be asked to monitor the condition of a client in a formal manner to assess medication regimes. An example can be the assessment of pain relief medication to ensure that pain is adequately controlled.

It is important to note that some clients may have difficulty in expressing themselves; you may need to speak up on their behalf during any reviews of medication. Simply by observing and monitoring clients, you can make a huge difference in helping the clients to take medication safely and effectively.

As well as medicines interacting with each other, they can also interact with food and drink that can affect the way a medicine works. Any interactions are normally highlighted on the medicine label and will also be outlined in the PIL. Some common products that can affect medication include:

Alcohol - this can make the adverse side effects of some medicines worse e.g. it can increase sleepiness or tiredness in those medicines that already may cause drowsiness such as antihistamines or sleeping tablets. It can also cause some very unpleasant effects with some medicines e.g. Metronidazole which is an antibiotic; alcohol should be avoided with these medicines. In fact, alcohol in large quantities can affect all medication.

Cranberry Juice - this should be avoided in patients taking Warfarin to thin the blood as it can affect levels of the drug in the body. Nifedipine can also be affected by cranberry juice.

Grapefruit Juice/Fruit - this can affect the way the liver works to eliminate drugs from the body. Medicines that are affected include Simvastatin (and other ‘statins’ to a lesser degree), Nifedipine, Felodipine, Ciclosporin, Terfenadine and Warfarin.

Herbal/Vitamin Products - you may find that some clients take vitamin supplements or herbal products. It is a common misconception that these products are safe because they are naturally derived. They can affect other medication so it is always a good idea to inform the clients GP or the Pharmacist to check for interactions. It is also advisable to record any supplements taken in the clients care plan. An example of an interaction is Vitamin K supplement sometimes found in multivitamins with Warfarin. Other medicines likely to be affected by some herbal medicines incluce carbamazepine, lithium, phenytoin and theophylline.

**Oxygen:**

Some people with advanced heart and/or lung conditions may require oxygen therapy. A consultant or the GP initiates oxygen therapy and they will fill out a Home Oxygen Order Form (HOOF) to order oxygen for an individual. There are nominated oxygen suppliers who will then be responsible for the delivery, maintenance and disposal of oxygen tanks. They will normally determine the type of oxygen tank to be used depending on the prescription requirements and flow rate required for each individual.

20.1. Storage of Oxygen

Oxygen should be stored in a clean, dry room with plenty of ventilation and away from any heat sources such as radiators. They should be kept out of direct sunlight and away from any naked flame, as oxygen is highly flammable and explosive. Empty and full cylinders should be stored separately; it is important to make sure that a cylinder is closed even when empty, as there can still be leakage of remaining oxygen. Appropriate signage should be displayed wherever oxygen is stored.



20.2. When Administering Oxygen:

* Ensure that the client has no petroleum jelly (Vaseline®) around their lips or nose as this is a flammable product and can be very dangerous
* Do not use aerosols around an oxygen cylinder
* Do not use grease or oil around oxygen equipment as these are flammable
* Do not drape any materials around the oxygen tank/equipment

NB/ Insurers need to be informed when there is oxygen in the home. It is also essential to inform the emergency services of where oxygen is stored if they are ever called to the care home in an emergency.

**Older Clients**

Older clients may be taking a large number of medicines; this can sometimes be difficult to manage, as there are more potential side effects and drug interactions. What often happens is that due to the side effects of one medication, another is prescribed; an example of this is someone who takes Co-Codamol tablets and becomes constipated and is then prescribed Senna tablets for constipation. It is therefore important that medication is reviewed on a regular basis by the GP to keep regimes as simple as possible.

Older people respond differently to both illnesses and their treatment due to the natural ageing processes of the body. Some general changes are outlined below:

* Constipation - older people are often less mobile which can contribute towards constipation. The muscles in the stomach and intestines become weaker which can also lead to constipation. It is helpful to try and increase both fluids and exercise as a natural remedy for constipation before medication is given. Remember, once medication is given for constipation, a person can become reliant on medication in order to empty the bowels so it can actually worsen the condition
* Failing Memory - this can lead to medication being forgotten by older people so reinforcement may be needed. Memory loss can be severe when associated with long-term conditions such as Alzheimer’s disease and it will be better to administer medication for those clients suffering from this or any other condition affecting the memory.
* Reduction in liver and kidney function - this may mean that medicines need to be prescribed at a lower than normal dose as the liver and kidneys cannot excrete drugs from the body as effectively.
* Loss of joint control - conditions such as arthritis is often present in older people. They may find opening tablet bottles etc. difficult so compliance aids may be useful if they are self-medicating (see pharmacist)
* Reduction in immune system function - this meant that older people are more susceptible to infections such as colds and flu. It may also take them longer to recover from illnesses
* Loss in bladder control - this can be an embarrassing part of getting older; you should treat this topic with a degree of sensitivity and assure clients that there is help available in the form of incontinence products and/or medication where necessary
* Depression - the loss of loved ones and independence can cause older people to become withdrawn
* Increase in the risk of falls - this can be due to reduced mobility or can be due to side effects such as dizziness and drowsiness. It is important to offer extra support to those with mobility problems as even a small fall can have serious consequences for elderly people whose bones are more brittle
* Reduction in function of heart and circulation - this leads to prescribing of blood pressure medication and it is essential that these long term conditions are regularly reviewed

Another issue with older people is ensuring that they are eating and drinking well; you may have clients in the home that are unable to feed themselves and need considerable help to ensure they have adequate food and fluid intake. It is therefore important to ensure that all clients have a healthy balanced diet with plenty of nutrients and that they drink approximately eight glasses of fluid a day.

Where fluid intake is inadequate, dehydration can occur; this can be very dangerous in both elderly people and children and in severe cases, can be life-threatening! When there are problems with nutrition, an alternative to food may be considered; high-calorie drinks may be given, in conjunction with a specialist, to supplement or replace foods.

Who is looking forward to getting older now…?!