

UNIT 9

PHARMACY



UNIT SUMMARY

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SECTION 1: HISTORY OF PHARMACY

SECTION 2: PHARMACOLOGY

SECTION 3: ROUTES OF ADMINISTRATION

SECTION 4: ANTIBIOTICS

SECTION 5: LATIN ABBREVIATIONS IN PHARMACY

SECTION 6: MEASUREMENTS AND FORMULAS

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9.1 – History of Pharmacy

What is Pharmacy?

Pharmacy is the science of collecting, preparing and dispensing drugs. It is the clinical health science that combines medical science, chemistry and biology.

Pharmacy is the study of drug action and the effects that those drugs have on our body.

Dispensing: giving drugs or medicines following what a doctor has written or recommended (prescription).
(صَرْفٌ)

The History of Pharmacy

Pharmacy started existing a very long time ago as part of medicine. It started in ancient (old) Greece, Rome, Middle East, Egypt, India and China.

In history, the first time it was discovered that a person was treated using a drug, was in ancient (old) Greece by **Asclepius** and **Hygeia**. It is said that they used a plant to treat a wound (injury). They were considered the masters of medicine, health and hygiene.

Pharmacies nowadays use a symbol of a **bowl** and a **snake**; this symbol came from Greeks Asclepius and Hygeia.



In ancient Egypt, India and China, physicians (doctors) started treating sick people using natural plants and herbs. However, in ancient Egypt a small separation between pharmacy and medicine happened.

It was decided that some physicians would visit sick people and other physicians would prepare treatments and wait for sick people to visit them.

Herbs: a plant or a part of a plant that is used to make medicines.
(أعشاب)

In India and China, doctors used different types of natural plants and herbs to treat sick people. Some of those plants and herbs are still being used nowadays to make medicines.

Pharmacy in the Islamic Golden Age

During the Islamic Golden age (8th-14th century), the separation between pharmacy and medicine happened. Muslim scientists and physicians had a lot of knowledge in chemistry and botany. This helped them discover different ways of preparing medicines, they also wrote a lot of books, which were later used by scientists in Europe.

9.1 – History of Pharmacy

Botany: the part of biology that studies everything about plants, such as their structure, classification, properties, diseases and interaction with the environment. (علم النبات)

Al Razi was a Muslim doctor, scientist and philosopher. During the Islamic Golden Age, he was the first to write books based on **home treatments**. His knowledge helped in the development of pharmacy and the separation of it from medicine.

The first pharmacies that existed in the world, were established during the Islamic Golden Age in the city of **Baghdad**.

The knowledge of pharmacy started spreading around the world very quickly by translating the books that were written in **Arabic** during the Islamic Golden Age.

In the **16th** century, a law was created that didn't allow doctors to prepare medicines for their patients. Pharmacists were the only professionals allowed to prepare medicines.

Pharmacist: a healthcare professional specialised in preparing, using, storing and providing medicine.

Types of Pharmacists

There are different types of pharmacy where a pharmacist can work, some of these include:

- **Community pharmacist** – pharmacists who work in a pharmacy where you would go to buy medicines.
- **Clinical pharmacist** – pharmacists who work in hospitals with doctors and nurses. They decide and advice which treatment each patient needs to improve.
- **Home care pharmacist** – pharmacists who are responsible for preparing and sending medication to people who are home as they are very sick or old.
- **Research pharmacist** – pharmacists who develop new drugs.

The types of pharmacy include:

- Community pharmacy
- Hospital pharmacy
- Clinical pharmacy
- Compounding pharmacy
- Consulting pharmacy
- Ambulatory care pharmacy
- Regulatory pharmacy
- Home care pharmacy
- Research pharmacy
- Online pharmacy

9.1 – History of Pharmacy

Hospital pharmacists can also specialise in different areas, such as

- **Oncology** (cancer)
- **Geriatric** (old age)
- **Paediatric** (infants and children)
- **Psychiatry** (mental health disorders).



9.2 – Pharmacology

Pharmacology

Pharmacy is the science of collecting, preparing and dispensing drugs. The practice of pharmacy requires a very good knowledge of **drugs**.

Pharmacology is the science that studies everything related to drugs. What drugs are made of, how those work in the body, their effects and interactions.

You can understand the meaning of the word pharmacology using its prefix and suffix:

- **pharma** – drugs
- **logy** – study of

Pharmacology focuses on studying drugs. However, pharmacy focuses more on selling, distributing or handling drugs.

Pharmacology is divided into two different areas of study;

- Pharmacokinetics (*Phar-ma-co-ki-net-ics*)
- Pharmacodynamics (*Phar-ma-co-dy-nam-ics*)

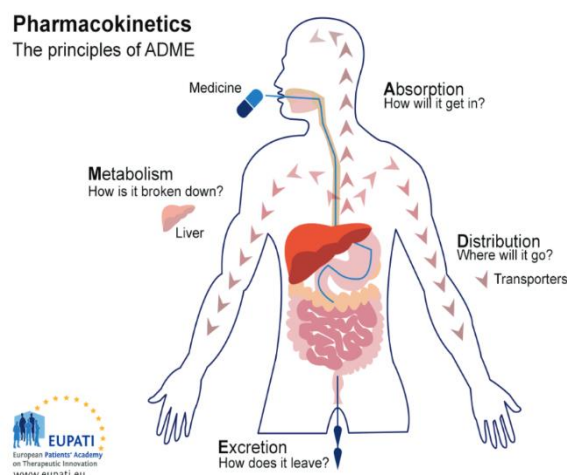
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Pharmacokinetics

Pharmacokinetics is the study of what the body does to the drug. It has four stages:

1. **Absorption** – How the medicine gets into the body
2. **Distribution** – Where the medicine goes in the body
3. **Metabolism** – What the body does to the medicine
4. **Excretion** – How the body removes the medicine

Pharmacokinetics The principles of ADME



9.2 – Pharmacology

Pharmacodynamics

Pharmacodynamics is the study of what the drug does to the body. The most important points to consider in pharmacodynamics are:

- What does the drug do to the body?
- What receptors are activated?
- What other effects does the drug have?

There are **factors** that influence pharmacodynamics, these are:

- Patient age
- Disease type
- Pregnancy
- Other drugs in the body

Receptors

When a drug enters the body, it starts interacting with receptors. **Receptors** are the parts of a cell that connect to a substance and cause a chemical reaction in that cell.

Cell receptors can be on the **outside** (*cell surface receptors*) or the **inside** (*intracellular receptors*) of the cell. When a drug connects to a receptor, there are three different levels of response:

- **Full agonist**
When a drug connects to a receptor and produces a **maximum** effect.
- **Partial agonist**
When a drug connects to a receptor and produces less than a maximum effect
- **Antagonist**
When a drug connects to a receptor, but there is no effect

Drug, Medicine and Excipient

The words “**drug**” and “**medicine**” can be used to describe the same thing, however, in pharmacy these two words have different meanings.

Drugs are chemical substances that are taken from plants, animals, microorganisms or minerals. Drugs are considered **ingredients**. They are not used directly as a treatment.

9.2 – Pharmacology

Medicines are used directly as a treatment, for example: medicines can treat a pain or cure an infection. Medicines are the result of a drug or drugs being mixed, sometimes with an excipient or without it.

Excipients (سَوَاغ) are used when making medicines. An excipient helps formulating, protecting or supporting a medicine.

Excipients make medicines safer for us to use. Most medicines have excipients added to them.



9.3 – Routes of Administration

Routes of Administration

Administration: to provide or give something.

You have probably taken many kinds of medication.

- Some drugs are taken by **mouth**, such as tablets. People with asthma use an **inhaler**.
- Some people have used **gels** or **creams** as pain relief or to stop an infection.
- Medication can also be given **intravenously** (*injected into a vein*) in a hospital or clinic.

The **route of administration** tells us how the drug has entered the body. Each drug has a specific method in which it should enter the body. The route used depends on **three** main factors:

- *What part of the body is being treated.*
- *How the drug works within the body.*
- *The formula of the drug.*

Oral

This route is the most **commonly used**. It is where the patient takes medication through the mouth.

Drugs taken orally are normally **pills** (حبوب) or **capsules**. The pill or capsule is broken apart along the way to the intestines and then dissolved and transported into the bloodstream. Once it is in the bloodstream, it can act on many organs of the body including the brain.

(فَمَوِي)



Advantages

- The **easiest**, **safest** and most **cost-effective** route.
- Tablets and capsules are very stable drugs.
This means they provide a very **accurate** dose for the patient.
- There are “**slow-release**” forms available.
This means that the drug releases slowly over a period of time, like twelve or twenty-four hours. Patients will only need to take a tablet once or twice a day.

Disadvantages

- The **unpredictable** absorption of a drug – Any food present in the digestive system will affect absorption rates. As a result, the drug may not have the desired effect.
- **Slow absorption** – Drugs taken orally are absorbed into the body slower than other routes. It takes a while for the drug to start showing any effects. If an immediate effect was needed, it would be better to use a different route of administration.

9.3 – Routes of Administration

Sublingual and Buccal

(تحت اللسان و بشدق)

These are two methods of giving medication via the **mouth**. They are **not common** methods of administration, but they are used in **emergencies**, for example during a **heart attack**.

Sublingual Administration

The drug is placed under the tongue. It will dissolve and absorb into the blood through the tissue under the tongue.



Buccal Administration

The drug is placed between the gum and cheek. Here it will be dissolved and absorbed into the blood.



These areas of the mouth have a lot of small blood vessels. Absorption of the drug is very **fast** because it does not have to go through the digestive system.

Advantages:

- **Lower doses** can be given because the drug goes straight into the bloodstream.
- If a patient is unable to swallow tablets, this route is a good **alternative**.
- If oral tablets cause the patient to suffer from **side effects** such as nausea, using the sublingual route is an easier alternative.

Disadvantages:

- Patients may find it **uncomfortable** to hold a small tablet in their mouth for a long time.
- A patient can accidentally **swallow** the drug. This will take longer to have the desired effects. Another dose cannot be given as this can lead to an overdose.
- If the patient **eats** or **drinks** while the tablet is in their mouth, it can affect how the drug is absorbed and how well it works.

Topical

(موضعي)

The drug is administered in the form of a **cream** or **gel** applied directly to the area that needs treatment. This is used when the area needed to be treated is easy to reach. It includes areas such as the **skin**, **eyes**, **ears** and **nose**.



9.3 – Routes of Administration

Advantages:

- **Easy** to apply for any age.
- Good if treatment is only needed in the **specific** area.
- **Low risk** of side effects and affecting other drugs.

Disadvantages:

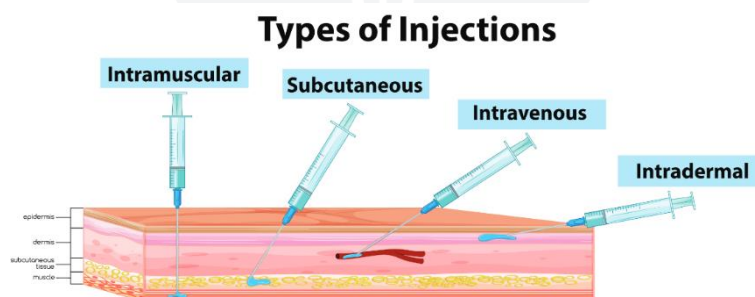
- Not well **absorbed** into deeper layers of the skin.
- Absorption can be **slow**.
- Creams and ointments applied to the skin can **stain clothes**.

Parenteral

(الوريدية/عن طريق الحقن)

The use of **injections** is the most common type of parenteral administration. There are four different types of injection, these are:

1. **Intradermal** – the substance is injected into layers of skin, for example, *allergy testing*.
2. **Intravenous** – injection in the bloodstream through a vein, for example, *saline 0.9% infusion*.
3. **Subcutaneous** – the drug is injected into the fat layer under the skin, for example, *insulin*.
4. **Intramuscular** – the drug is injected into the muscle, for example, *vaccines*.



Advantages:

- The drug action is **faster**, so it is suitable for use in an **emergency**.
- It is useful in **unconscious** patients.
- It is suitable when orally administered drugs do not work.

Disadvantages:

- They require aseptic (**clean**) conditions and preparation should be sterile (مُعَقَّم).
- The equipment is **expensive**.
- The technique can be **uncomfortable** or painful for the patient.
- Most injections require a **trained** medical professional.
- They can be **dangerous** if administered incorrectly.

9.3 – Routes of Administration

The table below shows the **time** taken for each route of administration to have an effect:

Route of administration	Time until effect
Oral	20 minutes – 1 hour
Sublingual and buccal	3-5 minutes
Topical	Variable (minutes to hours)
Subcutaneous	15-30 minutes
Intravenous	30-60 seconds
intramuscular	10-20 minutes

Routes of Administration and Forms of Medication

Oral medication	Sublingual and buccal medication	Topical medication	Parenteral medication
Capsules	Small tablets	Creams	Injections
Liquids	Films	Lotions	Infusion
Pastilles	Wafers	Gels	
Powder	Sprays	Ointments	
		Sprays	
		Liquids	

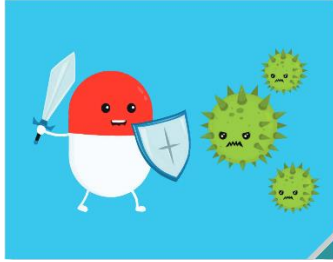
9.4 – Antibiotics

What are Antibiotics?

(An-ti-bi-ot-ics)

Antibiotics (المضادات الحيوية) are medicines that destroy or slow the growth of bacteria. They include a range of strong drugs and treat diseases which are caused by **bacteria**.

Antibiotics **cannot fight** viral infections such as the **common cold** or **COVID-19**.



Sometimes the body's immune system cannot fight all the bacterial cells by itself. When antibiotics are used properly, they can cure infection and they can save lives.

There are now many antibiotics available. In the UAE, you can only get antibiotics with a **prescription** from the doctor. It is **illegal** to buy antibiotics without a prescription.

The first ever used antibiotic was **penicillin**. It was discovered in 1928 and it is still very used nowadays.

Using Antibiotics

People usually take antibiotics **orally**. They can also be administered via an injection or directly applied to the part of the body that is infected.

Most antibiotics begin fighting bacteria within a **few hours**. It is important to complete the whole course of medication even after symptoms of the infection have improved.

This means you should take all of the antibiotics that you have been prescribed by the doctor even if you feel well. By doing this, it reduces the risk that bacteria will become resistant to the antibiotics.



Antibiotic Resistance

Resistance: stopping something from having an effect.

Medical professionals believe that people are **overusing** antibiotics. This overuse is making more bacteria **resistant** to antibiotics.

In other words, the antibiotic becomes useless against the bacteria because the bacteria have improved their defences therefore are not destroyed by the antibiotic.

9.4 – Antibiotics

Antibiotics should only be **prescribed** to treat conditions:

- that are unlikely to be cured without the use of antibiotics.
- that **could spread** if not treated.
- where antibiotics can significantly **speed up** recovery time.
- where the risk of not prescribing antibiotics can lead to **more dangerous** complications.

Side effect: a harmful and unwanted effect of a drug that happens alongside the desired effect.

Side Effects of Antibiotics

The chances of feeling side effects from medication will depend on **the drug**, and if it has been taken **following** the advice of a doctor or pharmacist.

Some medications show side effects in more than 1 out of every 10 people. Other medications only show side effects in 1 out of every 10,000 people. Side effects also range from **mild** to **life-threatening** conditions, although these are very rare.

The risk of feeling side effects are different from person to another. Antibiotics can cause the following **common** side effects:

- | | |
|-----------------|---------------|
| • diarrhoea | إسهال |
| • nausea | غثيان |
| • vomiting | التقيؤ |
| • rash | طفح جلدي |
| • upset stomach | اضطراب المعدة |

Less common side effects:

- | | |
|----------------------|--------------------|
| • kidney stones | حصى الكلى |
| • blood clotting | جلطة دموية أو خثرة |
| • blood disorders | اضطرابات الدم |
| • bowel inflammation | التهاب الأمعاء |

Experiencing **side effects** from any medication is **different** from having an **allergic reaction** to that medication.

9.5 – Latin Abbreviations in Pharmacy

Abbreviations in Healthcare

Abbreviation (اختصار): a shortened form of a word or name that is used instead of the full word or name. Abbreviations are commonly used in healthcare. Healthcare professionals mostly use them in written form. For example,

- when a doctor writes a **prescription** for a patient
- when healthcare professionals write on a patient's **medical records**.
- when healthcare professionals are **communicating** between each other regarding a patient's diagnosis or treatment.

Importance of Interpreting Abbreviations Correctly

Interpreting abbreviations correctly is very important for all healthcare professionals, including pharmacists. A correct interpretation can **guarantee** that patients are **safe**.

Not interpreting abbreviations correctly can be very **dangerous** for patients as it can lead to medication errors, such as **underdosing** or **overdosing**.

Underdosing – to take or administer an insufficient dose.

Overdosing – to take or administer more than the recommended dose.

Overdosing is very toxic for the patients, and it can even lead to death.

Common Abbreviations Used in Healthcare

Measurements

- **kg** – kilogram
- **g** – gram
- **mg** – milligram
- **mcg** – microgram
- **ml** – milliliter
- **tsp** – Teaspoon (5ml)

Routes of Administration

- **IM** – Intramuscular (حقن عضلي)
- **IV** – intravenous (داخل الوريد)
- **PO** – by mouth
- **SC** – subcutaneous (تحت الجلد)
- **SL** – sublingual
- **TOP** – topical

Other Abbreviations

- **Dr.** – doctor
- **XR** – X-ray
- **Dx** – diagnosis
- **Sx** – symptom
- **Tx** – treatment
- **FBC** – full blood count
- **BP** – blood pressure

9.5 – Latin Abbreviations in Pharmacy

Latin Abbreviations in Pharmacy

In pharmacy, abbreviations are mostly used in **prescriptions**. These abbreviations are usually shortening of words or sentences which were originally written in **Latin** language.

Latin abbreviations are common in drug prescriptions as Latin language was **the first** language used in research, experiments and academic writing by healthcare professionals.

Common Latin Abbreviations Used in Prescriptions

Abbreviation	Latin	Meaning
• Rx	<i>praescriptus</i>	prescription
• ac	<i>ante cibum</i>	before meals
• pc	<i>post cibum</i>	after meals
• hs	<i>hora somni</i>	at bedtime
• prn	<i>pro re nata</i>	as needed
• stat	<i>statim</i>	give now
• ad	<i>ad libitum</i>	as desired/wanted
• bid	<i>bis in die</i>	twice a day
• tid	<i>ter in die</i>	three times a day
• qid	<i>quarter die sumendus</i>	four times a day

Some prescriptions might have Roman numbers instead of English or Arabic numbers. For example

- number 1 can be written as “**i or I**”,
- number 2 would be written as “**ii or II**”
- and number 3 would be “**iii or III**”.

Interpreting Latin Abbreviations in Prescriptions

The following examples are prescriptions written using Latin abbreviations followed by the correct interpretation of each prescription:

Example 1

Prescription: “*Rx Captopril 25mg, i, SL, STAT, high BP*”

Interpretation: “Prescription: Captopril 25 milligrams, one tablet, sublingual, give now.
This medication is being administered because the patient has high blood pressure.”

9.5 – Latin Abbreviations in Pharmacy

Example 2

Prescription: “*Rx Ondansetron 4mg, IV, qid, PRN, nausea*”

Interpretation: “Ondansetron 4 milligrams, intravenous, four time a day, if needed by patient.
This medication should be administered if the patient experiences nausea.”

Example 3

Prescription: “*Rx Dexamethasone 4mg, ii, PO, bid, cancer Sx*”

Interpretation: “Dexamethasone 4 milligrams, 2 tablets, by mouth, twice a day.
This medication is being prescribed to manage cancer related symptoms.”



9.6 – Measurements and Formulas

Mathematics in Pharmacy

In pharmacy, mathematics is used to calculate

- measurements,
- fractions,
- conversions,
- decimals
- and ratios.

In this lesson, you will study how to convert units of measurement and how to calculate the correct dose of a medication. An error in the calculations can result in medication errors, such as underdosing or overdosing. Both errors can put the patient's life in danger.

Common Unit Conversions

Solids

- **1 kg** = 1000 g
- **1 g** = 1000 mg
- **1 mg** = 1000 mcg

Volume

- **1 L** = 1000 mL

Time

- **1 hour** = 60 min
- **1 min** = 60 sec

Example

- Convert **0.001kg** to **mg**
 - Multiply the kg number by 1000. This will give you the gram weight.
 $0.001 \text{ kg} \times 1000 \text{ g/kg} = 1\text{g}$
 - Multiply the g number by 1000. This will give you the mg weight.
 $1 \text{ g} \times 1000 \text{ mg/g} = 1000 \text{ mg}$
- Convert **1,000 ml** to **litres**
 - Divide the ml number by 1000. This will give you the litre volume.
 $1000 \div 1000 = 1\text{L}$

Drug Formulas in Pharmacy

Calculating Drug Dosages

In this section, you will learn how to calculate **tablet dosage, mixtures and solutions, and IV rate.**

9.6 – Measurements and Formulas

Tablet Dosage

$$\text{Prescribed Dose} \div \text{Stock Strength} = \text{Number of Tablets Needed}$$

This is used to calculate how many tablets will be needed to fill a prescription from a doctor. This is also known as the “**basic formula**”.



Example 1

The doctor prescribed **120 mg** of a drug. The drug is only available in **30 mg** tablets. How many tablets should be given to the patient?

Answer: $\text{Prescribed Dose} \div \text{Stock Strength} = \text{Number of Tablets Needed}$
 $(120 \text{ mg}) \div (30 \text{ mg}) = 4 \text{ tablets needed}$

Example 2

The doctor prescribed **200 mg** of a drug. The drug is only available in **40 mg** tablets. How many tablets should be given to the patient?

Answer: $\text{Prescribed Dose} \div \text{Stock Strength} = \text{Number of Tablets Needed}$
 $(200 \text{ mg}) \div (40 \text{ mg}) = 5 \text{ tablets needed}$

Mixtures and solution



$$\text{Desired Dose} \div \text{Stock strength} \times \text{Stock volume} = \text{Amount of Solution}$$

This is used to calculate the amount of a solution that should be given to the patient.

Example

The doctor prescribed **120 mg** paracetamol liquid four times a day. The drug is available in **250 mg/5ml**. How much liquid is needed per dose?

Answer: $\text{Desired Dose} \div \text{Stock strength} \times \text{Stock volume} = \text{Amount of Solution}$
 $(120 \text{ mg}) \div (250 \text{ mg}) \times (5 \text{ ml}) = 2.4 \text{ ml per dose}$

Calculate IV Rate

$$\text{Total IV Volume} \div \text{Time (hours or minutes)} = \text{ml administered per hour or minute}$$

This calculation is used mainly in a **hospital** setting. It calculates the rate of administration of IV fluids. This can be calculated over either minutes or hours.

9.6 – Measurements and Formulas

Example

The doctor wants to administer a drug intravenously. 120 ml of liquid X needs to be administered by IV over a period of six hours. How much liquid is administered per hour?

Answer: **Total IV Volume ÷ Time (hours) = ml administered per hour**
(120 ml) ÷ (6 hours) = 20 ml per hour



9.7 – Safety Measures in Pharmacy

Safety Measures

Safety measures are procedures taken to make sure that drugs are administered or taken in a safe way. This is to prevent any harm to the patient.

Procedures: a set of actions that are a good way of doing something.

Drugs can be given to a patient in a clinical setting by different healthcare professionals. Many drugs are also kept at home. This is so people can take medicines if they need to. For example, Your parents may keep **paracetamol** at home in case they get a headache.

If safety measures are not followed, then medication error could happen. This is when the patient takes the wrong medication at the wrong time or at the wrong dose. The effects of these errors can range from minor to fatal (very bad).

Effective Communication as a Safety Measure

Written and **verbal communication** are the two most used methods of communication in healthcare. Communicating effectively can prevent a lot of medical errors, such as drug errors. Therefore, an important part of safety measures is effective communication.

Pharmacists usually communicate with other healthcare professionals through written and verbal communication. This includes **doctors**, **nurses**, other **pharmacists** and pharmacy technicians.

Communication also happens with patients and sometimes their families, mostly regarding prescriptions. Good communication skills help to:

- ensure patient's safety
- avoid drug errors
- deliver better treatment for the patient
- build good relationships with patients.

How can Pharmacists Ensure Patient Safety Through Good Communication?

There are many ways to make communication more effective, for example using and remembering the **5 C's** of effective communication. The **5 C's** involve remembering to be:

- 1) **Clear** – *What exactly do I want to communicate?*
- 2) **Cohesive** – *Does all the information make sense?*
- 3) **Complete** – *Have I communicated all the information?*
- 4) **Concise** – *Am I being direct and brief? Or am I using words that are not needed?*
- 5) **Concrete** – *Am I being as specific as possible?*

9.7 – Safety Measures in Pharmacy

Communication

Good and clear communication between a pharmacist and a patient can help with the following:

- ensure the patient's safety
- avoid medication errors
- guarantee a better treatment for the patient
- build a good relationship between the pharmacist and the patient

Safety Measures in Administering Medication

Nurses are mostly involved in the administration of drugs in a hospital. At home, the administration of drugs can be given by a responsible person. There are **six** rules to follow if you are asked to give drugs to a family member.

The Six Rights of Drug Administration

#1 – Right Drug

The correct drug must be given to the patient. Errors can happen when the pharmacy dispenses the wrong drug. A caregiver can also administer the wrong drug to a patient. This sometimes happens if the drugs have similar names. Always make sure you are using the correct drug every time you administer them.



#2 – Right Patient



Give the drug to the right patient. Errors can happen at the pharmacy when two people have very similar names. At home, there may be many medications for different people kept in the same place.

To avoid this, the caregiver should double-check the patient's name and date of birth when collecting and administering the drug.

#3 – Right Dosage

Give the medication at the correct dose as directed by the doctor. If you are not sure, you should always check with the patient's doctor or the pharmacy where the drugs were collected from.



9.7 – Safety Measures in Pharmacy

#4 – Right Dosage

The medication should only be given by the route it was prescribed for by the doctor. Healthcare professionals should be aware of normal routes of administration as patients can sometimes get confused.

#5 – Right Time

The medication should be given at the correct time as prescribed by the doctor. **Thirty minutes** before or after the prescribed time is acceptable. Be aware that some medication must be taken on an **empty stomach** and some medication should be taken **with food**. Healthcare professionals should know this when giving you advice.

#6 – Right Documentation

If a nurse administers medication, they should make a record as soon as possible. This is so another nurse will not double the dose. This is also useful at home. You should record:

- When? (what day and time)
- What? (medication, dose, route)
- Any side effects



Safety Measures When Storing Medication

- 1) **Store all Medication out of Reach and Sight of Children.**
If your bag contains any medication put them high up and avoid leaving medicines on a desk or table at home.
- 2) **Think About Products that you Might not Think of as Medicines.**
Vitamins, creams, eye drops, and hand sanitisers can all be harmful to children.
- 3) **Make Sure that you Close your Medicine Caps Tightly after Each Use.**
Many medicines have child-resistant caps. This makes it is harder for children to get into medicine bottles.
- 4) **Put Medicine Away After Every Use.**
- 5) **Make Sure to Check the Best Before Dates on Medicines.**
Dispose of them in a proper manner. Do not put them down the drain. Drugs that are out of date should be taken to a pharmacy.
- 6) **Be Careful in Places you Visit with a Child.**
You know where medicines are kept in your own home. Be aware when visiting a family members house.

UNIT 9

PHARMACY

UNIT SUMMARY

Resources

- G12 – Term 3 – Unit 9: Pharmacy

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