



DEPARTMENT OF EDUCATION

**GRADE 9**  
**PERSONAL DEVELOPMENT**

**UNIT 3**



**HEALTH**



**FLEXIBLE OPEN DISTANCE EDUCATION**  
PRIVATE MAIL BAG, WAIGANI, NCD  
FOR DEPARTMENT OF EDUCATION  
PAPUA NEW GUINEA

# **PERSONAL DEVELOPMENT**

## **GRADE 9**

### **UNIT 3**

#### **HEALTH**

<b>TOPIC 1</b>	<b>PREVENTIVE HEALTH CARE</b>
<b>TOPIC 2</b>	<b>COMMUNICABLE AND NON-COMMUNICABLE DISEASES</b>
<b>TOPIC 3</b>	<b>FIRST AID AND SAFETY</b>
<b>TOPIC 4</b>	<b>DRUGS AND SUBSTANCE ABUSE</b>

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We also acknowledge the professional guidance provided by Curriculum and Assessment Division throughout the processes of writing and the services given by members of the Personal Development Subject Review and Academic Committees.

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**DIANA TEIT AKIS**

PRINCIPAL

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# CONTENTS

## Page

<b>Title Page</b>	.....	1
Acknowledgements	.....	2
Contents	.....	3
Secretary's Message	.....	4
Unit Introduction	.....	5
Study Guide	.....	6
<b>TOPIC 1: Preventive Health Care</b>		
Topic Introduction	.....	8
<input type="checkbox"/> Lesson 1: Personal Hygiene	.....	9
<input type="checkbox"/> Lesson 2: Nutrition	.....	16
<input type="checkbox"/> Lesson 3: Food Hygiene and Safety	.....	23
<input type="checkbox"/> Lesson 4: Sanitation	.....	29
ANSWERS TO PRACTICE EXERCISES 1-4	.....	35
<b>TOPIC 2: Communicable and Non-Communicable Diseases</b>		
Topic Introduction	.....	38
<input type="checkbox"/> Lesson 5: Communicable Diseases	.....	39
<input type="checkbox"/> Lesson 6: Non-Communicable Diseases	.....	45
<input type="checkbox"/> Lesson 7: Effects of Diseases	.....	55
<input type="checkbox"/> Lesson 8: Healthy Practices	.....	60
ANSWERS TO PRACTICE EXERCISE 5-8	.....	68
<b>TOPIC 3: First Aid and Safety</b>		
Topic Introduction	.....	70
<input type="checkbox"/> Lesson 9: Importance of First Aid	.....	71
<input type="checkbox"/> Lesson 10: First Aid Procedures	.....	78
<input type="checkbox"/> Lesson 11: Safety-Types and Practices	.....	83
ANSWERS TP PRACTICE EXERCISE 9-11	.....	91
<b>TOPIC 4: Drugs and Substance Abuse</b>		
Topic Introduction	.....	93
<input type="checkbox"/> Lesson 12: Drugs and Substances	.....	94
<input type="checkbox"/> Lesson 13: Types and Drugs	.....	103
<input type="checkbox"/> Lesson 14: Advantages and Disadvantages of Drugs	.....	110
<input type="checkbox"/> Lesson 15: Effects of drugs on the Community	.....	120
ANSWERS TP PRACTICE EXERCISE 12-15	.....	134

## SECRETARY'S MESSAGE

Achieving a better future by individual students and their families, communities or the nation as a whole, depends on the kind of curriculum and the way it is delivered.

This course is a part of the new Flexible, Open and Distance Education curriculum. The learning outcomes are student-centred and allows for them to be demonstrated and assessed.

It maintains the rationale, goals, aims and principles of the national curriculum and identifies the knowledge, skills, attitudes and values that students should achieve.

This is a provision by Flexible, Open and Distance Education as an alternative pathway of formal education.

The course promotes Papua New Guinea values and beliefs which are found in our Constitution, Government Policies and Reports. It is developed in line with the National Education Plan (2005 - 2014) and addresses an increase in the number of school leavers affected by the lack of access into secondary and higher educational institutions.

Flexible, Open and Distance Education curriculum is guided by the Department of Education's Mission which is fivefold:

- To facilitate and promote the integral development of every individual
- To develop and encourage an education system satisfies the requirements of Papua New Guinea and its people
- To establish, preserve and improve standards of education throughout Papua New Guinea
- To make the benefits of such education available as widely as possible to all of the people
- To make the education accessible to the poor and physically, mentally and socially handicapped as well as to those who are educationally disadvantaged.

The college is enhanced to provide alternative and comparable pathways for students and adults to complete their education through a one system, many pathways and same outcomes.

It is our vision that Papua New Guineans' harness all appropriate and affordable technologies to pursue this program.

I commend all those teachers, curriculum writers, university lecturers and many others who have contributed in developing this course.



**UKE KOMBRA, PhD**

Secretary for Education

## UNIT 3 INTRODUCTION

---



Dear Student,

Welcome to Unit 3 of the Grade 9 Personal Development Course. This Unit is called **HEALTH**. You will study it, using the steps suggested in the **Study Guide** on the next page.

This Unit is based on the National Department of Education approved Syllabus for conventional high school Personal Development. So you will study at home what High school students study in school.

The four Topics you will study are:

1. **Preventive Health Care**
2. **Communicable and Non-Communicable Diseases**
3. **First Aid and Safety**
4. **Drugs and Substance Abuse**

In Topic 1 – **Preventive Health Care** – You will learn about Personal Hygiene, Nutrition, Food Hygiene and Safety and Sanitation.

In Topic 2 – **Communicable and Non-Communicable Diseases** – You will learn about Communicable Diseases, Non-Communicable Diseases, Effects of Diseases and Healthy Practices.

In Topic 3 – **First Aid and Safety** – You will learn about Importance of First Aid, First Aid Procedures and Safety-Types and Practices.

In Topic 4 – **Drugs and Substance Abuse** – You will learn about Drugs and Substances , Types and Drugs, Advantages and Disadvantages of Drugs and Effects of drugs on the Community.

Each Topic has **Lessons** with **Practice Exercises** and **Answers**. You must read each lesson and work through the Practice Exercises. You will have to correct your own answers. The answers to the Practice Exercises are given at the end of each Topic. When you complete a Topic, you will then complete the **Topic Test** in the **Assignment Booklet**. You will repeat the same process until you complete the Unit.

**We hope you will enjoy studying this Unit for your Personal Development.**

## STUDY GUIDE

---

Follow the steps given below and work through the lessons.

- Step 1** Start with Topic1, Lesson 1 and work through it in order.
- Step 2** When you complete Lesson 1, you must do Practice Exercise 1.
- Step 3** After you have completed the exercise, you must correct your work. The answers are given at the end of each Topic.
- Step 4** Then, revise well and correct your mistakes, if any.
- Step 5** When you have completed all these steps, tick the check-box for Lesson 1, on the content page, like this:

Lesson 1: Know About Yourself

Then go on to the next lesson. You are to repeat the same procedure until you complete all the lessons in a Topic.

As you complete each lesson, tick the box for that lesson on the content page, like this  
 This will help you check your progress.

### **Assignment: Topic Test and Unit Test**

When you have completed all the lessons in a Topic, do the Topic Test for that Topic, in your Assignment Booklet. The Unit book tells you when to do this.

### **Marking:**

The Topic Tests in each **Assignment** will be marked by your **Distance Teacher**. The marks you score in each Assignment will count towards the final result. If you score less than 50%, you will have to repeat that Assignment.

Remember, if you score less than 50% in three (3) Assignments, your enrolment will be cancelled. So, you are encouraged to do your work carefully and make sure that you pass all Assignments.

**ALL THE BEST IN YOUR STUDIES!**

# TOPIC 1

## PREVENTIVE HEALTH CARE

**In This Topic You Will Learn About:**

- Personal Hygiene
- Nutrition
- Food Hygiene and Safety
- Sanitation



## TOPIC 1: Preventing Health Care

---

In this Topic, you will learn about Preventive Health Care. You will :

- Define personal hygiene
- Identify ways to promote personal hygiene
- Define what nutrition is,
- Identify the factors influencing the choices of food intake
- Discuss the importance of nutrition
- Defining food hygiene *new bullet*
- Identifying safe food practices
- Identify types of sanitation in homes and community
- Discuss sanitation management

*General comment: lower case for all shaded red*

In doing so, you will find out more about how to look after yourself and those around you in terms of personal hygiene or cleanliness, nutrition, which is the study of food and the way in which people feed themselves, how to keep food clean and safe and sanitation measures taken to keep places clean and healthy.

We hope you will enjoy this Topic.

## Lesson 1: Personal Hygiene

---



Welcome to lesson 1 of unit 3. In this lesson you will learn about personal hygiene.



### Your Aims:

- define personal hygiene
  - identify ways to promote personal hygiene
- 

### What is Hygiene?

First you will define personal hygiene.



What is personal hygiene?

Personal hygiene is what an individual does to keep clean in order to stay healthy



Personal hygiene is very important because it helps to keep everyone healthy from very small organisms that are called micro – organisms or microbes. Some examples are bacteria, viruses and fungi which can sometimes make us sick. In order to stay healthy and not get sick we must make sure that all parts of our body are kept clean and that we do not behave in ways that make it easy for microbes to grow and spread.

There are many sweat glands under arms and around the genitals, so these parts need to be washed every day, even if there is not an opportunity to have an all – over bath or shower.

Many microbes that can make us sick like to live where there is dirt or where it is warm and damp.

Scabies is a rash caused by a mite that burrows into the skin. Cleaning the skin every day can wash the mites off your skin. Healthy skin should be smooth, clean, and even colour and have no sores.

When you are clean you improve the likelihood of making and maintaining friendships and being accepted in social situations. There are a number of ways that we can practice to prevent microbes from reproducing and making us sick.



**Hygiene is keeping clean in order to stay healthy**



### Activity 1.1 Short Answer Questions

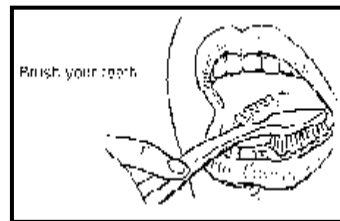
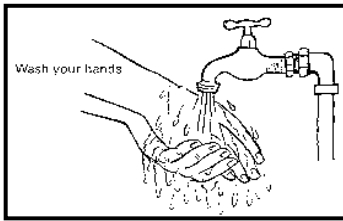
1. What is hygiene?  
\_\_\_\_\_
2. Why is personal hygiene important?  
\_\_\_\_\_
3. What are some examples of micro-organisms?  
\_\_\_\_\_

### Things to do to stay healthy

1. **Wash** your body every day using soap and clean fresh water if possible to keep skin clean and smooth from skin infections and body odour. After bathing, dry your skin with a clean towel and then hang the towel so that it will dry- outside in the sun if possible. Towels should be washed every week and then dried in the sun.
2. Keep your **hands** clean so that you do not transfer germs to your mouth. You should always wash your hands with soap:
  - after each visit to the toilet
  - before touching food
  - before eating
  - before treating any injury to the body.

If you cannot use soap, just use clean water. Using sea water or even muddy water is better than not washing your hands at all.

3. Keep your **nails** short and clean so that germs do not spread.
4. Clean your **teeth** after every meal to prevent bad breath and gum disease.
5. Wash your face with soap and water every morning and night.
6. Wash the outside of your ears every day and do not push sticks or anything else into your ears.
7. Keep your nose clear so that you can breathe properly. When you have a runny nose, remember to remove the mucus with a clean cloth or a soft leaf. Do not blow it on the ground as this will only spread the virus or otherwise you can blow it into the fire.
8. When you cough or sneeze, you should cover your nose and mouth with your hand or with a handkerchief to prevent germs which are carried in droplets from being carried in the air.
9. Comb your hair every day and wash it at least once a week with soap or shampoo, coconut and lemon. You can get rid of head lice by using kerosene and coconut oil.



**To stay healthy these are things that can be followed as illustrated**



### Activity 1.2

1. Name at least two (2) things that are used for cleaning the teeth

i) \_\_\_\_\_ ii) \_\_\_\_\_

2. What is the reason for keeping your hands clean?

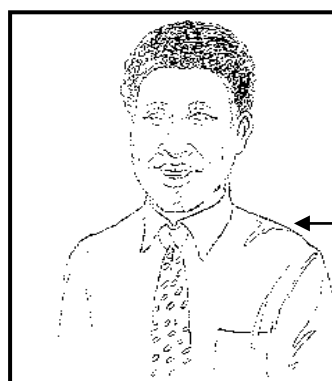
\_\_\_\_\_

3. How often should you comb your hair?

\_\_\_\_\_

### Care of clothes

It is best to wear clean clothes every day, and underwear should be washed every day because it quickly becomes soiled with body fluids. You should not wear clothes that are wet and damp because they will encourage fungi to grow on the skin. In hot climates, people sweat a lot so it is wise to change their clothes as soon as they get soaked in sweat. Similarly, for students in hot climates, school uniforms after school to be washed and worn the next day.



Clean and fresh clothes

**Clothes should look clean to give a neat and tidy appearance.**

**Activity 1.3**

**Fill in the blank spaces with the correct word:**

Wear \_\_\_\_\_ clothes every day, and underwear should be \_\_\_\_\_ every day because it quickly becomes soiled with body \_\_\_\_\_. Wet or damp clothes should not be \_\_\_\_\_ because they will encourage fungi to grow on the \_\_\_\_\_.

**Toilet routine**

Going to the toilet every day also helps us to stay healthy. We should pass faeces regularly because this helps to stop constipation. When faeces remain in the intestine for a long time, too much water is removed, which makes them hard and difficult to pass. We should not defecate in the bush because this will attract flies and can spread disease.

Exercise, drinking plenty of water, and eat a lot of fresh fruit and vegetables help to keep our bowel movements regular. We should also pass urine several times each day

- **Defecation is passing faeces or stools when we empty our bowel by going to the toilet.**
- **Constipation is difficulty in passing faeces.**

**Activity 1.4**

1. Define;

(a) Defecation: \_\_\_\_\_  
\_\_\_\_\_

(b) Constipation: \_\_\_\_\_  
\_\_\_\_\_

2. Explain why a Toilet routine important.

\_\_\_\_\_  
\_\_\_\_\_

## Summary



You have come to the end of lesson 1. In this lesson you have learnt that:

- Personal hygiene is what an individual does to keep clean in order to stay healthy.
- Washing your body every day with soap and clean fresh water will keep your skin clean and smooth from infections and body odour.
- Wash hands before handling and eating food.
- Wash your face with soap and water.
- Brush your teeth after breakfast and before going to bed.
- Clean your ears and nose.
- Wash hair once a week with soap or shampoo.
- Avoid alcohol, tobacco and betel nut.
- Wear clean clothes every day.
- Use the toilet regularly to pass faeces and to urinate

**NOW DO PRACTICE EXERCISE 1 ON THE NEXT PAGE**

## Practice Exercise 1



1. Complete the following table:

Parts of body	What is used for washing?	Why washing these parts?
i. Underarms	_____	To feel fresh and clean.
ii. _____	Use soap and shampoo	Keep hair clean and free from lice.
iii. Fingernails	Soap, water and nail cutter	_____
iv. _____	Tooth paste, toothbrush, sand, coconut husk, betel nut skin	To prevent bad breath and gum disease

2. Answer the following questions.

a. How often should we wash our body?

\_\_\_\_\_

b. What is personal hygiene?

\_\_\_\_\_

c. What should you do when you have mucus in the nose?

\_\_\_\_\_

d. Why is it important to pass faeces regularly?

\_\_\_\_\_

e. Wet or damp clothes should not be worn, why?

\_\_\_\_\_

f. Why can't people defecate in the bush?

\_\_\_\_\_

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 1.**

## Answers to Lesson Activities

---

### Activity 1.1

1. Hygiene is keeping clean in order to stay healthy.
2. Personal hygiene is very important because it helps to keep everyone healthy from very small organisms that are called micro – organisms or microbes.
3. Some examples are bacteria, viruses and fungi which can sometimes make us sick.

### Activity 1.2

1. Toothpaste, toothbrush, sand, coconut husk, betel nut skin and other root vegetables that are used in their villages/locality
2. To stop germs from transferring to mouth.
3. Every day.

### Activity 1.3

Clean, washed, fluids, worn, skin

### Activity 1.4

1. Defecation is passing faeces or stools when we empty our bowel by going to the toilet.
2. Constipation is difficulty in passing faeces
3. It helps us to stay healthy in order to prevent constipation and to have a regular system to pass faeces and urine.

- *Do referencing at the end*

---

## References

Healthy Living in Papua New Guinea, Andrew Sollien

Outcomes Edition Personal Development Grade 9, Kenneth Rouse

Personal Development Student Book 9, Dianne McInnis



## Lesson 2: Nutrition

---



Welcome to lesson 2 of unit 3. In the last lesson you learnt about personal hygiene. In this lesson you will learn about nutrition.



### Your Aims:

- define nutrition
  - identify the factors influencing the choices of food intake
  - discuss the importance of nutrition
- 

### Definition

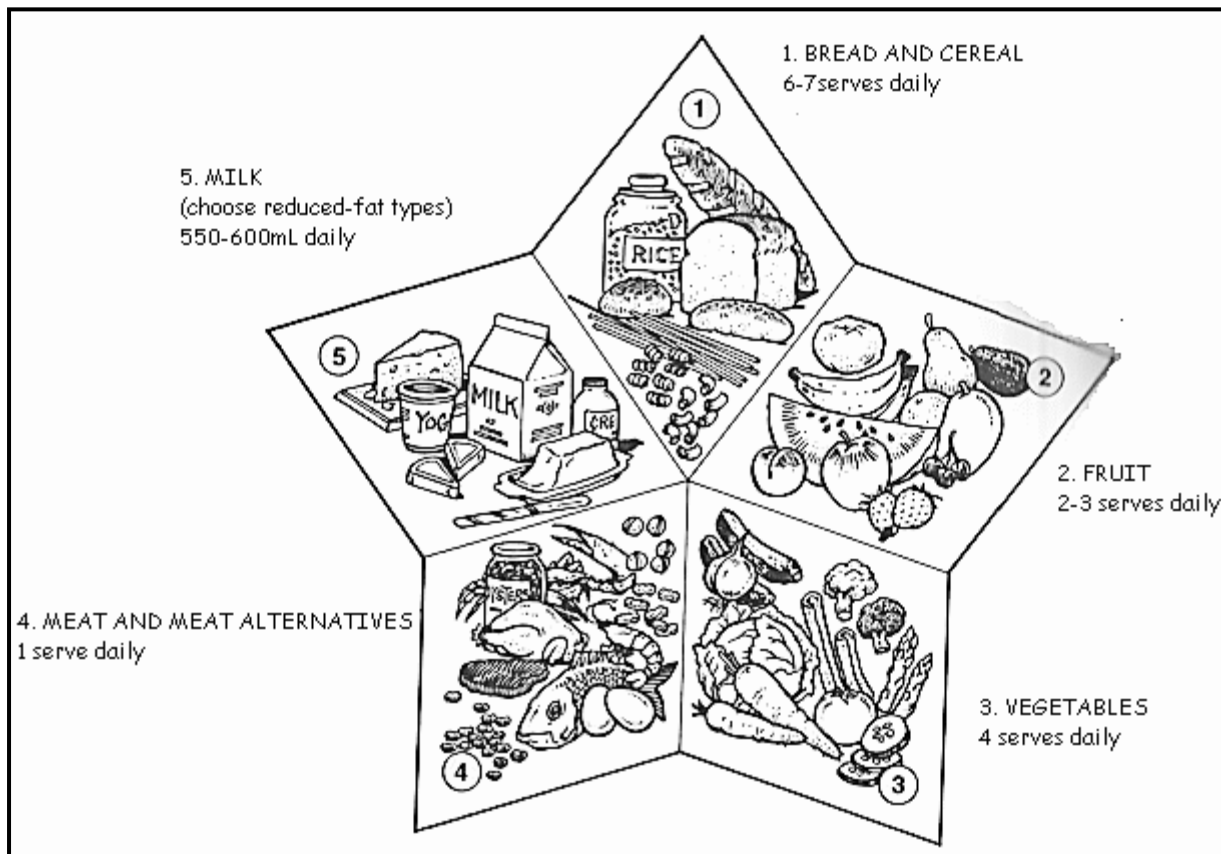


Nutrition is the study of food and how people feed themselves

### Reasons why people eat food

- The availability of different foods, which may be affected by the climate and season.
- Our knowledge that some foods are more healthy than others
- Our local, family and cultural customs which include myths and beliefs.
- The climate and its effects on our appetite.
- Our personal likes and dislikes
- The cost of different kinds of foods
- Media influence such as TV, magazines, newspaper, radio etc...

The most important thing to remember when choosing food is whether it will make us healthy. There are five food groups that you should choose from and these are given in the diagram below.



The diagram above shows the five food groups

Food contains nutrients that play different roles in our bodies. Nonetheless a nutritious diet is recommended as it:

- Ensures that the body is strong and there is energy to work, play and keep warm
- Is necessary for growth, repair and development of body cells and tissues
- Helps to prevent diseases
- Regulates the body processes

- *Need more information-too brief*
- *Acknowledge source*

Nutrient	Roles they play or function	Sources
1. Protein	1. Growth and development ➤ They provide the materials for growth and repair of cells and tissues. Protein cannot be stored in the body, so some protein has to be eaten each day.	Lean meat, fish, cheese, eggs, milk, nuts and beans
2. Carbohydrates	2. a: Energy and warmth ➤ Sugars and starches are used as an energy source. Glucose, a type of sugar, is found in the blood. It is used by the cells to supply energy. ➤ Cellulose is often called fiber. It keeps your digestive system working well	- Sugars: fruit, sugar cane, honey and sweet foods. - Starch: Potatoes, rice and other vegetables, bread, pastry, cakes and pasta - Cellulose: vegetables, fruits and grains. -
3. Fats	2. b: Energy and warmth ➤ High- energy food. They produce more energy per gram than carbohydrates. The body stores fat as a food reserve. It can also turn excess carbohydrates to fat.	Nuts, seeds, avocados, olives, butter, margarine, and fatty meat such as lamb flaps, and chicken skin.
4. Vitamins and 5. Minerals	3. Prevention of diseases	- Obtained from different food sources especially fruits and vegetables.
6. Water	4. Regulation of body processes	- Obtained from different fruit juices and pulps especially fruits and different food sources especially vegetables - Water



### Activity 2.1

Write short answers to answer the following questions.

1. Nutrition is the \_\_\_\_\_ of food and how people feed themselves.
2. How often in a day should you eat fruits? \_\_\_\_\_
3. Write three factors that influence the choices of food you make.
  - i. \_\_\_\_\_
  - ii. \_\_\_\_\_
  - iii. \_\_\_\_\_

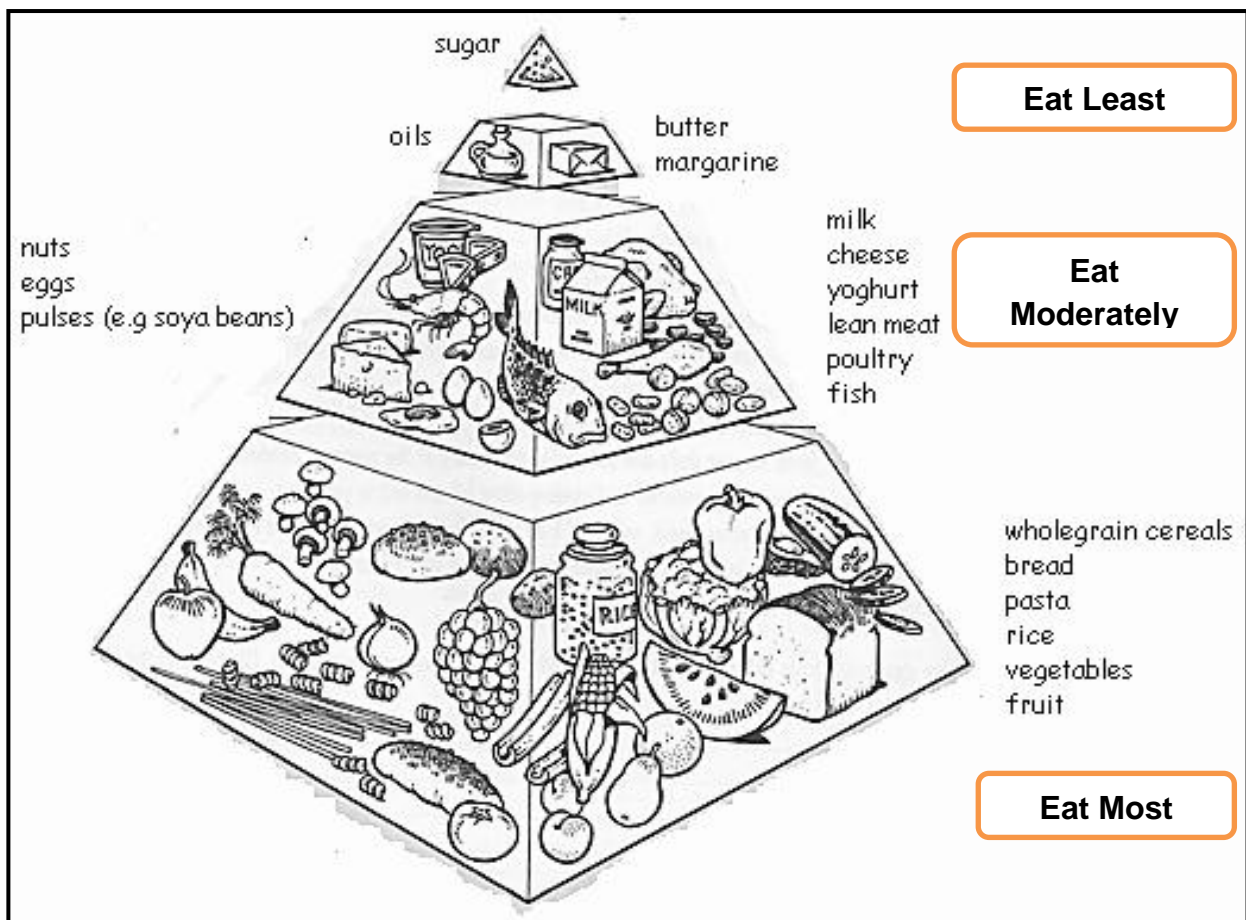
## Why is food important to you?

Good nutrition is important during adolescence. Young people who do not eat a nutritious, balanced diet may not reach a healthy height, strength or size. Food gives you energy to work and play. It is important to listen to your body's demand by eating the right amount and type of food so that it can function properly.

Your choice of food has very important effects in your life. Apart from providing the nutrients your body needs, the food you eat influences the way you look and feel, contributing significantly to your enjoyment of life and your self-esteem.



The Healthy Diet Pyramid shows how much to eat of the different types of food. We can eat large amounts of food from the “eat most” section at the bottom of the pyramid. We can eat some food from the middle section, but not too much. We should eat the least amount of food from the top section of the pyramid.



The diagram above illustrates the Healthy Diet Pyramid



## Activity 2.2

Write short answers to answer the following questions.

1. List 3 examples of food that you should eat moderately.

i. \_\_\_\_\_  
ii. \_\_\_\_\_  
iii. \_\_\_\_\_

2. Why food is considered important to your day to day living?

\_\_\_\_\_  
\_\_\_\_\_

## Summary



**You have come to the end of lesson 2. In this lesson you have learnt that:**

- Nutrition is the study of food and how people feed themselves.
- There are various factors influencing the choices we make in food
- We need food to grow, reproduce, and maintain good health. Without food, our bodies could not stay warm, build or repair tissue, or maintain a heartbeat. Eating the right foods can help us avoid certain diseases or recover faster when illness occurs.
- The “Healthy Diet Pyramid” guides individuals on which foods we should eat most, moderately and eat sparingly.
- Food contains nutrients that aid the body to do its different tasks. The roles they play are;
  - ✓ Warmth and energy
  - ✓ Growth and repair of body cells and tissues
  - ✓ For protection against diseases
  - ✓ Regulation of bodily processes
- There are seven nutrients that are obtained in food;
  - ✓ Carbohydrates, fats, proteins, vitamins, minerals and water.

---

**NOW DO PRACTICE EXERCISE 2 ON THE NEXT PAGE**

## Practice Exercise 2

---



1. What do we mean by the term “nutrition”?  
\_\_\_\_\_  
\_\_\_\_\_
  
2. We need to know about healthy eating because  
\_\_\_\_\_  
\_\_\_\_\_
  
3. Apart from the list given, list two other possible factors influencing the choice of food you make.  
\_\_\_\_\_  
\_\_\_\_\_
  
4. True or False: The top section of the “Healthy Diet Pyramid” indicates that we should eat a lot of the food that has been given. \_\_\_\_\_
  
5. Would you consider breakfast with sweet potato and a cup of tea healthy for the day? Justify your answer.  
\_\_\_\_\_  
\_\_\_\_\_
  
6. List three (3) examples of carbohydrate foods
  - i. \_\_\_\_\_
  - ii. \_\_\_\_\_
  - iii. \_\_\_\_\_

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 1.**

## Answers to Lesson Activities

---

### Answers to Activity 2.1

1. Everything/ anything
2. Four (4) servings daily
3. Factors influencing the choices of food we eat
  - i. The availability of different foods.
  - ii. Knowledge that some foods are more healthy than others
  - iii. Local, family and cultural customs and beliefs.
  - iv. The climate with its effects on appetite.
  - v. Personal likes and dislikes
  - vi. Cost of various kinds of foods
  - vii. Media influence

### Answers to Activity 2.2

1. The three (3) examples of food we can eat moderately are
  - a. Meat, poultry or fish etc. from the meat group or
  - b. milk, cheese, yoghurt from the dairy products group
2. It is very important to know about nutrition as it affects our lifestyle, how we look and feel about ourselves.

---

### References

Healthy Living in PNG, A. Sollien

Outcomes Based Personal Development Grade 9, K. Rouse

## Lesson 3: Food Hygiene and Food Safety

---



Welcome to lesson 3 of unit 3. In the last lesson you learnt about nutrition. In this lesson you will learn about food hygiene and food safety.



### Your Aims:

- defining food hygiene
  - identifying safe food practices at home.
- 

### What is food hygiene?

Food hygiene means all the things that we do to handle, store and prepare fresh food and cooked food so that it is safe to eat and lasts as long as possible. In order for this to be practiced the following points below need to be considered.

#### Food hygiene practices

- Fresh food should be stored out of direct sunlight where it is cool and the air is moving. This helps to prevent the food from spoiling.
- Fresh fruit and vegetables should be washed in clean water if they are eaten raw.
- Fresh fruit and vegetables should be stored in a refrigerator or in a covered and cool area.
- Cover fresh meat with plastic and store in the freezer.
- When using a chopping board to chop fresh meat wash before using it for fruit and vegetables or a separate one.
- Cooked food that is not eaten straight away should be covered and cooled quickly so that it does not begin to spoil.



### Activity 3.1

Write True and False beside each statement.

- |                                                       |       |
|-------------------------------------------------------|-------|
| 1. Food will spoil quickly if not stored properly     | _____ |
| 2. Store fresh meat in a container                    | _____ |
| 3. Care of food preparation is important              | _____ |
| 4. Fresh food should be stored out of direct sunlight | _____ |
| 5. Hygiene is cleanliness                             | _____ |

### Preserving food

We all know that food gets spoilt in its natural state after being harvested; killed and picked therefore we need to find ways to protect them for safe consumption.



All communities have traditional and modern ways to preserve food so that it can be used later. All of these methods are used to slow down or stop the decay of food that is caused by **microbes**.

**Microbes are very small living things such as bacteria, moulds and yeast.**

### Ways of preserving food

- Refrigeration – food stored at 3°C will keep longer but will eventually spoil.
- Freezing – food stored at -18°C will not go bad but will still decay when unfrozen.
- Dehydration (removing of moisture) – sun drying (e.g. coconuts, coffee beans, chillies); smoking(e.g. fish, flying foxes); Pickling (acid) – soaking food (fruits and/or vegetables) in vinegar (e.g. pickled onions)
- Sugaring – adding sugar ( e.g. jam, syrup)
- Salting – adding salt or salt solution (e.g. fish, bacon, pig meat)
- Pasteurization – heating to 63°C for thirty minutes and then cooling, then heating to 80°C for about half a minute and then cooling quickly ( e.g. fresh milk)
- Sterilization - canning/bottling ( e.g. tinned fish, baby food); packaging (e.g. noodles, twisties)

**A helpful microbe like yeast is used to make bread and beer. Penicillin is an antibiotic medicine that is made from a mold that grows on fruit and bread. Only a few make us sick.**



### Activity 3.2

1. Complete the table below. One example has been done for you

Method of preservation	Example
Dehydration	Powdered milk

### Food preparation

To prepare food for eating and to make sure that you do not get sick, you must do the following:

#### How to prepare food for eating

- Wash your hands properly if possible with soap and water.
- Either cook or boil the food well and wash or peel all fruits.
- Put the food on to clean plates or into containers.
- If you are waiting to eat the food then it must be covered up.
- If the food is not all used up then it must be covered and stored properly, either wrapped in plastic or packed in a container.



### Activity 3.3

Write short answers to answer the following questions.

1. Why is it important to wash your hands before preparing food?

---

2. Why is it important to follow the food preparation steps?

---

### Storing food in the home

The conditions we use to store food will affect how long the food will keep. Food will spoil quickly if it is not stored properly because of the action of microbes. Bacteria reproduce more quickly when it is warm and moisture is present, the food starts to decay, so people in the highlands find that food will keep longer than on the coast.

For this reason food should be kept covered in a cool place where there is plenty of fresh air. Fresh, moving air helps to prevent the growth of moulds. The normal amount of oxygen in the air also makes it difficult for some kinds of bacteria to grow.

### Storing food safely at home

- Small scraps of food should not be left lying around as this will encourage insects and rats.
- Animals such as flies, cockroaches and rats must be kept away from food because they are all carriers of microbes that can make us sick.
- Flies can be controlled by keeping food covered, using a food cupboard, covering windows with fly wire and keeping doors closed.
- Cockroaches and ants can be controlled by placing the legs of a food cupboard in containers of water or kerosene, by sealing cracks in floors and walls and spraying with insecticide.
- Rats can be controlled by storing dry food in jars or metal bins with lids and not leaving food lying around.

<p><b>Insects such as flies and cockroaches carry microbes that can make us sick. Ants will eat and spoil food but do not carry diseases that will make us sick</b></p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------



### Activity 3.4

Fill in the blanks with a correct word

1. Keep \_\_\_\_\_ clean and \_\_\_\_\_ away from flies, cockroaches, rats, and other animals as this encourage \_\_\_\_\_ that can make us sick.

## Summary

---



**You have come to the end of lesson 3. In this lesson you have learnt that:**

- It is important to be aware of safety and hygiene at all times.
- Food can be unsafe if it is not stored, handled or prepared correctly.
- The four main points to be aware of food hygiene practices are, food preparation, preserving food and storage of food.
- Food poisoning is caused by bacteria.

**NOW DO PRACTICE EXERCISE 3 ON THE NEXT PAGE**

## Practice Exercise 3

---



Read the story below and answer the questions.

### Bad start to Xmas break

According to the medical superintendent, Dr Elti, a large number of people have been coming to the hospital complaining of diarrhoea and vomiting. Most of them are students or their family members who attended the end – of – year ceremony at the local high school. The Chairman of the Board, Mr Gari Lus, said that a mumu was prepared, but because of the rain it was hard to make the stones hot enough. Mr Lus also reported that the local Member of Parliament, Mr Wai Ani, was invited to be the guest speaker, but was very late in arriving. “After the mumu was opened it was left in the warm sun for several hours while we waited for the VIPs,” Mr Lus said.

Dr Elti reminded people to drink plenty of water to prevent dehydration if they have diarrhoea or vomiting and to come to the hospital if they need to. “Bad diarrhoea can make people so weak that they faint and young children can die because they lose so much water. There will be lots of family parties over Christmas, and we don’t want more people getting sick,” Dr Elti said.

1. Why did the students or their family members complain of vomiting and diarrhoea? Give two reasons.  
\_\_\_\_\_
2. Explain what the school should have done to prevent this from happening.  
\_\_\_\_\_
3. What do you think caused the food to get spoilt?  
\_\_\_\_\_
4. What should people do when they have bad diarrhoea and vomiting?  
\_\_\_\_\_
5. What are the effects of having bad diarrhoea and vomiting?  
\_\_\_\_\_

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 1.**

## Answers to Lesson Activities

---

### Activity 3.1

1. T
2. F
3. T
4. T
5. T

### Activity 3.2

Refrigeration

Freezing

Sugaring

Salting

Pasteurization

Sterilization

***\*Note: the above answers are correct for the type of method but for the examples students answers will vary.***

### Activity 3.3

1. So your hands are clean from germs passing on the food
2. To prevent contamination of food so that it will be safe to eat

### Activity 3.4

Clean, covered, bacteria

---

## Reference

Healthy Living in PNG Andrew Sollien, Personal Development Grade 9, Dianne McInnis

Outcomes Based Personal Development Grade 9, Kenneth Rouse

## Lesson 4: Sanitation

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Welcome to lesson 4 of unit 3. In the last lesson you learnt about food hygiene and food safety. In this lesson you will learn about sanitation.



### Your Aims:

- define sanitation
- identify types of sanitation in homes and community
- discuss sanitation management

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### Sanitation in the home

What is sanitation?



Measures taken to keep places clean and healthy

Diseases can be spread by harmful germs or what can be called pathogens. If we know how these diseases are spread then we also can prevent them from spreading by a number of ways. The most important thing to remember is keeping your home clean prevents the spread of diseases.

<b>Preventing the spread of diseases</b>		
<b>Ways in which pathogen is spread</b>	<b>Example of disease carried</b>	<b>How to prevent the spread</b>
Water	Diarrhoea	Drink safe water, boil unsafe water, keep rivers and creeks clean
Food	Diarrhoea, typhoid, food poisoning	Wash hands and utensils. Keep kitchens clean. Wash fresh food. Cook food properly. Store food properly
Droplets in the air	Colds and influenza	Cover mouth when coughing or sneezing. Open windows and doors to allow ventilation
Direct contact (touching)	Ringworm (grille or sipoma) Sexually transmitted infections	Wash clothes and towels properly and dry in the sun- do not share. Have only one sexual partner. Use condoms

Ways in which pathogen is spread	Example of disease carried	How to prevent the spread
Insects: Flies and cockroaches, mosquitoes	Diarrhoea, typhoid, food poisoning, malaria, dengue fever	Keep kitchens, bathrooms and toilets clean. Remove water in which mosquitoes lay eggs
Other animals: mites (spread from person to person)	Scabies	Keep body clean with soap and water



### Activity 4.1

Write true or false beside each statement

- Overcrowded rooms and poor ventilated houses can cause spread of diseases. \_\_\_\_\_
- Breast milk can cause babies to have diarrhoea. \_\_\_\_\_
- You can get diarrhoea if you don't wash your clothes daily. \_\_\_\_\_
- One way you could prevent flies from contaminating your food is cover the food with proper lids. \_\_\_\_\_
- Pathogens can be spread if homes and communities are kept clean. \_\_\_\_\_

### Sanitation in the community

Some of the country's major health problems occur in urban communities and it seen as an eye-sore to the government. All communities need certain facilities or services and to follow certain rules or guidelines in order for the people to stay healthy.

### Sanitation needs in the community

#### Water Supply

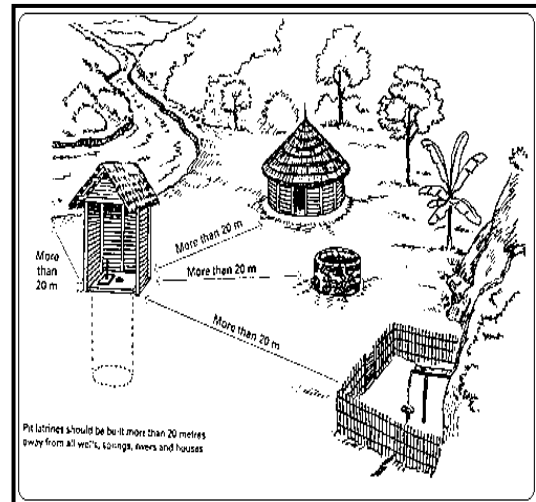
Clean water is needed for personal hygiene, cooking food, flushing toilets and keeping buildings clean. Water should be safe for drinking. Many people use one source of water for drinking and cooking and a different source for washing. For example, drinking and cooking with tank water and washing in the creek or shallow water-wells. Rainwater collected from a suitable roof is considered safe, whereas water from a thatched roof or a roof with rust can be unsafe. Piped supply from the underground is the safest source to obtain water from. Polluted water is responsible for 80 percent of the diseases throughout the country.



Clean water in container

## Sewerage

Toilets that are working properly must be kept clean as they are used by everyone including children. Sewerage is a system of sewer pipes that carry human and domestic waste known as sewage, from buildings in towns and cities. In a village setting people remove their waste in the bush, gardens, creeks, rivers or in the sea. However it is advisable that they should dig pit latrines 20 metres away from water source and the house.



Pit latrine system

## Rubbish disposal

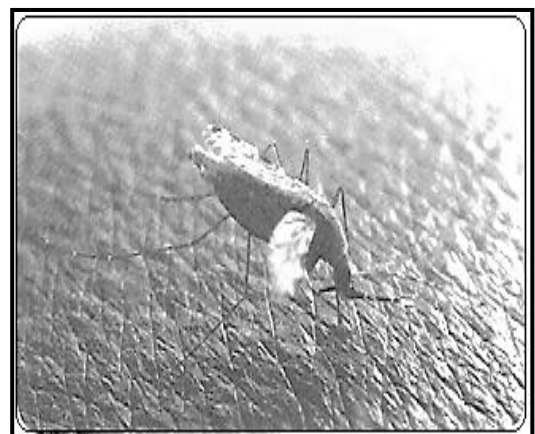
All rubbish should be collected regularly and not left lying around. Separate the rubbish. Leaves and other plant or organic rubbish can be piled into a compost heap and later used in the garden. Tins and other metals should be crushed, burned and buried in the ground, or those that can be recycled should be sent to specific places for recycling. Papers and plastic bags should be collected and burnt.



Cola can floating on water

## Drainage

Too much used water and rainwater can damage crops and homes if there is no efficient drainage system. All water tanks, taps and wells need good drainage to carry away water that is spilled. Water that runs back into the well will contaminate the water. Mosquitoes can also breed in pools of water which can lead to the spread of malaria.



Mosquito biting a person





### Activity 4.2

#### Filling in Blank spaces

Carry out a survey of your home and the community you live in by making a checklist of sanitation problems like the ones in the table below. The first one has been done for you.

Sanitation problem	Home	Community
Blue flies breeding in waste food	x	✓
People using bush instead of pit latrine		
Draining water back into the water well		
Empty tins, bottles, plastic bags lying around		
Mosquitoes breeding in pools of water after rain		

### Summary



You have come to the end of lesson 4. In this lesson you have learnt that:

- Sanitation is the things we do to keep places clean and healthy.
- We can prevent diseases if we know how to prevent the spread of diseases.
- Communities need proper water supply, sewerage systems, proper ways to dispose rubbish and appropriate drainage system to avoid pathogens or harmful bacteria from causing diseases.

**NOW DO PRACTICE EXERCISE 4 ON THE NEXT PAGE**

### Practice Exercise 4

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1. What is sanitation? \_\_\_\_\_
2. List two things you can do to prevent the spread of diarrhoea.
  - i. \_\_\_\_\_
  - ii. \_\_\_\_\_
3. Walk around your home and community
  - i. list all the places where;
    - a. mosquitoes are breeding
    - b. flies are buzzing around
    - c. empty tins and bottles are lying around
  - ii. What can you do about this problem?
4. Below are steps on how to deal with a sanitation problem. They are not in correct order in which they should appear therefore arrange in sequential order whichever comes first, 1, 2, 3 ...5 so as to solve a problem when need arises.

#### STEPS IN DEALING WITH A SANITATION PROBLEM

- a. \_\_\_\_\_ Do the people want to make a change? You are more likely to be successful if the people involved see the problem and want to change. You will need to talk to people and ask questions to find this information:
- b. \_\_\_\_\_ Carry out your plan- keep it small at first. Then, if it is successful, you can extend it later.
- c. \_\_\_\_\_ Look around the community to find a suitable sanitation problem, for example, different kinds of rubbish disposal, drains, pit toilets etc...
- d. \_\_\_\_\_ Plan what you will do to deal with the problem. Try to keep it simple so it is easier to achieve.
- e. \_\_\_\_\_ Try to identify why the problem is happening. Is it lack of knowledge, lack of rubbish bins, no rubbish collection, blocked drains, flies or mosquitoes breeding, poor maintenance etc.?

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 1.**

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## Answers to Lesson Activities

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### Answers to Activity 4.1

1. True
2. False
3. False
4. True
5. False

### Answers to Activity 4.2

Answers will vary

---

## References

1. Healthy Living in PNG, A. Sollien
2. Outcomes based Personal Development Grade 9, K. Rouse

## ANSWERS TO PRACTICE EXERCISES 1-4

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### Answers to Practice Exercise 1

1. Complete the following table:

Parts of body	What is used for washing?	Why washing these parts?
i. Underarms	Soap and water	To feel fresh and clean.
ii. Hair	Use soap and shampoo	Keep hair clean and free from lice.
iii. Fingernails	Soap, water and nail cutter	Keep nails short and clean, prevent germs
iv. Teeth	Toothpaste, toothbrush, sand, coconut husk, betel nut skin	To prevent bad breath and gum disease

2. Answer the following questions.

- Everyday
- Personal hygiene is what an individual does to keep clean in order to stay healthy.
- Remove it with a clean cloth or soft leaf
- It helps us prevent constipation
- They will encourage fungi to grow on the skin
- This will attract flies and spread disease

### Answers to Practice Exercise 2

- Nutrition is the study of food and how people feed themselves
- It affects the way we look and feel about ourselves
- Answers will vary
- False
- No. Because it is not a balanced meal
- List three (3) examples of carbohydrate foods
  - Rice, banana
  - Yam, cassava
  - Sago, cereals, bread etc.

### Answers to Practice Exercise 3

- the food was left in the warm sun and stayed out too long and got cold
  - the food wasn't cooked properly
- re-cooked the food while waiting or put it in the shade
- micro-organism
- Drink a lot of water
- People can get so weak and faint and young children can die because of losing so much water

### Answers to Practice Exercise 4

- Measures taken to keep places clean and healthy.
- Boil unsafe water before drinking
  - Cover food with proper lid
- Walk around your home and community
  - list all the places where;

- a. mosquitoes are breeding
  - b. flies are buzzing around
  - c. empty tins and bottles are lying around
- ii. Answers vary

4. Below are steps on how to deal with a sanitation problem. They are not in correct order in which they should appear therefore arrange in sequential order whichever comes first, 1, 2, 3 ...5 so as to solve a problem when need arises.

### STEPS IN DEALING WITH A SANITATION PROBLEM

- a. **4** Do the people want to make a change? You are more likely to be successful if the people involved see the problem and want to change. You will need to talk to people and ask questions to find this information:
- b. **5** Carry out your plan- keep it small at first. Then, if it is successful, you can extend it later.
- c. **1** Look around the community to find a suitable sanitation problem, for example, different kinds of rubbish disposal, drains, pit toilets etc...
- d. **3** Plan what you will do to deal with the problem. Try to keep it simple so it is easier to achieve.
- e. **2** Try to identify why the problem is happening. Is it lack of knowledge, lack of rubbish bins, no rubbish collection, blocked drains, flies or mosquitoes breeding, poor maintenance etc.?

## TOPIC 2

# COMMUNICABLE AND NON-COMMUNICABLE DISEASES

## TRADITIONAL GOVERNMENTS IN PAPUA NEW GUINEA

**In This Topic You Will Learn About:**

- Communicable Diseases
- Non-Communicable Diseases
- Effects of Diseases
- Health Practices

## **TOPIC 2: Communicable and Non-Communicable Diseases**

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In this Topic, you will learn about Communicable and Non-Communicable Diseases. You will:

- Defining communicable diseases
- Identifying communicable diseases
- Discussing ways to prevent communicable diseases
- Define non-communicable diseases.
- Identify non-communicable diseases
- Discuss ways to prevent non communicable diseases
- Identify effects of different diseases on the patient
- Identify effects of different diseases on the families, communities and the country
- Identify healthy practices and
- Discuss the importance of healthy practices

In doing so, you will find out more about the different kinds of diseases there are, what causes them, how to prevent them and how they affect those around us; our families, our community and the country as a whole.

We hope you will enjoy this Topic.

## Lesson 5: Communicable Diseases



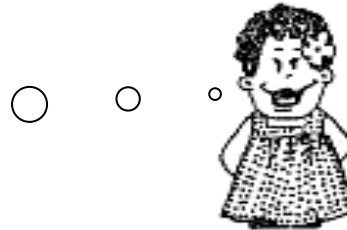
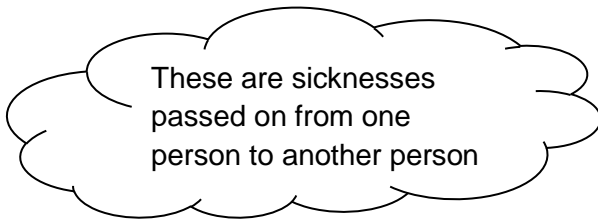
Welcome to lesson 5 of unit 3. In the last lesson you learnt about sanitation. In this lesson you will learn about communicable diseases.



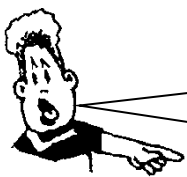
### Your Aims:

- defining communicable diseases
- identifying communicable diseases
- discussing ways to prevent communicable diseases

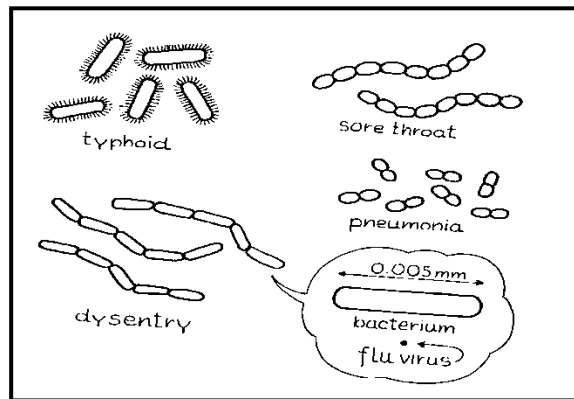
### What are communicable diseases?



Communicable diseases are also referred to as **infectious** or **contagious diseases**. Diseases are not caused by accidents. A **disease** is a disorder of your body and makes you unhealthy. When you have a disease, you feel sick and you have discomfort or pain because some part of your body is not working properly. Some diseases can even cause death.



**Look!** These are small organisms that can harm us through common infectious diseases



Bacteria that cause diseases

Some examples of communicable diseases are colds, flu, tuberculosis (TB), typhoid, sexually transmitted infections (STI) and HIV and AIDS.

Traditionally, people believed that evil spirits caused sickness. Sorcerers gave people plant mixtures to make them healthy. Some of these traditional medicines are still used and do make people healthy because the plants that are used have medicinal qualities.





### Activity 5.1

Write short answers to answer the following questions.

1. What are some communicable diseases?

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2. What causes these diseases?

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3. What is another term for communicable diseases?

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### Types of communicable disease

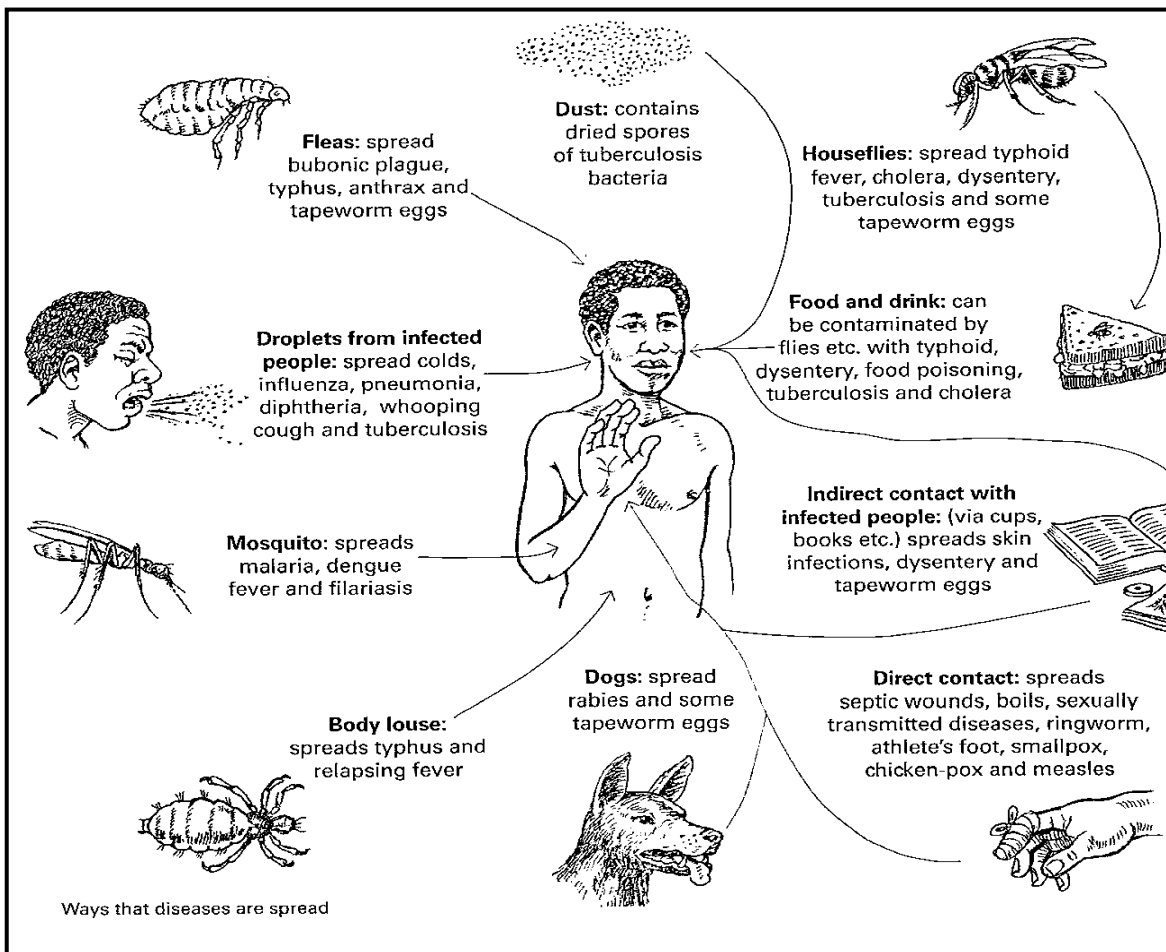
Because they are transmitted from person to person, there are many things that people do to prevent the spread of communicable diseases. These are shown in the table below:

#### Communicable diseases: transmission and prevention

Disease	How is it caused?	How is it spread or transmitted?	Sign and symptoms	How is it prevented?
Tinea, sipoma or ringworm	A fungus that lives on the skin	Direct contact between people, sharing clothes, towels, bed sheets	Growth of rings on skin	Do not share clothes, towels and bed sheets.
Malaria	Microbes called protozoa	By <i>Anopheles</i> mosquitoes that usually bite at night	Fever, headaches, vomiting	Sleep under insecticide-impregnated bed nets. Try to avoid being bitten. Remove mosquito breeding places.
Colds and influenza	Microbes such as viruses	By droplets in the air when people cough or sneeze	Runny nose, cough, sore throat, headaches, temperature	Cover mouth when coughing or sneezing. Keep five meters away from infected people.
Gastroenteritis	Bacteria, viruses or food poisoning	Food and drink, cups and plates	Vomiting and diarrhea	Good hygiene and sanitation
Dengue or break bone fever	A virus	By Andes mosquitoes that bite in the day time	Fever, pains in joints	Get rid of mosquito breeding places.

Tuberculosis	Bacteria	Droplets in the air when people cough	Lose weight, spit blood	Cover mouth when coughing. Do not get close to infected people.
Typhoid	Bacteria	Food and drink	Vomiting and diarrhea	Good hygiene and sanitation.
Scabies	Small animal called a mite	Direct contact from person to person	Itchy sores, usually between the fingers	Good hygiene and sanitation.
Sexually transmitted infections	Bacteria, viruses	Sexual contact	Pain when urinating, Sores, pus, may be unable to have children	Have only one partner, use condoms

This flow diagram shows ways of diseases being spread. Do you think this information is important to know about? Yes, of course so that it helps you to take safety measures to protect yourself from these diseases. As the saying goes ***prevention is better than cure.***



Ways that diseases are spread



**Activity 5.2**

Match the common diseases in column A with the way they are spread in column B by drawing an arrow that links the two together.

**Column A**

- 1. \_\_\_\_\_ Malaria -
- 2. \_\_\_\_\_ Grille -
- 3. \_\_\_\_\_ Gastroenteritis -
- 4. \_\_\_\_\_ Typhoid -
- 5. \_\_\_\_\_ Tuberculosis -

**Column B**

- a) coughing that puts droplets into the air
- b) eating contaminated food
- c) direct contact between people
- d) insects such as mosquitoes
- e) sharing cups and other utensils



**Activity 5.3 Short Answer Questions**

Write short answers to answer the following questions.

- a) Rabies \_\_\_\_\_
- b) Dengue \_\_\_\_\_
- c) Colds and flu \_\_\_\_\_

**Summary**



You have come to the end of lesson 5. In this lesson you have learnt that:

- A communicable disease is one that spreads from person to person.
- Colds, flu, tuberculosis (TB), typhoid, sexually transmitted infections (STI) and HIV and AIDS are types of communicable diseases.
- These communicable diseases can be prevented.

**NOW DO PRACTICE EXERCISE 5 ON THE NEXT PAGE**



## Answers to Lesson Activities

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### Activity 5.1

1. TB, malaria, typhoid, STIs, HIV and AIDS, colds and flu
2. Micro-organisms or microbes
3. Infectious or contagious diseases

### Activity 5.2

1. d
2. c
3. e
4. b
5. a

### Activity 5.3

- A. dogs
- B. mosquito
- C. droplets in the air from people

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## References

Healthy Living in PNG, Andrew Sollien

Outcomes Based Personal Development Grade 9, Kenneth Rouse,

Personal Development Grade 9, Dianne McInnis

## Lesson 6: Non-Communicable Diseases

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Welcome to lesson 6 of unit 3. In the last lesson you learnt about communicable diseases. In this lesson you will learn about non-communicable diseases.



### Your Aims:

- define non-communicable diseases.
  - identify non-communicable diseases and
  - discuss ways to prevent non-communicable diseases.
- 

### Types of Non-Communicable Diseases

A **non-communicable disease**, or **NCD**, is a medical condition or disease which by definition is **non-infectious** and **non-transmissible** among people. Non-communicable diseases are not caused by bacteria and viruses and do not spread from one person to another. It is not a contagious disease as well.

### Causes and risk factors

Risk factors such as a person's background; lifestyle and environment are known to increase the likelihood of certain non-communicable diseases. They include age, gender, genetics, exposure to air pollution, and behaviours such as smoking, unhealthy diet and physical inactivity which can lead to hypertension and obesity, in turn leading to increased risk of many NCD.

Some common types of non-communicable diseases and the factors that contribute to causing these diseases are:

### Cardiovascular diseases

This includes all the diseases of the heart and circulatory system such as heart disease, high blood pressure, blood vessel diseases such as heart attack and stroke, diabetes,

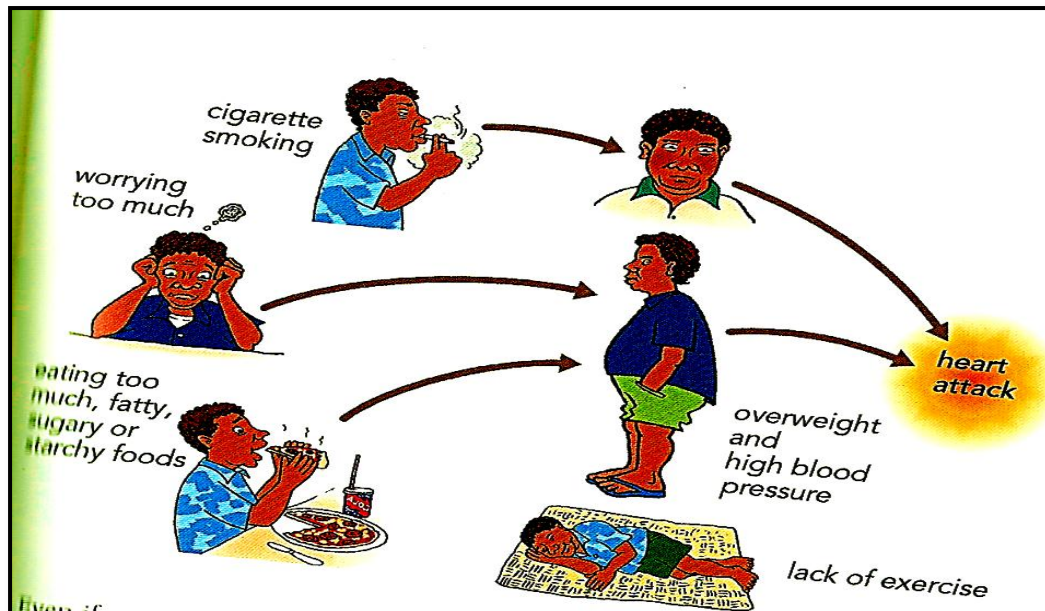


**Stroke:** a blockage in the blood flow in or to the brain.

**Heart attack:** a blockage in the blood flow that affects the heart's ability to work normally.

Environmental factors of cardiovascular disease are smoking, high blood pressure, lack of physical activity, high levels of cholesterol.

Groups at risk are smokers, overweight or obese people, people with high blood pressure, people over 65 years of age, people with low levels of education, people with a family history of CVD.



Lifestyle factors that contributes to heart attack

## Cancers

These are group of diseases that are characterized by the uncontrolled growth and spread of abnormal cells which includes lung cancer, breast cancer, bowel cancer, skin cancer and leukaemia, etc.

Lifestyle factors that contribute to cancer include smoking, excessive drinking, high fat, low fibre food selection

Environmental factors include exposure to carcinogenic chemicals, sustained and consistent exposure to the sun

Groups of people at risk are smokers, people who have high fatty and low fiber diets and people who spend long hours out in the sun.

**It is estimated that the main causes of cancer deaths are: tobacco (30%), poor diet (35%), reproductive and sexual behaviour (7%), work related (4%) and the environment (3%)**

## Injury and poisoning

This includes motor accidents, suicide, falls and drowning.

Environmental factors include unsafe workplace, unsafe behaviours and attitudes, Clumsiness, Alcohol, develop unsafe habits, lack of knowledge and skills, don't plan ahead and also take unnecessary risks.

Groups at risk include rural dwellers, elderly people ages 60 years and over and youth between the ages 15 and 24 year especially males.

## Asthma

A condition or disease where the bronchial tubes become narrowed and filled with extra mucus resulting in difficulty in breathing out, feels short breath, wheezes and coughs.

Environmental factors such as chemical irritants, allergies, stress, smokers, cold air, extreme weather changes, food preservatives, additives or clothing,

Groups at risk of asthma are children of people who smoke during pregnancy, people with allergies, people working with chemicals people living in areas subject to air pollution.



Asthma causes airways to narrow and therefore affects person ability to breathe easily. They say it feels like drowning on dry land.

## Malnutrition (poor diet diseases)

This includes high intake or low intake of nutrient consumption such as sugar, salt, saturated fats, and trans fatty acids, calcium, iron, etc.) and physical inactivity. The diseases that may result from poor nutritional habits are osteoporosis, hypertension, anaemia, obesity, rickets, scurvy, etc.

## Genetic disorders

These are caused by errors in genetic information that produce diseases in the affected people or problems that people are born with.

Non-communicable diseases may be chronic diseases of long duration and slow progression, or they may result in more rapid death such as some types of sudden stroke. Chronic diseases require chronic care management as do all diseases that are slow to develop and of long duration.

**Non communicable diseases have many different causes. They are not caused by bacteria and viruses and cannot be passed from one person to the other.**





### Activity 6.1

Filling in Blank spaces

1. Non- communicable diseases and their Risk Factors.

The non-communicable diseases that are listed in the table below have a number of causes called risk factors (life style or environmental factors that will probably cause the disease in a particular person). For each disease write down as many risk factors in the column headed 'Risk factors that cause this disease'.

<b>Non- Communicable diseases</b>	<b>Risk factors that cause this disease.</b>
Cardiovascular disease	
Skin cancer	
Asthma	
Injuries/ poisoning	
Anemia	
Osteoporosis	
Genetic disorders	
Breast cancer	

2. List down two factors that are known to increase the likely hood of certain non-communicable diseases.

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3. Which groups of people are mostly affected by the disease injury and poisoning?

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4. Which disease is a person born with or inherited from parents?

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## Causes and Prevention of Non-Communicable Diseases

Most non-communicable diseases are considered preventable because they are caused by changeable risk factors.



Walking is the best exercise for all human.

The common groups of non-communicable diseases are shown in the table below

<b>Non-communicable diseases: causes and prevention</b>		
<b>Non- communicable diseases</b>	<b>Causes</b>	<b>How it is prevented?</b>
Cardiovascular diseases (Diseases of the heart and circulatory system)	<ul style="list-style-type: none"> <li>- Smoking,</li> <li>- overweight, inactivity,</li> <li>- high levels of fats and cholesterol in your blood</li> <li>- high blood pressure</li> <li>- high stress levels</li> </ul>	<ul style="list-style-type: none"> <li>- Have an active lifestyle</li> <li>- Control your kilojoule intake</li> <li>- Reduce fat, salt and sugar intake</li> <li>- Increase intake of fiber to lower blood cholesterol</li> <li>- Reduce stress</li> <li>- Cut down on smoking and drinking alcohol</li> </ul>
<b>Cancers</b> <ul style="list-style-type: none"> <li>- skin cancer</li> <li>- lung cancer</li> <li>- bowel cancer</li> <li>- Breast cancer</li> <li>- Cervical cancer</li> </ul>	<ul style="list-style-type: none"> <li>- Radiation from the sun</li> <li>- Smoking ,alcohol, air pollution</li> <li>- High fat, low fiber food selection, alcohol and overweight</li> <li>- Overweight, gave birth later in life</li> <li>- Sexual intercourse at a young age, sexual intercourse with many partners</li> </ul>	<ul style="list-style-type: none"> <li>- Avoid the sun in the middle of the day</li> <li>- Protect your skin from skin against ultraviolet (UV) rays</li> <li>-</li> <li>- Avoid tobacco products</li> <li>- Have a nutritious diet</li> <li>- Exercise</li> </ul>
Injury and Poisoning	<ul style="list-style-type: none"> <li>- Unsafe behaviours and attitudes</li> <li>- Clumsiness</li> <li>- Alcohol</li> <li>- Develop unsafe habits</li> <li>- Lack of knowledge and skills</li> <li>- Don't plan ahead</li> <li>- Take unnecessary risks</li> </ul>	<ul style="list-style-type: none"> <li>- Understand and follow the safety precautions</li> <li>- Know what the dangers are</li> <li>- minimize number of ways risks taken</li> <li>- be assertive</li> <li>- use safety equipment</li> <li>- know you limitations</li> <li>- plan ahead</li> </ul>

Asthma	<ul style="list-style-type: none"> <li>- Hereditary</li> <li>- Sudden changes in climate</li> <li>- Nervous tension</li> <li>- Environmental pollution</li> <li>- Smoking</li> <li>- Other allergies such as pollen, animal hair, insecticide spray, food additives, cosmetics, etc.</li> <li>- Obesity</li> <li>- stress</li> </ul>	<ul style="list-style-type: none"> <li>- keep aerobically fit</li> <li>- avoid allergens such as smog, smokes and fumes</li> <li>- seek treatment quickly if an attack occurs</li> <li>- avoid food and drinks containing artificial additives</li> <li>- eat natural foods</li> <li>- take prescribed asthma medication</li> <li>- develop an asthma action plan</li> </ul>
Malnutrition anaemia, osteoporosis, Obesity. Diabetes, heart disease, bowel cancer, hypertension, etc.	<p>Poor diets (high nutrient intake or low nutrient intake of nutrients such as iron, calcium, vitamin D, fats, fiber,, complex carbohydrate, etc.)</p> <p>Lack of iron</p> <p>Lack of calcium, vitamin D</p>	<ul style="list-style-type: none"> <li>- eat a balanced meal or (eat foods from the 5 food groups)</li> <li>- Increase the consumption of specific nutrient lacking that causes the disease. (E.g., osteoporosis take in foods containing calcium)</li> <li>- Reduce the amount of nutrient that is in high levels causing the disease.</li> </ul>
Genetic disorders	Errors in genetic information	Cannot prevent diseases that are inherited from parents.



### Activity 6.2

Write short answers to answer the following questions.

1. List down at least 5 non-communicable diseases that are common in PNG?

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2. How should people prevent themselves from having asthma?

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3. Which non-communicable disease is a person more likely to get if he consumes alcohol excessively and is a heavy smoker?

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4. How should we prevent diseases that are related to poor diet?

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## Summary

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You have come to the end of lesson 6. In this lesson you have learnt that:

- A ***non-communicable disease***, is a medical condition or disease which by definition is **non-infectious** and does not pass from one person to the other
- A ***non-communicable disease*** is abbreviated as ***NCD***
- Factor that contribute to non-communicable disease include hereditary, lifestyle and environment, etc.
- These categories of factors include a number of risk factors such as age, gender, genetics, exposure to air pollution, and behaviours such as smoking, unhealthy diet and physical inactivity which can lead to hypertension and obesity, in turn leading to increased risk of many NCD.
- Most non-communicable diseases can be preventable because they are caused by changeable risk factors.

**NOW DO PRACTICE EXERCISE 6 ON THE NEXT PAGE**



### Practice Exercise 6

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1. Define the term non-communicable disease.

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2. Make a list of the heart disease risk factors.

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3. How can these risk factors be prevented?

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4. List down at least different types of cancers and describe each of them briefly.

i) 

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ii) 

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iii) 

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5. Find out about a non-communicable disease that is found in your area. Describe the disease, the effect that it has on the person and how it can be treated?

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**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 2.**

## Answers to Lesson Activities

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### Activity 6.1

#### 1. Non-communicable diseases and their Risk Factors.

Non-Communicable diseases	Risk factors that cause this disease.
Cardiovascular disease	<ul style="list-style-type: none"> <li>- Smoking,</li> <li>- overweight, inactivity,</li> <li>- high levels of fats and cholesterol in your blood</li> <li>- high blood pressure</li> <li>- high stress levels</li> </ul>
Skin cancer	<ul style="list-style-type: none"> <li>- Radiation from the sun</li> </ul>
Asthma	<ul style="list-style-type: none"> <li>- Hereditary</li> <li>- Sudden changes in climate</li> <li>- Nervous tension</li> <li>- Environmental pollution</li> <li>- Smoking</li> <li>- Other allergies such as pollen, animal hair, insecticide spray, food additives, cosmetics, etc.</li> <li>- Obesity</li> <li>- stress</li> </ul>
Injuries/ poisoning	<ul style="list-style-type: none"> <li>- Unsafe behaviours and attitudes</li> <li>- Clumsiness</li> <li>- Alcohol</li> <li>- Develop unsafe habits</li> <li>- Lack of knowledge and skills</li> <li>- Don't plan ahead</li> <li>- Take unnecessary risks</li> </ul>
Anemia	Poor diets (low nutrient intake of nutrients such as iron)
Osteoporosis	Poor diets (low nutrient intake of nutrients such as calcium, vitamin D)
Genetic disorders	Errors in genetic information
Breast cancer	<ul style="list-style-type: none"> <li>- Overweight, gave birth later in life</li> </ul>

2. Environmental and lifestyle factors
3. Groups at risk include rural dwellers, elderly people ages 60 years and over and youth between the ages 15 and 24 year especially males.
4. Genetic disorder

### Answers to Activity 6.2

1. Asthma, skin cancer, lung cancer, breast cancer, heart disease, malnutrition etc.
2.
  - keep aerobically fit
  - avoid allergens such as smog, smokes and fumes
  - seek treatment quickly if an attack occurs
  - avoid food and drinks containing artificial additives
  - eat natural foods
  - take prescribed asthma medication
  - develop an asthma action plan
3. Cardiovascular disease or heart disease, lung cancer, asthma
4. By eating a balanced meal or consuming foods from the five food groups.

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[http://en.wikipedia.org/wiki/non-communicable\\_disease](http://en.wikipedia.org/wiki/non-communicable_disease)

[www.euro.who.int>noncommunicable](http://www.euro.who.int/noncommunicable_diseases) diseases>NCD background information

[www.livestrong.com>home](http://www.livestrong.com/home) diseases & Health Conditions> mental health disorders

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## Lesson 7: Effects of Diseases

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Welcome to lesson 7 of unit 3. In the last lesson you learnt about non-communicable diseases. In this lesson you will learn about effects of diseases.



### Your Aims:

- identify effects of different diseases on the patient
  - identify effects of different diseases on the families, communities and the country
- 

### How drugs affect your health

Drugs affect people differently. Two people can use the same drug at the same time but can experience different effects. How drugs affect a person is influenced by a number of facts, including:

- How much is used
- Height and body weight
- Past experience with the drug
- Mood
- The strength of the drug
- State of health when taking the drug
- Whether the drug is used on its own or with other drugs
- The environment – whether used alone or with others, at home or at a party.

All drugs, including prescription medicines, have the potential to negatively affect your health if not used correctly. Long-term misuse or abuse of a drug can lead to damage to your body and even death.

### Their drugs, not yours!

Often, one person's drug use can affect the health and well-being of others., even those who choose not to use drugs.

- **Passive smoking** can cause cancer in people breathing second-hand smoke
- **Drink driving** can lead to other people being injured or killed

One person's drug use can affect other people in many ways, including

- Accidents and injuries
- Health problems such as cancer from passive smoking
- Aggressive or violent behaviour towards others
- Domestic violence
- Family breakdown
- Family financial problems
- Sexual assault
- Crime – such as break ins and theft
- Littering and environmental damage (for example, discarded cigarette butts, needles or bottles)





Passive smoking is one example of how other people’s drug use can affect you.

**PASSIVE SMOKING**, is when a non-smoker is breathing in the second-hand smoke from a smoker or the smoke from a burning cigarette

**Health Fact**

Medicines were developed to improve your health by fighting disease and infection and helping your body to heal. Medications are misused when a person does not follow the instructions given by the doctor or chemist, or when someone uses medication that was not prescribed for them.



**Activity 7.1**

Write short answers to the following questions.

1. What is passive smoking?

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2. What do you think the phrase, “their drugs, not yours,” mean?

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3. In your own words, explain how one person’s drug use can affect others in:

(a) An accident:

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(b) Family financial problems:

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(c) Domestic violence:

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## Summary

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You have come to the end of lesson 7. In this lesson you have learnt that:

- Drugs affect people differently.
- Two people can use the same drug at the same time but can experience different effects.
- Passive smoking, is when a non-smoker is breathing in the second-hand smoke from a smoker or the smoke from a burning cigarette
- Long-term misuse or abuse of a drug can lead to damage to your body and even death.

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**NOW DO PRACTICE EXERCISE 7 ON THE NEXT PAGE**



### Practice Exercise 7

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How drugs affect a person is influenced by a number of facts. In your own words, give examples of how drugs can affect a person in the following situations.

1. How much drug is used.

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2. The environment – whether used alone or with others, at home or at a party

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3. The strength of the drug.

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**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 2.**

## Answers to Lesson Activities

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### Answers to Activity 7.1

1. Passive smoking is when a non-smoker is breathing in the second-hand smoke from a smoker or the smoke from a burning cigarette.
2. Their Drugs, Not Yours, is a phrase that refers to how innocent people can be affected by the use of drugs by other people such as passive smoking and drink driving.
3. (A to C) Individual answers may vary. No standard answer.

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[www.euro.who.int>noncommunicable](http://www.euro.who.int/noncommunicable_diseases) diseases>NCD background information

[www.livestrong.com>home](http://www.livestrong.com/home) diseases & Health Conditions> mental health disorders

## Lesson 8: Healthy Practices

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Welcome to lesson 8 of unit 3. In the last lesson you learnt about effects of diseases. In this lesson you will learn about healthy practices.



### Your Aims:

- identify healthy practices
  - discuss the importance of healthy practices
- 

## Health

Think about the term health. You probably thinking of many different things rather than one thing in particular. Health is a very broad term and the world organization (WHO) defines it as a 'state of complete physical, mental and social wellbeing. If you are healthy, you are not just disease free, you have optimum social, physical and mental wellbeing – you feel great.

### What we need for a healthy life style

A healthy lifestyle means that everyone must:

- ✓ Live in a clean environment
- ✓ Have a healthy diet
- ✓ Have good personal hygiene

### A healthy Environment

Our natural environment has everything we need to stay alive. It has air to breath, water to drink and food to eat. Preserving the natural environment will reward us with clean water and land for growing food that will support us to live longer, healthier lives. The environment must be looked after so that we and future generations can continue to live in it. The consequences of polluting the natural environment include air, water and land pollution. Polluting the environment causes health problems.

#### Air pollution

- Breathing in polluted air affects our lungs and makes us sick
- Burning bushes/trees/ rubbish releases toxic chemicals into the air that also affect our lungs and are irritating to the eyes

#### Water pollution

- Chemicals released from the mining activities into the river pollute and contaminate the same water that people use for washing and drinking. This is the same river where people catch fish to eat.
- Rivers and canals become breeding grounds or disease- producing germs when industrial and household wastes are dumped in them. These germs can give you diarrhoea, typhoid fever, stomach and liver sickness and food poisoning.

**Land pollution**

The use of too many fertilizers, pesticides and other chemicals destroy the soil, plant and animal life, and may lead to fatal diseases. Pesticides and poisons which can be enter water or food webs, when the animal feeds or drinks, the chemical enter the body. People then eat these animals and can be exposed to these poisons.

In your community, everyone should:

- Organize activities to protect the environment, keep it a healthy place to live in.
- Plant trees and vegetables on vacant land and avoid using chemical fertilizers or pesticides.



**Towards a clean home environment**

To plan a healthy lifestyle everyone needs to live in a clean environment. This means that:

- The house needs to be well maintained, clean and free of pests
- The house must be adequate size for the number of people living there
- The house must be free of rubbish – rubbish can be buried if not recycled
- There is good land drainage to prevent mosquito’s from breeding
- There is a good supply of clean water
- People are able dispose of rubbish correctly

At home, everyone should:

- Dispose of rubbish properly
- Avoid rubbish in river, canals or ponds and
- Bury rubbish that cannot be reused or disposed of in another way



**Activity 8.1**

Write short answers to answer the following questions.

1. What does a healthy lifestyle mean?

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2. Why should we preserve our natural environment?

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3. How can you keep your home environment clean?

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## Towards a healthy diet

To plan a healthy diet everyone needs to:

- Plan meals so that the right foods are eaten. A nutritious meal is a mixed diet including foods from all the five groups of foods
- Plan gardens so that the right foods can be grown
- Budget family income so that the foods that cannot be grown can be purchased
- Exercise regularly, regardless of your weight
- Avoid sweets and other fatty foods.
- Eat a lot of fruits and vegetables. They will keep you healthy and protect you from contracting diseases.

## Important points to remember



- Proper budgeting is essential to ensure that there is always enough money for all necessities such as food, school fees and emergencies.
- Whenever possible, nutritious foods should be grown in the family garden for home eating.

- Money should not be wasted on non-nutritious foods or unhealthy activities such as gambling or drinking alcohol.
- Families should remember to buy food from the least expensive shops.



### To make food budget, a family needs to know:

- **How much food each member of the family requires each day**
- **The total food required by the family**
- **The cost of the foods eaten by the family**

## Towards personal hygiene

Living a healthy life means taking care of yourself mentally, spiritually socially and physically. For good personal hygiene, you need to have clean teeth, and wash your hands. Strong teeth and healthy gums are vital if you are able to break down and digest foods. Your teeth will last longer if you eat the right foods. Food like meat, fish eggs, milk and vegetables are good for strong teeth. Avoid sweetened drinks and too many sweets. If you want to eat sweets things eat coconut and sugarcane as they are good for strengthening the teeth.

Don't forget

- ✓ Clean your teeth after breakfast, after lunch, and after dinner. Use a toothpick or dental floss. Germs live on dirty teeth-don't give them any chances
- ✓ That a fresh breath means clean mouth and teeth
- ✓ Visit a dentist at least once a year

**Wash hands before eating**

Germs are microscopic and live dirty places where you cannot see them. They can make you very sick. You can catch germs by eating food with dirty hands.

Remember to wash your hands

- ✓ Before eating or touching food
- ✓ After using the toilet
- ✓ After playing

**Wash your wounds with soap and water**

Always wash hands to keep them clean and free of infection. A wound is open cut-small, big or deep. Keep wounds covered.

Remember:

- ✓ Wash your wounds with soap and water
- ✓ Ensure you receive antibiotics from your doctor or health centre if the wound becomes red or swollen, has pus(yellowish fluid coming out of it) and gives you pain

For burn wounds, it is advisable to pour cold water on the burn or place it in a cold water for at least five minutes or visit a health centre

**Sources of health advice**

Whenever you have health concerns or need extra health information, you can use a number of sources

- Your parents
- Your doctor
- Your school your community counsellor
- Your chemist
- Your school or local library



**Activity 8.2**

Write short answers to answer the following questions.

1. List down two important ways of planning a healthy diet.

i. \_\_\_\_\_

ii. \_\_\_\_\_

\_\_\_\_\_



iii. \_\_\_\_\_  
\_\_\_\_\_

2. Why should you wash your hands before eating?

\_\_\_\_\_  
\_\_\_\_\_

3. What should you do if you have burn wound?

\_\_\_\_\_  
\_\_\_\_\_

4. What does it mean by having a good personal hygiene?

\_\_\_\_\_  
\_\_\_\_\_

### Summary

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You have come to the end of lesson 7. In this lesson you have learnt that:

- Health defined by world organization (WHO) is a 'state of complete physical, mental and social wellbeing.
- If you are healthy, you are not just disease free, you have optimum social, physical and mental wellbeing
  
- A healthy lifestyle means that everyone must:
  - ✓ Live in a clean environment
  - ✓ Have a healthy diet
  - ✓ Have good personal hygiene
  
- The consequences of polluting the natural environment include air, water and land pollution.
  
- For good personal hygiene, you need to have clean teeth, and wash your hands always before eating after playing and after using the toilet.
  
- Seek help from parents, a doctor, a health workers, school, community counsellor, chemist Your school or local library

**NOW DO PRACTICE EXERCISE 8 ON THE NEXT PAGE**



### Practice Exercise 8

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1. Define the term health.

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2. How should you contribute in making the environment around you healthy?

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3. What should the community do to keep the environment healthy?

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4. List down the sources you are able to seek for extra health information.

iv) \_\_\_\_\_  
v) \_\_\_\_\_  
vi) \_\_\_\_\_

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 2.**

## Answers to Lesson Activities

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### Answers to Activity 8.1

1. A healthy lifestyle means that everyone must:

- ✓ Live in a clean environment
- ✓ Have a healthy diet
- ✓ Have good personal hygiene

2. Preserving the natural environment will reward us with clean water and land for growing food that will support us to live longer, healthier lives. The environment must be looked after so that we and future generations can continue to live in it.

3. Individual answers may vary. No standard answers.

However the following may be some possible answers.

- The house needs to be well maintained, clean and free of pests
- The house must be adequate size for the number of people living there
- The house must be free of rubbish – rubbish can be buried if not recycled
- There is good land drainage to prevent mosquitos from breeding
- There is a good supply of clean water
- People are able dispose of rubbish correctly

### Answers to Activity 8.2

1. The following are the possible answers.

- Plan meals so that the right foods are eaten. A nutritious meal is a mixed diet including foods from all the five groups of foods
- Plan gardens so that the right foods can be grown
- Budget family income so that the foods that cannot be grown can be purchased
- Exercise regularly, regardless of your weight
- Avoid sweets and other fatty foods.
- Eat a lot of fruits and vegetables. They will keep you healthy and protect you from contracting diseases.

2. You can catch germs by eating food with dirty hands that can make you sick.

3. For burn wounds, it is advisable to pour cold water on the burn or place it in cold water for at least five minutes or visit a health centre

4. For good personal hygiene, you need to have clean teeth, and wash your hands. Strong teeth and healthy gums are vital if you are able to break down and digest foods. Your teeth will last longer if you eat the right foods. Food like meat, fish eggs, milk and vegetables are good for strong teeth. Avoid sweetened drinks and too many sweets. If you want to eat sweets things eat coconut and sugarcane as they are good for strengthening the teeth.

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## Answers to Practice Exercises 5-8

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### Answers to Practice Exercise 5

Yes, it can because it is spread through air. People who have TB spit and the germs are released in the air which is then breathed in by other people. This is very dangerous because a lot of people can be able to get this disease very easily through this bad attitude.

### Answers to Practice Exercise 6

1. Non- communicable diseases are not infectious and cannot be passed from one person to the other.

2. Heart disease risk factors are

- Smoking
- Overweight
- inactivity
- high levels of fat s and cholesterol in your blood
- high blood pressure
- high stress levels

3. These factors can be prevented by

- Have an active lifestyle
- Control your kilojoule intake
- Reduce fat, salt and sugar intake
- Reduce stress
- Cut down on smoking and drinking alcohol

4. Possible answers are:

Skin cancer - Radiation from the sun

Lung cancer- Smoking, alcohol, air pollution

Bowel cancer-High fat, low fiber food selection, alcohol and overweight

Breast cancer-Over weight, gave birth later in life

Cervical cancer-Sexual intercourse at a young age, sexual intercourse with many partners

5. Individual answers may vary. No standard answers.

### Answers to Practice Exercise 7

(Question 1 to 3) Individual answers may vary. No standard answer.

### Answers to Practice Exercise 8

1. Health defined by world organization (WHO) is a 'state of complete physical, mental and social wellbeing.

2. Individual answers may vary. No standard answers.

3. In your community, everyone should:

- Organize activities to protect the environment. Keep it a healthy place to live in.
- Plant trees and vegetables on vacant land and avoid using chemical fertilizers or pesticides

- 4.
- Your parents
  - Your doctor
  - Your school your community counsellor
  - Your chemist
  - Your school or local library

## TOPIC 3

### FIRST AID AND SAFETY

**In This Topic You Will Learn About:**

- Importance of First Aid
- First Aid Procedures
- Safety-Types and Practices

## **TOPIC 3: First Aid and Safety**

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In this Topic, you will learn about First Aid and Safety. You will:

- Define First Aid
- Discuss why first aid is important
- Define DRABC
- Identify the strategy
- Define DRABC
- Identify the DRABC process in first aid
- Define safety
- Identify types of safety methods in personal lives

In doing so, you will find out more about what first aid is, why it is important, the first aid procedures and the types of safety and their practices.

We hope you will enjoy this Topic.

## Lesson 9: The Importance of First Aid

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Welcome to lesson 9 of unit 3. In the last lesson you learnt about healthy practices. In this lesson you will learn about the importance of first aid.



### Your Aims:

- define first aid
- discuss why first aid is important
- identify the strategy

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### First Aid

Learning about first aid is very important because you may be put into a situation where someone has had an accident in the home – mainly burns, scalds, poisoning, falls, cuts and electrocution or is suffering from an illness and needs help until medical assistance arrives. Would you know what to do if one of these situations occurred? Some of these accidents are life threatening and it would be wise to have a sound knowledge of safety procedures and first aid.

### What is first aid?



First aid is the immediate help given to a victim of an accident, sudden illness, or other medical emergency

The most obvious aim of first aid is to save lives. This aim can be simplified into four Ps which can be referred to as:



What are the four principles of first aid?

### ***The four principles of first aid are:***

1. Preserve life
2. Protect the unconscious
3. Prevent the injury or illness from becoming worse
4. Promote recovery.

### ***What does each of these mean?***



- *Preserve life:* the first aider should have knowledge to keep the injured person alive if there is a life threatening situation.
- *Protect the unconscious:* make sure to move the person away from danger and placed in a position where the injury or illness will not get worse.
- *Prevent injury or illness becoming worse:* the injured should be attended to in order to prevent complications arising from the injury or illness (that is, bleeding should be stopped)
- *Promote recovery:* by talking to the injured person and keeping those comfortable and arranging for emergency care can speed up recovery. In most cases, a qualified person is needed for assistance but in the case when a situation arises then bystanders should be sent to seek medical advice or if you are alone you must attend to the injured person and then seek medical help as soon as possible.



### Activity 9.1

Write short answers to answer the following questions.

1. What is the aim of first aid?

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2. The immediate response given to someone who is injured is called

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3. When a person is injured and is in danger, what principle will you follow?

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4. Which principle will speed up recovery when a person is injured?

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### The importance of first aid

Proper first aid can save a person's life, especially if the person is bleeding badly, has stopped breathing, or has been poisoned. First aid can also prevent the development of additional medical problems that might result from an injury or illness. It is also about using your common sense to help injured people without doing harm to them or yourself.

Emergency treatment should be done by the person on the scene who has the best knowledge of first aid, while someone else goes for help. The treatment should be continued until professional medical help is available. First aid involves reassuring the injured person, relieving the pain and moving the person, if necessary, to a hospital or clinic.

Some examples of situations that need first aid are shown in the table below:

Sickness or injury	What happens to the person	What you should do
Wounds	Skin is cut by barbed wire, animal claw, razor blade or knife. Skin is speared by garden tool or nail.	Stop or slow the bleeding. Clean wound. Do not remove any sharp object that is inside. Cover with a clean dressing. Get medical help.
Fractures	Bone is broken and may show through the skin. Bleeding – but this may not be seen when it is inside. Pain, swelling, shape of arm or leg looks wrong, unable to move properly.	Use DRABC (see page 5) Stop or slow the bleeding. Immobilize (prevent any movement) Get medical.
Poisons	The person swallows, inhales or absorbs harmful substance through the skin. May cause headache, dizziness, yawning, reduced vision, nausea, vomiting, rapid pulse, difficulty breathing, red skin or burns.	Be careful of danger to yourself. Remove person from the area. Use DRABC (see page 5) Get medical help.
Bites (e.g. snake)	Puncture marks (holes) and pain at site. Swelling, headache, muscle weakness, difficult breathing, shock.	Comfort the person. Wrap up with a tight bandage above the bite and along the arm or leg. Put the arm in a sling or the leg in splint to stop it moving. Get medical help.
Stings (e.g. stonefish)	Very bad pain, swelling, skin looks grey or blue, may be an open wound. Person behaves in a strange way.	Put the injured area under hot water. Use DRABC (see page 5) Get medical help.

It is also important to protect yourself when performing first aid. Check the following points.

1. Wash hands before you help so that dirt and germs on your hands do not get into a wound and wash hands after to remove blood or germs that got onto hands.
2. Wear plastic gloves or a plastic bag for protection.
3. Cover any cuts with a waterproof covering before performing any first aid on an injured person.



### Activity 9.2

Fill in the blanks with the correct word.

1. First aid is performed when there is a \_\_\_\_\_ person or when someone is bleeding badly.
2. First aid can help save a person's \_\_\_\_\_.
3. \_\_\_\_\_ caused by a snake can be identified by puncture marks and pain.

## Summary

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You have come to the end of lesson 9. In this lesson you have learnt that:

- First aid is the immediate help given to an injured person
- First aid is done to save lives
- A person with first aid knowledge should be the very one to perform it
- The four principles of first aid are:
  1. preserve life
  2. protect the unconscious
  3. prevent the injury or illness from becoming worse
  4. promote recovery.

**NOW DO PRACTICE EXERCISE 9 ON THE NEXT PAGE**

---

**Practice Exercise 9**

---



Read the story and answer the questions.

**Andrew's snake bite experience**

I went home to my village to build a house. As it was late afternoon, the carpenter and I decided to go to the river to catch some fish to eat.

The path to the river was very difficult to follow as the grass was very high with overhanging vines and creepers making it difficult to walk. As I stopped to catch my breath I heard a rustling sound in the grass and before I could react I felt a pair of fangs sinking into my left foot.

It was now a matter of survival and I did all the *wrong* things.

First of all, I tied a strip of cloth around my ankle to stop the poison from flowing upward to my heart.

Second, I panicked and used a blunt knife to cut my veins with the intent to bleed the poison out.

Worst of all, the carpenter bravely held my wound to his mouth and tried to suck out the venom.

'Just help me to the house,' I said to the old man and he shouldered me home.

Blood flowed out from my wounds like an open tap. The cloth I had tied around my ankle couldn't stop the bleeding.

It seemed like an eternity until we arrived at the house and again I did the most stupid thing. I asked for a razor blade and used it to cut above my ankle, slicing through my flesh up to my thighs. If I had some basic first aid knowledge I would have known that once bitten, never cut yourself because it only helps the poison to get into the blood more quickly.

Thankfully help arrived and the entire village came to my aid. My brother stopped a car and it brought us to Port Moresby General Hospital where I was admitted.

I spent two whole weeks in the Intensive Care Unit and decided that if I got well again I would undertake a first aid course and make people aware of potential health dangers and how to deal with them.

Answer the following questions.

1. What are the wrong things Andrew did?

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2. What should Andrew have done to the snake bite?

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3. Andrew realized what was important in this situation and which taught him a lesson. What did he decide to do after being discharged?

---

---

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4. Give 3 examples of potential health dangers.

- i. 

---
- ii. 

---
- iii. 

---

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 3.**

## Answers to Lesson Activities

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### Answers to Activity 9.1

1. To save lives
2. First aid
3. Protect the unconscious
4. Promote recovery

### Answers to Activity 9.2

1. Injured
2. Life
3. Bites

### Answers to Activity 9.3

1. c
2. d
3. e
4. b
5. a

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Basic First Aid in Papua New Guinea, Andrew Sollien

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## Lesson 10: First Aid Procedures

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Welcome to lesson 10 of unit 3. In the last lesson you learnt about the importance of first aid. In this lesson you will learn about first aid procedures.



### Your Aims:

- define DRABC
- identify the DRABC process in first aid

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### DRABC

DRABC is a basic life support flowchart that can be remembered easily as in the cartoon.

You can remember the order of first aid (DRABC) by thinking Of Doctor (Dr.) ABC



When you approach the scene of an accident or emergency, follow the DRABC Action Plan. What is DRABC? DRABC stands for Danger, Response, Airway, Breathing, and Circulation.

First attend to the most urgent needs:

- D DANGER:** Check for danger, risks, or hazards to yourself, the injured person or anyone nearby. Remove the person from danger e.g. from electricity. Always ensure the safety of everyone.
- R RESPONSE:** Check if the person is unconscious by shouting, 'Can you hear me? Open your eyes', and gently shake the shoulders. If there is no response, shout for help then follow the ABC (airway-breathing-circulation) procedure.
- A AIRWAY:** Open the airway by placing one hand on the injured person's forehead and gently tilting the head back. Check the mouth for anything that may be blocking it, then lift the chin using two fingers. Look for signs of life and movement. No signs of life will mean the injured person is not moving, unconscious, unresponsive and not breathing normally.

**B BREATHING:** If the **person is breathing**, support the head and neck, then carefully place the person in the recovery position. If the person is **not breathing** normally, follow these steps:

1. Kneel beside the injured person's head, lift their chin and tilt their head back, opening their mouth.
2. Using thumb and index finger, pinch their nose closed.
3. Take a breath, and place your lips on the injured person's mouth, ensuring good seal.
4. Blow steadily into their mouth for about one second.
5. Watch for their chest to rise.
6. Keep the person's head and chin tilted while you take your mouth away
7. Watch for the chest to fall.
8. Repeat steps 3 to 7.
9. Check if the injured person is breathing, moving and responding.
10. If there are no signs of life, start CPR (cardiopulmonary resuscitation)

**C CIRCULATION:** Give 30 compressions at the rate of almost two compressions per second, followed by two breaths. For a person over one year old, use the following procedure.

1. Put your hands in the center of the person's chest between the nipples.
2. Place one hand on top of the other.
3. Push down 30 times.
4. Continue with 2 breaths, then 30 pushes until a health worker arrives or the person starts moving.

For a baby under one year old, use two fingers (index and middle) of one hand not your whole hand.



**Next steps to take when:**

**UNCONSCIOUS:** place the person in the recovery position.

**BLEEDING:** control any bleeding

**FRACTURES:** splint all fractures and dress large wounds.

**To resuscitate a person means to make him or her conscious again after an accident or sudden illness.**





**Activity 10.1**

Match column A to column B by writing the letter on the space beside the term.

**Column A**

**Column B**

- |                      |   |                                             |
|----------------------|---|---------------------------------------------|
| 1. _____ Circulation | — | a. if the airway is blocked – clear it.     |
| 2. _____ Responses   | — | b. remove the person from hazards or risks. |
| 3. _____ Breathing   | — | c. if there is no pulse – start CPR.        |
| 4. _____ Danger      | — | d. check the person if conscious            |
| 5. _____ Airways     | — | e. start mouth -to – resuscitation          |

DRABC process when dealing with injured people.

The process of DRABC is:

- |          |                    |                                                   |
|----------|--------------------|---------------------------------------------------|
| <b>D</b> | <b>DANGER</b>      | remove the person from danger                     |
| <b>R</b> | <b>RESPONSE</b>    | check to see if the person is conscious           |
| <b>A</b> | <b>AIRWAYS</b>     | check to see if airway is clear – if not clear it |
| <b>B</b> | <b>BREATHING</b>   | start resuscitation if person is not breathing    |
| <b>C</b> | <b>CIRCULATION</b> | start cardiac arrest if there is no pulse         |

2. What does DRABC of the emergency plan of action mean?

D \_\_\_\_\_

R \_\_\_\_\_

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

**Summary**



You have come to the end of lesson 10. In this lesson you have learnt that:

- First aid is the immediate help given to an injured person
  - People administering first aid need to know how to apply the

**NOW DO PRACTICE EXERCISE 10 ON THE NEXT PAGE**



**Practice Exercise 10**

---

1. Explain the following:

i. CPR \_\_\_\_\_  
\_\_\_\_\_

ii. EAR \_\_\_\_\_  
\_\_\_\_\_

iii. ECC \_\_\_\_\_  
\_\_\_\_\_

2. How would you help a baby under one in an emergency situation?

\_\_\_\_\_  
\_\_\_\_\_

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 3.**

## Answers to Lesson Activities

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### Activity 10.1

1. DRABC means:

D is DANGER: check about danger to yourself, the casualty or the bystander

R is RESPONSE: check to see if any response from casualty

A is AIRWAY: to be checked and opened or cleared if blocked

B is BREATHING: to be checked and restored by EAR if absent

C is CIRCULATION: to be checked and restored by ECC if absent

---

### Reference

Health and Physical Education 1, 3<sup>rd</sup> Edition; Damien Davis, Tania Hamilton, Kim Bastone-Cook, Michelle Bradford

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[www.about.com/snf.htm?u=http://sportsmedicine.about.com/](http://www.about.com/snf.htm?u=http://sportsmedicine.about.com/)

## Lesson 11: Safety-Types and Practices

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Welcome to lesson 11 of unit 3. In the last lesson you learnt about first aid procedures. In this lesson you will learn about safety types and practices.



### Your Aims:

- define safety
  - identify types of safety methods
- 

### What is safety?

Before we go into detail on how to administer first aid, we should be reminded of one very important point. *Most accidents are preventable.* The golden rule of first aid is to be safety conscious. Safety is simply to protect someone or something from danger or harm. Common-sense safety rules can prevent many accidents. Your home is where most accidents occur; therefore you can be responsible for keeping your living environment safe by checking the level of safety and identifying any changes that can be made in your home.

### Safety methods:

#### Safety in the home:

- Store poisonous substances and medicines out of the reach of children.
- Provide guards for fires and radiators.
- Do not leave toys around the house so people can slip on them.
- Store firearms and explosives in safe areas, locked away from children.
- Turn handles on saucepans and other cooking containers away from the edges of the stove.
- Keep sharp knives and other sharp objects away from the reach of children.
- Keep toddlers out of the kitchen when anyone is cooking.
- Unplug electric cords when not in use.
- Keep electrical appliances in good order.
- Always run cold water into the bath before the hot water.
- Do not leave cigarette lighters or matches within reach of children.
- Plastic and plastic bags should be kept out of reach of children.

#### Safety in the backyard:

- Have a childproof fence around swimming pools – keep gate locked.
- People should never swim alone.
- Store pool chemicals safely away.
- Never run around the pool area.

- Never push people into the pool.
- Never dive in unless you know the depth of the water.
- Lock away all sharp or dangerous tools when not in use.
- Have dangerous or flammable liquids clearly marked,
- Do not leave ladders standing against walls.

### **Safety in the car and boat:**

- Ensure the car is roadworthy.
- Don't drive too far without taking a break.
- Make sure all passengers have seat belts correctly fitted, and that babies and small children are secured.
- Carry approved life jackets for all people on board.
- Inform someone responsible where you are going and when you intend to return.
- Check weather forecast.
- Carry sufficient fuel and water.

### **Safety in the school:**

- Children should never run along crowded walkways or corridors.
- Do not push or shove, especially on stairs or at the school gate.
- Never place bags or heavy items on railings under which people walk.
- Never run out from behind a parked bus or car.
- Wear protective clothing or protective glasses when using machines, particularly when grinding, turning or welding.
- Concentrate and be very careful when working with machines.

### **Outdoor sun safety:**

- Wear protective clothing such as hats and long shirts that cover the skin.
- Work outside during the early hours of the day and in the late afternoon when the sun is not so strong.
- Do not spend too much time out in an open area or field.
- Swim and sunbathe in the hours before 10 am and after 3pm.
- Use sunscreens, but be aware that they do not give complete protection.

### **Safety emergency plan:**

In an emergency situation, we have to have a set of priorities in our 'plan of action'. The most widely used plan of action is the DRABC plan, in which each letter stands for something a first 'aider' should do, and in the correct order.

#### **D → Danger**

- to yourself; to the casualty or injured person; to the bystander

**R → Response**

- gently shake and loudly shout;
- if casualty responds, check and control serious bleeding,
- if no response, proceed with ABC

**A → Airway**

- open the mouth
- clear if needed
- clear and open airway (tilt head and support jaw)

**B → Breathing**

- is the lower chest or abdomen rising and falling?
- can you hear breathing sounds?
- can you feel breathing?
- if casualty is breathing but not responding place in coma position
- if casualty is not breathing start expired air resuscitation (EAR), and external cardiac compression (ECC)

**C → Circulation**

- check carotid pulse
- if present, continue EAR
- if absent, begin cardio-pulmonary resuscitation (CPR)



**Activity 11.1 Short Answer Questions**

1. List three safety methods in each of the following situations:

a. Safety in the home

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

b. Safety in the backyard

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

c. Safety in the car and boat

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

d. Safety in the school

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

e. Outdoor sun safety

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

2. What does DRABC mean, the emergency plan of action?

- D \_\_\_\_\_
- R \_\_\_\_\_
- A \_\_\_\_\_
- B \_\_\_\_\_
- C \_\_\_\_\_

**Summary**



**You have come to the end of lesson 11. In this lesson you have learnt that:**

- You should be very aware of this rule: Every person has a responsibility to be alert to possible dangers and to do all in their power to prevent accidents to their own family and to other people.
- The golden rule of first aid is to be safety conscious. Safety is simply to protect someone or something from danger or harm.
- Common-sense safety rules can prevent many accidents. Your home is where most accidents occur; therefore you can be responsible for keeping your living environment safe by checking the level of safety and identifying any changes that can be made in your home.
- There are four main danger areas in the home;
  - the kitchen
  - the bathroom
  - the garage/storage area
  - the pool

**NOW DO PRACTICE EXERCISE 11 ON THE NEXT PAGE**

**Practice Exercise 11**

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**Explain the following:**

i. CPR \_\_\_\_\_  
\_\_\_\_\_

ii. EAR \_\_\_\_\_  
\_\_\_\_\_

iii. ECC \_\_\_\_\_  
\_\_\_\_\_

**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 3.**



## Answers to Lesson Activities

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### Activity 11.1

1. (Accept any three of the following answers)

**a. Safety in the home:**

- Store poisonous substances and medicines out of the reach of children.
- Provide guards for fires and radiators.
- Do not leave toys around the house so people can slip on them.
- Store firearms and explosives in safe areas, locked away from children.
- Turn handles on saucepans and other cooking containers away from the edges of the stove.
- Keep sharp knives and other sharp objects away from the reach of children.
- Keep toddlers out of the kitchen when anyone is cooking.
- Unplug electric cords when not in use.
- Keep electrical appliances in good order.
- Always run cold water into the bath before the hot water.
- Do not leave cigarette lighters or matches within reach of children.
- Plastic and plastic bags should be kept out of reach of children.

**b. Safety in the backyard**

- Have a childproof fence around swimming pools – keep gate locked.
- People should never swim alone.
- Store pool chemicals safely away.
- Never run around the pool area.
- Never push people into the pool.
- Never dive in unless you know the depth of the water.
- Lock away all sharp or dangerous tools when not in use.
- Have dangerous or flammable liquids clearly marked,
- Do not leave ladders standing against walls.

**c. Safety in the car and boat**

- Ensure the car is roadworthy.
- Don't drive too far without taking a break.
- Make sure all passengers have seat belts correctly fitted, and that babies and small children are secured.
- Carry approved life jackets for all people on board.
- Inform someone responsible where you are going and when you intend to return.
- Check weather forecast.
- Carry sufficient fuel and water.

**d. Safety in the school:**

- Children should never run along crowded walkways or corridors.
- Do not push or shove, especially on stairs or at the school gate.

- Never place bags or heavy items on railings under which people walk.
  - Never run out from behind a parked bus or car.
  - Wear protective clothing or protective glasses when using machines, particularly when grinding, turning or welding.
  - Concentrate and be very careful when working with machines.
- e. Outdoor sun safety**
- Wear protective clothing such as hats and long shirts that cover the skin.
  - Work outside during the early hours of the day and in the late afternoon when the sun is not so strong.
  - Do not spend too much time out in an open area or field.
  - Swim and sunbathe in the hours before 10 am and after 3pm.
  - Use sunscreens, but be aware that they do not give complete protection.

## 2. DRABC means:

D is DANGER: check about danger to yourself, the casualty or the bystander

R is RESPONSE: check to see if any response from casualty

A is AIRWAY: to be checked and opened or cleared if blocked

B is BREATHING: to be checked and restored by EAR if absent

C is CIRCULATION: to be checked and restored by ECC if absent

**Reference**

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[www.about.com/snf.htm?u=http://sportsmedicine.about.com/](http://www.about.com/snf.htm?u=http://sportsmedicine.about.com/)

## Answers to Practice Exercises 9-11

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### Answers to Practice Exercise 9

1. All the wrong things Andrew did are as follows:
  - Tied a strip of cloth around his ankle.
  - Cut his veins with a blunt knife
  - Venom was sucked out by the carpenter
  - He was carried by the carpenter on his shoulders
  - He cut above his ankle with a razor blade and slicing his flesh up to his thighs.
2. Andrew should have done the following:
  - Ask his uncle for comfort
  - Not to panic
  - Wrap with a cloth tightly above the bite
  - Put the leg in a splint to stop movement
  - Sent uncle for help to be carried correctly.
3. Andrew decided to take up a first aid course, give awareness to people on potential health dangers and how to deal with them.
4. Some potential health dangers are poison, stings, drowning and broken bones.  
**Note: students answers may vary and not the same as above.**

### Answers to Practice Exercise 10

1. i. CPR: Cardio-Pulmonary Resuscitation.  
The artificial maintenance of breathing and circulation. CPR can be performed by one person or two people.
  - ii. EAR: Expired Air Resuscitation.  
To maintain breathing of the casualty.
  - iii. ECC: External Cardiac Compression  
Used to revive and restart circulation of the casualty.
2. For a baby under one year old, use two fingers (index and middle) of one hand not your whole hand.

### Answers to Practice Exercise 11

- i. CPR: Cardio-Pulmonary Resuscitation.  
The artificial maintenance of breathing and circulation. CPR can be performed by one person or two people.
- ii. EAR: Expired Air Resuscitation.  
To maintain breathing of the casualty.
- iii. ECC: External Cardiac Compression  
Used to revive and restart circulation of the casualty.

## TOPIC 4

### DRUGS AND SUBSTANCE ABUSE

**In This Topic You Will Learn About:**

- Drugs and Substance Abuse
- Types of Drugs
- Advantages and Disadvantages of Drugs
- Effects of Drugs in the Community

## **TOPIC 4:     **Drugs and Substance Abuse****

---

In this Topic, you will learn about drugs and Substance Abuse. You will:

- Define drugs and substances
- Identify medical drugs and recreational drugs
- Identify different types of drugs
- Identify the difference between legal and illegal drugs
- identify the advantages and disadvantages of drugs
- Explain drug dependency and withdrawal
- Identify the positive and negative effects of drugs
- Identify ways to prevent or avoid harmful drugs

In doing so, you will find out more about the different types of drugs and substances, their advantages and disadvantages and the different effects they have on the community.

We hope you will enjoy this Topic.

## Lesson 12: Drugs and Substance

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Welcome to lesson 12 of unit 3. In the last lesson you learnt about safety types and practices. In this lesson you will learn about drugs and substances.



### Your Aims:

- define drugs and substances
- identify the difference between legal and illegal drugs
- identify legal and illegal drugs

---

### What is drug and substance abuse?

Drug or substance abuse is a common problem affecting many communities throughout the world. In some countries, like the United States of America, Health authorities have made it their top goal to address the problem by pumping money and other resources into drug education programs. In PNG drug and substance abuse is a growing concern for all communities. Much of the law and order problems we face throughout our country daily are a direct result of drug abuse.

Before we proceed further let us define the terms **Drug** and **Substance**.

**Drug or Substance is any chemical substance (with the exception of food and water) which when taken into the body changes its function either physically or mentally.**

In the medical field, drugs refer to all the medicines that are used in the prevention, diagnosis (identification), treatment or cure of diseases. These include painkillers, antibiotics, cough mixtures, skin ointments and many others. In addition, drugs also include natural plants like the *areca catechu* or *betel nut* or *buai* tree; the Cannabis plant from which *Marijuana* is derived and others. Drugs are chemicals and because of their chemical structures, they tend to affect the body in many different ways depending on the amount taken and the frequency in which they are taken. In many cases, some drugs change an individual's body and brain in ways that last long or permanently even after a person has stopped taking it.

The following are examples of drugs and substances that people abuse.



Fig 1. Injections & Pills



Fig 2. Tablets & Pills



Fig 3. Aerosol/Spray Cans



So how are drugs taken?

Depending on the drug, it can enter the human body in a number of ways. Drugs can be:



**1. Inhaled** or breathed-in. Nebulizer is drug that is inhaled by Asthma patients



**2. Ingested** or taken orally. Most medicines are taken through the mouth by drinking or swallowing, such as cough mixtures and painkillers.



**3. Injected** Certain medication like insulin can be given through injection.

The way in which a drug enters the body determines the effect it has on the person. For example, injection takes the drug directly into the blood stream producing an immediate effect, while ingestion takes a little longer for the drug to have an effect as it has to pass through the digestive system.



Mmm! So what does drug and substance abuse mean?



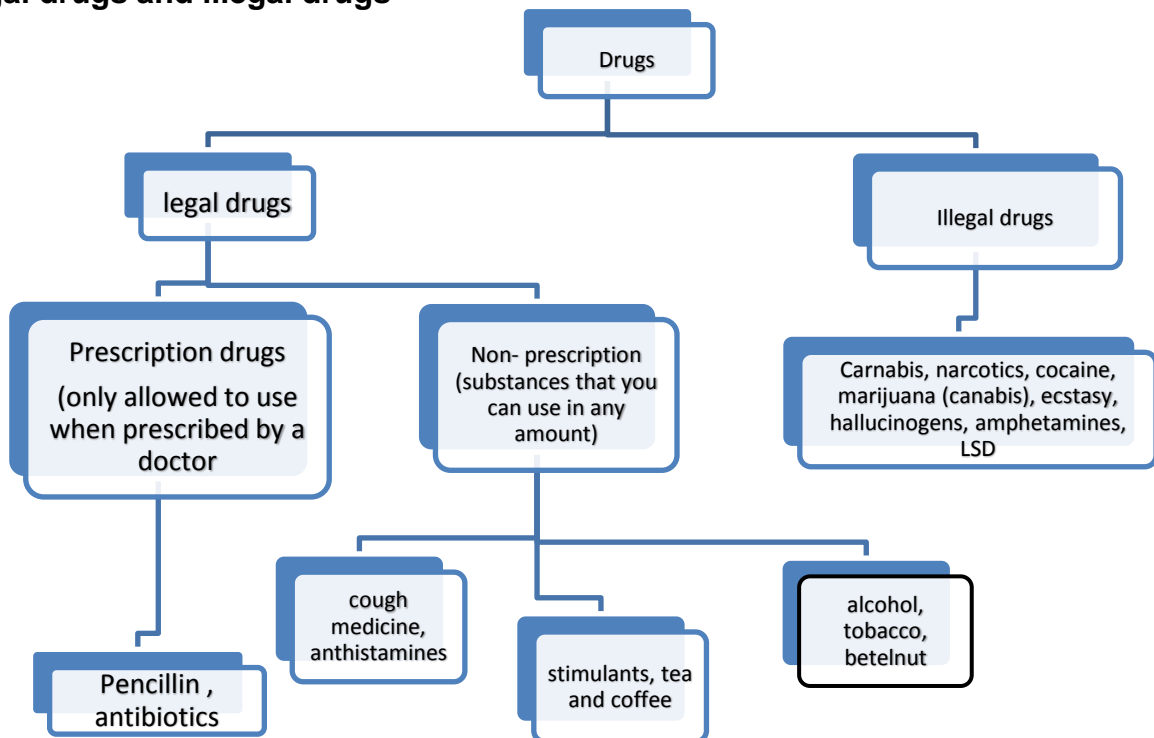
There are various explanations of this phrase but for our case we will describe **drug or substance abuse** as *the continued use of a drug in which the user consumes the substance in amounts or methods which are harmful to themselves or others*. Abuse is simply the improper use of something for other purposes than what it was originally intended. In other words, drug and substance abuse is the improper use of chemical substances for wrongful purposes. Both drug and substance abuse is the same thing however, the term substance is more commonly used today because of the wide range of substances including (alcohol, spray cans, petrol, glue, nail polish and various other chemical substances) which are inhaled to produce effects similar to traditional drugs.

Now that you understand what drug and substance abuse is all about, let us identify the types of substance that are abused.

### Types of Drug and Substance Abuse

There are many levels of substance abuse and many kinds of drugs, some of them readily accepted by society like caffeine, nicotine and alcohol as well as prescribed drugs including morphine, codeine, methadone and others. All drugs can be placed into different categories according to their function and legal status. Two main classes in which drugs can be grouped are shown by the diagram below.

#### Legal drugs and illegal drugs



#### Legal Drugs

These are drugs/substances approved by law to be sold over-the-counter in shops or by doctor's prescription (a written document stating the quantity and period in which the drug is to be taken). Some drugs like alcohol and tobacco as well as common remedies like cold and flu medicines, painkillers, antibiotics are examples of such drugs.

## Illegal Drugs

As the name suggests, these drugs are forbidden by law and their production, sale and possession carry penalties including fines and jail time. These drugs are considered by law as having harmful effects on the user. Some well-known examples of these drugs are cannabis or marijuana, cocaine, ecstasy and methamphetamine,

Legal drugs can be further divided into two **Medicinal** and **Recreational Drugs**.

### (i) Medicinal Drugs

Medicinal or *pharmaceutical* drug is a drug used to diagnose, cure, treat or prevent disease. Medicines can be in the form of pills or tablet, injections, liquids and cream. Certain medicinal drugs are very strong and require the user to obtain a doctor's prescription to buy this over the counter at a pharmacy. Most medicines are easily bought over the counter.

### (ii) Recreational Drugs

These are mind altering (changing) chemical substances that are used for non-medicinal, leisure purposes. In other words, these drugs do not contain any healing property but users' take it for the sole purpose of pleasure or just to get a 'high.' In PNG, we can say that betel nut, cigarettes and alcohol are examples of recreational drugs.



Considering that drug abuse is a very dangerous behaviour, why do people continue to engage in such an activity?

## Reasons people use Drugs

There are many reasons why people engage in drug and substance abuse. The following are some reasons people give for taking recreational drugs,

- Some people are pressured into by their peers;
- Other people just want to experiment the feeling;
- Some people feel that drugs provide them with new experiences and views,
- Individuals feel relaxed and more confident in relating to others;
- It enables a person to temporarily forget their problems.
- To prevent illnesses
- Cure diseases
- Improve sporting performances
- Cover up poor communication skills
- Escape boredom, loneliness, poverty or insecurity
- Seek attention from people around them
- Parents take drugs

Legal drugs can be further divided into 4 types depending on the effects they have on a person. In the next lesson, we will identify the four types of drugs and their effects.

**Activity 12.1**

Write short sentences to answer the following questions.

1. What is the difference between legal and illegal drugs?

---

---

List down 5 reasons why people take drugs

- i) \_\_\_\_\_  
ii) \_\_\_\_\_  
iii) \_\_\_\_\_  
iv) \_\_\_\_\_  
v) \_\_\_\_\_

2. What are the 3 main groups of drugs? Give an example for each of them

- i) \_\_\_\_\_  
ii) \_\_\_\_\_  
iii) \_\_\_\_\_

3. In the table below write down 3 common legal and illegal drugs in PNG.

Legal drugs	Illegal drugs

4. How do drugs enter your body?

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## Summary

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You have come to the end of lesson 12. In this lesson you have learnt that:

- Drugs are chemical substances other than food that changes the physical, mental or emotional state of the body.
- A drug may enter your body by being inhaled, ingested or injected
- Drugs can be divided into legal and illegal drugs and further be grouped according to their effects as stimulants, depressants and hallucinogens
- Medicinal drugs are prescription drugs and non-prescription drugs. Non-prescription drugs are sometimes called over-the-counter drugs
- Social or recreational drugs are non-medicinal and are often used in social settings
- People take drugs for medical reasons such as recovering from illness and social reasons such as for pleasure.
- All drugs when taken into the body have certain effects depending on what they contain.
- Some drugs are dangerous and do have short term and long term effects including death.

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**NOW DO PRACTICE EXERCISE 12 ON THE NEXT PAGE**



## Practice Exercise 12

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1. Define the term drugs?

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2. List the following drugs under these two headings: medicinal and recreational drugs. (Aspirin, Tobacco, Insulin, alcohol, Heroin, Heart tablets, Marijuana, Antibiotics, Ecstasy )

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3. Write a definition of a socially acceptable drug and list the drugs that fall into this category?

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4. Apart from medicinal purposes, are there any other positive uses of drugs?

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**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 4.**

## Answers to Lesson Activities

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### Activity 12.1

1. Legal drugs are readily available from chemists, supermarkets or liquor stores and are not prohibited by laws.  
Illegal drugs are not available in shops and are prohibited by laws.

- 1.2. Some of the reasons for drug use are:
- To prevent illness
  - To cure diseases
  - To feel better
  - To improve your sporting performances
  - To escape reality
  - To cover up poor communication skills
  - To join the peer group
  - To satisfy curiosity
  - To escape boredom, loneliness, poverty of insecurity
  - Because advertisers tell them to
  - Because their mums and dads take drugs
  - They want attention from people around them.

2. What are the 3 main types of drugs and give an example of each of them?

<u>Major categories</u>	<u>Example</u>
Stimulants	nicotine etc.
Depressants	alcohol
Hallucinogens	high dose of cannabis

3. In the table below write down 3 common legal and illegal drugs in PNG.

Legal drugs	Illegal drugs
Medicinal drugs (aspirin)	marijuana
alcohol	ecstasy
tobacco	heroin

4. How do drugs enter your body?  
A drug may enter your body by being:
- inhaled- some asthma medications, another person's cigarette smoke, sniffing
  - ingested-capsules, tablets, alcoholic drinks,
  - injected- some medications, some illegal drugs

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## Lesson 13: Types of Drugs



Welcome to lesson 13 of unit 3. In the last lesson you learnt about drugs and substances. In this lesson you will learn about types of drugs.



### Your Aims:

- identify different types of drugs and their effects
- identify medical and recreational drugs
- identify the difference between legal and illegal drugs

Drug and substance abuse is a common problem that affects many communities worldwide. We read, hear and see daily in the media about people taking drugs and creating problems in their communities. Why is this so? Well as we saw in the last lesson, people take drugs and substances for different reasons, and each drug produces different effects.

### Drugs classified by function

Drugs have a wide range of effects on the body. The three major group categories are categories: stimulants, depressants, hallucinogens. They are grouped in this manner because of the specific effects they have on you.

Group	Effects	Examples
Stimulants	speed up the activity of chemicals in the brain  causes: disorientation, distraction, talk very fast and not make sense	Caffeine, cocaine, nicotine, ecstasy, amphetamines
Depressants	Slow down the activity in parts of the brain and nervous systems  causes confusion, loss of concentration, poor judgment and memory and perception problems	Alcohol, cannabis, analgesics, tranquillizers, methadone, codeine, morphine, heroin
Hallucinogens	Hallucinate or alter your perception of what is happening around you, for example you may see visions or hear voices Causes: worried feeling, depression panic, paranoia or long term mental disturbance may result in serious accidents and death	LSD, psilocybin (magic mushrooms), PCP, mescaline and high doses of cannabis and ecstasy



Note that all activities should be placed at the end of the lesson to avoid distracting the pupils and the flow of information.



### Activity 13.1: Short Answer Questions

1. What is your own definition for 'drug'?
2. List three reasons why people use drugs.
3. Can tobacco be listed as a drug?
4. Which two drugs are commonly used in PNG today?

Now let us continue with our topic for this lesson. Here we can see that drug or substance when taken into the body has some kind of chemical reaction to a person's body chemistry. This means that this substance/drug reacts with the person's body thus affects the internal organs like brain, liver, heart stomach etc.

### Medicinal and Recreational Drugs

Legal drugs can further be divided into the following groups:

- Medicinal drugs
  - ✓ Medicinal over-the counter drugs can be purchased at a chemist supermarket or shops. They include aspirin, and cold and flu medications
  - ✓ Medicinal prescription drugs are only available if prescribed by a doctor. They include antibiotics and sedatives
- Recreational or social drugs are non-medicinal and are often used in social settings. They include alcohol and tobacco
- Ingredients of food or drink such as caffeine, a stimulant found in coffee and chocolate.

#### (a) Medicinal drugs

**Medicines** are legal drugs that a health worker can give you if you are sick. There are many different medicines for treating illness. Medicines can be in the form of pills, injections, liquids or creams. Some are stronger and you need a prescription from a doctor or health worker. Examples of prescription drugs are antibiotics, strong pain killers, vaccines and tranquillizers are used for serious accidents or injuries. Other medicines are called over-the counter drugs because anyone one can buy them across the counter in the store without a prescription. Over-the counter medicines such as flu remedies, aspirin, Panadol, laxatives and painkillers help relieve aches and pains.

#### (b) Recreational Drugs

People take recreational drugs because they find their effect more pleasurable. Various drugs have different effects on the brain. The most common recreational

drugs are alcohol, nicotine and betel nuts (buai). Although these drugs are legally available, this does not mean they are safe. Their use and misuse can cause disease and death to many thousands of people each year.

Alcohol slows the down the activity in the central nervous system, including the brain. Some immediate effects include:

- Affects judgment, thinking, mood, and memory
- Reduced concentration
- Dehydration and increased urination
- Vomiting
- Nausea and headache when recovering

Long term effects of alcohol can include:

- Cirrhosis of the liver
- Alcohol related brain damage
- Sexual dysfunction
- Depression
- Memory loss
- Long term health effects of injuries and illness incurred from actions while under influence of alcohol (e.g. STI, road and traffic related injuries, falls, etc.)

Tobacco is the drug that causes most number of deaths. It takes only few seconds for the body to be affected by cigarette smoke. Nicotine a chemical in tobacco, is rapidly absorbed into the bloodstream and reaches the brain within seven seconds of inhalation in cigarettes. Nicotine remains in the body for 8-12 hours. The effects of chemicals in tobacco smoke include:

- Hair, clothes, and breath smells of stale smoke
- Teeth and fingers go yellow
- Skin looks unhealthy and grey
- Sense of smell and taste are affected
- Dizziness and nausea
- Increase in heart rate and blood pressure
- A reduction in the amount of oxygen delivered to tissues
- Reduction in the amount of urine produce by kidneys

### **Betel nuts**

The nut of the betel or Areca catechu tree contains arecollin, which is a mild central nervous system stimulant. The betel nut is chewed in the Pacific Ocean, India, Thailand and Indonesia, and other Asian countries. Traditionally, people chewed betel nuts at celebrations. Chewing betel nut can produce:

- A relaxed and happy feeling
- Unpleasant feelings, including dizziness, sweating, weakness of the limbs
- Loss of appetite
- Diarrhoea, if chewed on an empty stomach
- Red staining of mouth, gums and teeth

- Mouth and throat cancer, if chewed with lime.

Chewing betel nut can be addictive. Using lime with a stick to one side of the mouth may cause irritation or burning of the tongue and mouth tissue overtime. The lime can eat away the gums and the skin causing mouth and throat cancer.

## Cannabis

The use of illegal drugs such as cannabis has become increasingly common at parties and dances.

Cannabis is a depressant although in large doses it can also have a mild hallucinogenic effect. Cannabis comes in three main forms: marijuana (. dried leaves and flowers from a plant); hashish (resin); and hash oil (a thick oily liquid extracted from the resin). When smoked, cannabis has almost twice as much tar as cigarette. Cannabis is also known as pot, joint, reefer, weed, hash, mull, grass and dope.

	<b>Immediate effects</b>	<b>Long term effects</b>
Small dose	Feeling unusually well and happy	Increased risk of bronchitis, lung cancer and respiratory disease
	Increased appetite and heart rate	Change in motivation, loss of energy
	Loss of inhibitions and concentration	Decreased concentration , memory and learning abilities
	Reddened eyes	
	Focus on one particular thing, ignoring everything else- overall reduction in concentration	
Large dose	Confusion, hallucination	Lowered sperm count
	Detachment from reality	Reduced sex drive
	Anxiety or panic, feelings of excitement	Irregular menstrual cycle
	Paranoia, vomiting	Psychotic behaviour



### Activity 13.1

Write short sentences to answer the following questions.

1. Identify one drug in PNG that is dangerous. Why is this drug dangerous?

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2. What is the difference between a medicinal drug and a recreational drug?

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3. List down 2 short term effects and long term effects of alcohol

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4. What are the effects of chewing betel nut?

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5. What is cannabis?

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## Summary



You have come to the end of lesson13. In this lesson you have learnt that:

- There are different types of drugs that people used in our society today.
- The common ones we find are alcohol, marijuana, tobacco, homebrew and betel nut
- Medical drugs are used as medicinal to cure illness or diseases
- Marijuana is an illegal drug in the society while other drugs like alcohol and tobacco may be legal.

**NOW DO PRACTICE EXERCISE 13 ON THE NEXT PAGE**

**Practice Exercise 13**

Define the following terms;

i. Recreational drugs -

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ii. Medical drugs -

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iii. Illegal drugs -

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iv. Legal drugs -

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v. Marijuana -

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vi. Alcohol -

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vii. Depressant -

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viii. Stimulants -

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ix. Hallucinogens drugs -

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x. Psychoactive drugs -

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**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 4**

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## Answers to Lesson Activities

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### Answers to Activity 13.1

1. Tobacco, continuous intake of this drug can lead to health and hygiene status being lowered and may lead to death.  
Individual answers may vary. No standard answers.
2. What is the difference between a medicinal drug and a recreational drug?  
Medical drugs are drugs used to prevent and cure diseases  
Recreational drugs are used for pleasure
3. *Some possible answers*  
Short term effects  
Cirrhosis of the liver  
Alcohol related brain damage  
Long term effects  
Affects judgment, thinking, mood, and memory  
Reduced concentration
4. Hair, clothes, and breath smells of stale smoke  
Teeth and fingers go yellow  
Skin looks unhealthy and grey  
Sense of smell and taste are affected  
Dizziness and nausea  
Increase in heart rate and blood pressure  
A reduction in the amount of oxygen delivered to tissues  
Reduction in the amount of urine produced by kidneys
5. **Cannabis** is a depressant although in large doses it can also have a mild hallucinogenic effect. Cannabis comes in three main forms: marijuana (. dried leaves and flowers from a plant); hashish (resin); and hash oil (a thick oily liquid extracted from the resin). Cannabis is also known as pot, joint, reefer, weed, hash, mull, grass and dope.

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[www.google.drugs](http://www.google.drugs).http/.

## Lesson 14: Advantages and Disadvantages of Drugs



Welcome to lesson 14 of unit 3. In the last lesson you learnt about types of drugs. In this lesson you will learn about advantages and disadvantages of drugs.



### Your Aims:

- identify the advantages and disadvantages of drugs
- explain drug dependency and withdrawal

In our last lesson we looked at the types of drugs and what drug does to human body especially the brain. We talked about drugs we can easily buy at the stores like alcohol, cigarette, and other where you get from Pharmacies like Tranquilizers and barbiturates.

These drugs are legal drugs or drug allowed by law to be sold. On the other end, there are illegal drugs like Marijuana, home brew which are not allowed by law.



### Activity 14.1

Let us do this activity to test our understanding of drugs. You can refer to the previous lessons to do this activity. Match the words with the definitions by writing the letter of the correct definition beside each word.

Words	Definition
1. Marijuana ___	a) Any use of a drug that results in a physical, mental, emotional, legal or social problem.
2. Nicotine ___	b) A drug which acts on the central nervous system to suppress neural activity in the brain. For example alcohol, opioids, etc.
3. Depressant ___	c) This drug is legal and is easily available in shops. People take it openly in public.
4. Drug Misuse / Abuse ___	d) This drug is illegal in Papua New Guinea. It is mostly smoked.
5. Stimulant ___	e) A stimulant drug and is legally sold in stores. People smoke it.

6. Alcohol _____	f) Drug such as caffeine, nicotine and beverages has this. It affects the central nervous system giving a feeling of alertness and energy. The effect may wear off quickly.
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### Advantages and Disadvantages

There are many social and ethical issues surrounding the use and abuse of drugs. These issues are made complex particularly because of conflicting values concerning drug use within modern societies. Values may be influenced by multiple factors including social, religious, and personal views. Within a single society, values and opinions can differ greatly, resulting in conflicts over various issues involving drug abuse.

Since the 1960s, drug abuse has attracted considerable public awareness. This heightened awareness of drugs and their consequences has been influenced largely by campaigns and programs oriented toward educating the public about the dangers of drug abuse and about how individuals and societies can overcome drug-related problems. One of the most hotly contested issues concerning contemporary drug use, focuses on whether currently illicit or illegal drugs should be legalized. Another major area of concern involves the abuse of drugs in sports, which can send conflicting messages to young generations whose heroes are professional athletes.



### Activity 14.2

Define the following terms. You may use your dictionary.

i. Values

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ii. Opinion

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iii. Social

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iv. Ethical

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v. Religious

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### Advantages of drug use

Let us now look briefly at some of the advantages drug users say they benefit from using drugs.

#### Personal

- To satisfy curiosity



- To cope with boredom
- To have something to do
- To rebel or defy parents
- To get revenge to gain attention from family
- To avoid loneliness
- To deal with stress/to survive
- To forget disappointments
- To avoid family arguments or family problems
- To forget family (or friends) for a while

### **Performance - at School/Work**

- To stay awake
- To feel more creative
- To have an edge
- To try to focus/concentrate better
- To forget school/work disappointments
- To be in control of emotions
- To avoid having to live up to too many pressures
- To forget that school is not where they want to be

### **Social**

- To fit in with a group or find new friends
- To deal with shyness or lack of confidence
- To be able to talk with strangers or feel comfortable in large groups
- To avoid having to talk
- To imitate role models
- To create a positive social image (along with "approved" dress, hair and music)
- To be the "real me."
- Often groups/friends change

### **Health/ Physical**

- To control pain
- To control weight
- To gain muscle mass
- To stay awake

The above are the general views shared by drug users. Basically when they take or use drugs, it allows them to perform or do the above.

### **Now let us look at an example of a specific drug.**

The advantages of cocaine were categorized as follows; cocaine gives: - excitement, makes partying better, more festive, gives feelings of being high, relaxed, beautiful gives self-confidence makes one clear-headed, more concentrated on tasks, more creative it is possible to go on drinking longer, improves quality of love making [better sex], eases communication, relations, lessens shyness [gives energy, one needs less sleep, less easily tired [more energetic]. A small residual category remained with other advantages [other].

## **Disadvantages of drug use**

Now let us look at the disadvantages of drug use.

### **Personal**

- Curiosity gets satisfied - then what? May or may not try something else
- Excitement levels off
- May get the "wrong" type of attention
- May lose control of emotions, i.e., may become angry or violent, depressed or anxious
- May go against family/religious values
- Creates problems with family, e.g., loss of trust
- Does not resolve family or personal problems
- May lose pleasure in everyday activities
- May lose self-esteem

### **Social**

- Often groups/friends change
- May let friends down
- Gives false sense of confidence or courage
- May become more isolated
- May say or do things will regret later
- May make a fool of oneself or act bizarre
- May become uncharacteristically rude
- May become someone no one recognizes
- May lead to negative episodes, e.g., Drive when should not have; get involved in sexual situations otherwise would not have (others could take advantage of you).

### **Performance - at School/Work**

- Difficult to sleep/rest
- May become very sleepy
- May become less motivated to do well in school/at work - a "who cares" attitude
- Memory, ability to concentrate and think clearly may be affected
- Moods may change and may have difficulty controlling emotions
- May lose employment

### **Health/ Physical**

- May lead to chemical dependence
- May become undernourished
- May cause the appetite to increase
- Females may become masculine- looking - includes body hair
- Males may experience breast development, decrease in size of testicles/lower sperm count
- May find it difficult to sleep or get adequate rest
- May get infections more easily (e.g., HfV/AIDS or hepatitis may be contracted through needle use.)
- May damage major organs, body systems

## Financial

Cost of purchasing drugs

## Legal

- Negative implications regarding possession, purchase and use of various substances.
- Could jeopardize opportunities in future.

Because so many different disadvantages were mentioned, it would be easier for us to reduce them into three categories: disadvantages relating to physical effects, disadvantages relating to psychological effects, and a residual category.

Perceived physical disadvantages:

- unpleasant physical effects
- bad for health
- creates bad physical condition and
- creates physical dependence

Disadvantages that relate to psychological effects:

- creates psychological dependence
- makes one egocentric or self-centred
- makes one aggressive
- makes one feel depressed
- makes one feel negative, makes one speedy
- gives megalomaniac feelings or feel self-important
- makes one superficial/ unrealistic
- makes insensitive and gives paranoid/distrustful feelings

Psychological expressions are even more variable in response to drugs prepared from *Cannabis*. Changes in mood may include giggling, laughter, and jubilation.

Thought processes may also become disorganized, with fragmentation, disturbances of memory, and frequent shifts of attention acting to disrupt the orderly flow of ideas. One may also experience some loss of reality contact in terms of not feeling involved in what one is doing; this may lead to considerable detachment and depersonalization. Undesired subjective experiences include fear, anxiety, or panic. These effects vary considerably with practice and with the setting in which the drug is taken.



### Activity 14.3

In the table below list the advantages in one column and the disadvantages in the other column. Talk about the same situation. Example 1 is done for you.

Advantages of drug use	Disadvantage of drug use
1.To deal with shyness or lack of confidence	Gives false sense of confidence or courage
2. To fit in with a group or find new friends	
3.	May find it difficult to sleep
4. To control pain	
5.	May become less motivated to do well in school/work- a "who cares" attitude
6. To avoid family arguments/problem	
7.	May go against family or religious values
8. To avoid having to talk	
9.	May become undernourished
10.To deal with stress to survive	

### What is drug dependence and withdrawal?

With regular use, *tolerance* to and *dependence* on drugs can develop. *Withdrawal* symptoms may also be experienced if the drug is reduced or stopped.

#### Tolerance

A person needs more of a drug in order to achieve the same effects they felt previously with smaller amounts. In other words, it is the ability to deal with something unpleasant or annoying, or to continue existing despite bad or difficult conditions.

#### Dependence

Use of the drug becomes central to a person's life, and they may experience withdrawal symptoms if they stop using the drug. In other words, when you need something or someone all the time, especially in order to continue existing or operating, you become dependent on that thing or person.

#### Withdrawal

Describes a series of symptoms that may appear when a drug on which a user is physically dependent is stopped or significantly reduced. The withdrawal symptoms vary depending on a range of factors including the drug type and tend to be opposite to the effects produced by the drug.

The body is always trying to maintain a state of balance. When the body has become accustomed to the drug for normal function and use is ceased, the body will try to counterbalance for the change producing withdrawal symptoms. In other words, it is

the unpleasant physical and mental effects which result when you stop doing or taking something, especially a drug, which has become a habit.



### Activity 14.4

1. What is the difference between drug dependence and withdrawal?

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2. What is the difference between tolerance and dependence?

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### Summary

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You have come to the end of lesson 14. In this lesson you have learnt that:

- The advantages of drugs for drug users are for:
  - personal use
  - for better performance at school or work
  - for motivation during social activities
  - for health and physical purposes
- Drug dependence is when a person cannot leave or stay away from a drug
- Withdrawal is the sign shown by a drug user once the drug user starts to move away from the drug.
- Tolerance is when the drug user's body starts to accept more of the regular or normal amount of drugs the user normally take.
- Psychological expressions are even more variable in response to drugs prepared from cannabis.
- Changes in mood may include giggling, laughter, and jubilation.

**NOW DO PRACTICE EXERCISE 14 ON THE NEXT PAGE**

**Practice Exercise 14**

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Answer the following questions in detail. Have at least two to three paragraphs to explain each question.

1. How would the drug affect the user economically?

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2. How have drugs made a positive and negative affect on our body/lifestyle?

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3. Discuss at list five negative consequences of Teenage drug abuse.

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**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 4.**

**Answers to Lesson Activities**

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**Activity 14.1**

1. d
2. e
3. b.
4. a.
5. f
6. c

**Activity 14.2: Define the following terms.**

1. Values – to consider something important.
2. Opinion – a though or belief about something or someone.
3. Social – relating to society and living together in an organized way.
4. Ethical - relating to beliefs about what is morally right and wrong ethical and legal issues

5. Religious - relating to the belief in and worship of a god or gods

**Activity 14.3:**

<b>Advantages of drug use</b>	<b>Disadvantage of drug use</b>
3. To deal with shyness or lack of confidence	Gives false sense of confidence or courage
4. To fit in with a group or find new friends	Often groups or friend change
5. To stay awake	May find it difficult to sleep
6. To control pain	May lead to chemical dependency
7. To forget school/work disappointment	May become less motivated to do well in school/work- a "who cares" attitude
8. To avoid family arguments/problem	Does not resolve family or personal problem
9. To rebel or defy parents	May go against family or religious values
10. To avoid having to talk	May become more isolated
11. To control weight	May become undernourished
12. To deal with stress to survive	May lose control of emotions, i.e. may become angry, violent, depressed or anxious

**Activity 14.4**

1. Drug dependence is when a person cannot leave or stay away from a drug while withdrawal is the sign shown by a drug user once the drug user starts to move away from the drug.
2. Tolerance is when the drug user's body starts to accept more of the regular or normal amount of drugs the user normally take while dependence is when the drug user cannot device him/herself from the drug.

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## Lesson 15: Effects of Drugs on the Community

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Welcome to lesson 15 of unit 3. In the last lesson you learnt about advantages and disadvantages of drugs. In this lesson you will learn about effects of drugs on the community.



### Your Aims:

- identify the positive and negative effects of drugs
  - identify ways to prevent or avoid harmful drugs
- 

### Advantages and disadvantages of drug use

In our last lesson we looked at the disadvantages and disadvantages of drug use and now we will look at the positive and negative effects of drugs on an individual, a community and the country as a whole. When we talk about positive effects we mean good outcomes it does while on the other end the negative effects reflects the bad outcomes it does or contributed to the community.

### Positive impact of drug use in a society

The use of alcohol and other drugs can have an impact on many areas of our lives. Our physical health, leisure activities, relationships with others, emotional health, employment, finances, education, and our spiritual well-being can all be affected.

For some people, the use of alcohol and other drugs results in more positive effects than negative effects. For example, they may feel relaxed, have more fun at parties, or feel more creative. However, as people increase their use, the likelihood of negative effects increases. They may begin to feel depressed, experience problems concentrating, lose friends, or start making poor decisions like drinking and driving and even borrow more money to buy drugs, etc.

Some people say that using drugs is harmless; others will say that nothing good can come from using substances. It is important to understand that using drugs can have both positive and negative consequences. We wouldn't continue to do something if it didn't have some kind of reward. People make choices about their use based on their views of the balance between the positive and negative consequences.

As someone's use of alcohol, and or other drugs continue, it is likely that they will start to have more negative consequences in the following areas of their lives: physical health, emotional health, school or employment, leisure, relationships, finances, and spiritual. If their use of alcohol, and/or other drugs, is having a negative impact on one or more of these areas, then their use is considered problematic.



### **Activity 15.1 Try the balloon/ball frantic exercise**

You need a balloon/ball and a black marker to write with. On the balloon/ball, write the name of someone you loved so much. It can be your father, mother or best friend.

Next try to keep the balloon/ball aloft, and don't allow it to touch the ground. You may keep them aloft by hitting them with your hands, heads, knees, etc. for at least 10 minutes.

1. After 10 minutes you stop and try to answer this question: Is it easier for you to keep something important to you up or aloft?
2. Now, try to keep the balloons/ball aloft without using your hands. What is it like?
3. Was it frustrating trying to keep the balloon/ball in the air?
4. How did it feel when you dropped the balloon/ball?
5. Did you need help from other people to keep the balloon/ball in the air?
6. Would others have been able to help you if they were not able to use their hands like you did?
7. Why do you think people make the choice to start using drugs?
8. What other choices could they make instead of using drugs?

### **The Impact of Drugs on Society**

The negative consequences of drug abuse affect not only individuals who abuse drugs but also their families and friends, various businesses, and government resources. Although many of these effects cannot be quantified, a recent report in 2002 indicated that the economic cost of drug abuse to the United States was \$180.9 billion.

The most obvious effects of drug abuse--which are manifested in the individuals who abuse drugs--include ill health, sickness and, ultimately, death. Particularly devastating to an abuser's health is the contraction of needle borne illnesses including hepatitis and HIV/AIDS through injection drug use. Other literature data indicate that in 2004 over 3.5 million individuals aged 18 and older admitted to having injected an illicit drug during their lifetime. Of these individuals, 14% (498,000) were under the age of 25. Another literature reports that 123,235 adults living with AIDS in the United States in 2003 contracted the disease from injection drug use, and the survival rate for those persons is less than that for persons who contract AIDS from any other mode of transmission. It further reported that more than 25,000 people died in 2003 from drug-induced effects.

Children of individuals who abuse drugs often are abused or neglected as a result of the individuals' preoccupation with drugs. Other studies have shown that parents who abuse drugs often put their need to obtain and abuse drugs before the health and welfare of their children. The same data also indicated that during 2002 and 2003, 4.3% of pregnant women aged 15 to 44 report having used illicit drugs in the past month. Children whose parents and other family members abuse drugs often are physically or

emotionally abused and often lack proper immunizations, medical care, dental care, and necessities such as food, water, and shelter.

The risk to children is even greater when their parents or guardians manufacture illicit drugs such as methamphetamine. Methamphetamine abusers often produce the drug in their own homes and apartments, using hazardous chemicals. Children who inhabit such homes often inhale dangerous chemical fumes and gases or ingest toxic chemicals or illicit drugs. These children commonly test positive for methamphetamine and suffer from both short- and long-term health consequences.

Moreover, because many methamphetamine producers also abuse the drug, children commonly suffer from neglect that leads to psychological and developmental problems. The same data show that U.S. law enforcement agencies report having seized 9,895 illicit methamphetamine laboratories in 2004. These agencies report that 2,474 children were affected by these laboratories (i.e., they were exposed to chemicals, they resided at laboratory sites, or they were displaced from their homes), while 12 children were injured and 3 children were killed.

The economic impact of drug abuse on businesses whose employees abuse drugs can be significant. While many drug abusers are unable to attain or hold full-time employment, those who do work put others at risk, particularly when employed in positions where even a minor or slight mistake could be catastrophic; airline pilots, air traffic controllers, train operators, and bus drivers are just a few examples.

Economically, businesses often are affected because employees who abuse drugs sometimes steal cash or supplies, equipment, and products that can be sold to get money to buy drugs. Moreover, absenteeism, lost productivity, and increased use of medical and insurance benefits by employees who abuse drugs affect a business financially.

The economic consequences of drug abuse severely which in turn also affected the community, provincial and even the national government, and, ultimately, the taxpayer. This effect jeopardize the safety of citizens and adversely affect the environment. Children, law enforcement personnel, emergency responders, and those who live at or near places where drugs are produced, have been seriously injured or killed as a result of the production. For instance, Methamphetamine users often require extensive medical treatment; some abuse, neglect, and abandon their children, adding to social services costs; some also commit a host of other crimes including domestic violence, assault, burglary, and identity theft. The major effect is that it cost the law agencies a lot of money to track the drug manufacture, dealer and even the drug user thus affect the government budget.

The trafficking and abuse of drugs for example, in the United States affect nearly all aspects of our lives. The economic cost alone is immense, estimated at nearly \$215



**Ways to prevent or avoid harmful drugs.**

1. **Lack of knowledge about the dangers of psychoactive drugs is dangerous.**  
Educate the young people about the effects of psychoactive substance use. This helps them to understand the negative impact drugs will bring if you use it.
2. **Personal problems** (personal problem drives young people into taking drugs)  
Personal development program be encourage so that young people participate in to help them find better ways to solve their personal problems rather resorting to alcohol and drugs as a way to solve their problem.
3. **Peer pressure**  
Train the young people to resist their peer with a positive approach. To say no in a positive way.
4. **Lack of social skills**  
We need to be involve in social activities like church youth groups/activities. This can develop their social skills and even interpersonal skills.
5. **Lack of fear of psychoactive drugs**  
Need to visit mentally ill people and even alcohol related accidents.

Furthermore, you can do the following:

6. Throw out all alcohol and drugs and anything that goes with them such as pipes, etc.
7. Stop seeing or talking to the heavy drinkers and drug users you know
8. Do what you can to avoid being around people who drink or use drugs
9. Change your phone number
10. Throw out the contact information of dealers or people who drink heavily
11. Try new activities that are drug-free
12. Try a self-help group such as Alcoholics Anonymous or Narcotics Anonymous
13. Talk to people you trust about difficult situations

Tell people who can and will help you quit drinking or using drugs what you are doing, let them know what they can do to help

Have your money deposited directly in your bank or get help to manage your money

## **What is Effect of drugs?**

Most of the drugs that are available start out with the general purpose of making a person's health and life better. While most drugs fall within this "helpful" category, drug abuse would certainly be at the top of the negative list in terms of hurting people. Drug abuse is when a person takes a drug for reasons other than what the physician has prescribed the drug for, usually because it produces some type of "high" feeling. The list is long for people who have died by their own hand by taking too much of a particular drug.

Pharmaceutical grade drugs have saved countless lives. Diseases like malaria, small pox, and measles have practically been wiped out. Tuberculosis which used to require extended hospitalization can be avoided with a simple injection. Eye drops are saving the eye sight of malnourished people. Millions of people enjoy extended lives thanks to cholesterol lowering meds; diabetics well-being is insured not just by proper diet but with the addition of medications. Prescription such as low dose aspirin, multiple vitamins, fish oil, anti-depressants, diuretics etc. allows people to live a lovely, high quality life.

Any of these drugs taken improperly can have a negative impact. Overdoses are common among the elderly or those with dementia who forget taking their medication and innocently take a second round of medications. Conversely, they may forget to take their medications which can also have a negative impact on their bodies.

Taking up a friend who offers one of their pills for a headache or other ailment can have a negative effect. These pills can interact negatively with physician prescribed medications and cause undesirable side effects. Antibiotics save lives, but people who stop taking them because they feel better and hold the balance of their prescription back in case they become ill again in the future are only fooling themselves. Half of the dosage will not have the intended effect of containing an infection, and the patient runs the risk of a rebound effect of the original illness returning.

Then, of course, there are the illegal or illegally provided drugs. Illegal drugs run the range of cocaine, heroin, meth, and marijuana, generally used because the user enjoys the high. Once the high is gone, the user has to go looking for more drugs in order to get that feeling again. Drug overdoses are common resulting in an array of conditions from anxiety to death.

Illegally provided pharmaceuticals drugs have their own negatives. Improperly used, the drugs can cause adverse interactions with other drugs being used, unexpected allergic reactions, and in the case of antibiotics, over used (prescribed or otherwise) lose their value as the antibodies the drug was intended to kill off will mutate or change and become immune to that antibiotic.

## **Positive effects of Drugs**

The issue of substance misuse and its effects on families and communities presents many challenges for governments and service providers

### **Effects of substance misuse on families and children:**

Families can be a significant influence on the patterns and problems associated with drug and alcohol misuse of relatives in both supportive and detrimental or harmful ways.

- Grandparents and other relatives in the extended family can be significantly affected by an individual family member's use. They may be called upon to provide care and support for their own adult children as well as their grandchildren.

### **Health and social well-being:**

- Substance misuse has been associated with a range of detrimental social, physical and psychological factors affecting the individuals who use substances, their families and children.

### **Parenting:**

- It has not been established that substance misuse alone results in compromised parenting or family violence – a complex range of other social and economic factors are also implicated.
- An increasing number of child abuse cases are associated with substance and alcohol misuse.
- There is an emphasis in the literature on the detrimental effects of maternal drug use and limited research about the effects of parental substance misuse, or the effects of substance misuse by fathers.

### **The physiological effects:**

- Substance misuse during pregnancy is associated with fetal origins of a range of serious adult diseases including diabetes, kidney diseases and obesity.
- The association of heavy alcohol consumption with Fetal Alcohol Syndrome (FAS) and is evident in many literatures.

### **Mental health:**

- 'Dual diagnosis' refers to people who present with both psychiatric and substance misuse issues and is a growing problem.
- Increasing numbers of parents who are clients of child protection agencies have been diagnosed with 'dual diagnosis.'
- A recently launched report has highlighted the association between cannabis use and a range of mental health issues.
- The association between drug use and mental illness is complicated by other confounding or other related factors such as poverty and unemployment.

**Ethnicity:**

- The assumption that adults and young people born overseas are less likely to use drugs is not yet certain due to specific social and cultural contexts in which the user lived in.
- The increased likelihood of substance misuse in some groups has been associated with issues such as social exclusion, refugee experience, racism and family isolation.

**Indigenous people:**

- Indigenous people who drink alcohol are more likely to drink at harmful levels.
- Alcohol consumption is part of the complex history experienced by Indigenous communities and is linked with notions/idea of kin and social obligation.
- Indigenous people who misuse substances are over usually found in child care and other charitable organizations.
- Indigenous peoples in mostly use higher levels of psychoactive substances than non-Indigenous peoples.

**Substance misuse and the justice system:**

- The relationship between substance misuse and involvement in the criminal justice is a big problem. It requires an array of preventative, social and legislative responses.
- A high proportion of domestic violence, assault, malicious damage and noise complaints are the result of alcohol use.
- Young people who have been found with relatively small amounts of cannabis are increasingly becoming involved in the criminal justice system.
- Involvement in the criminal justice system is associated with a wide range of detrimental or harmful social and health effects for families and young people

**Health and child protection**

Statistics shows that the status of infants and children sometimes refer to as the consequences of parental drug misuse are frightening. For example, the incidence of Fetal Alcohol Spectrum Disorders (FASD) and Fetal Alcohol Syndrome (FAS), where a child undergone abuse by substance abuse parents is affected both behaviorally psychological and cognitively.

There has also been some work in attempting to calculate the social costs of drug and alcohol abuse in economic terms and these have been estimated for example, in Australia for the year 1998-99 at \$7.6 billion for alcohol and \$6.1 billion for other drugs. It is easier now-a-days for people to obtain alcohol is problematical for families. Increases in the number of outlets and extended trading hours has been associated with road trauma and violence.

Alcohol based taxes on spirits and beers increase the price of these products unlike wine based products which are not taxed heavily. This has resulted in vulnerable groups and heavy drinkers buying cask wines and encourages young people to buy fruity pop wine based drinks.



## Health and social effects

Alongside changes in the pattern and prevalence of drug problems— at both national and community levels—medical, social and other problems associated with drug-use have also changed and become complex.

What about the impact on me and my family?

Dealing with the alcohol or other drug use of someone close to you can be very stressful and disruptive. You may even experience extreme periods of chaos and distress worrying about your friend's health, etc.

Your relative or friend's drug or alcohol use may have physical, emotional and mental effects on you and other family members. In some cases, you may feel guilt, self-blame, anger, rejection, disappointment, grief, denial, shame, powerlessness, anxiety and depression.

You may experience ill health as a result of living with the person's drug or alcohol use. And conflict, neglect and financial difficulties may affect your family life.

Everyone reacts differently, at different times. However, some common responses include:

Thinking you can deal with the problem and control it, on your own or within the family.  
Thinking you've responsible for 'fixing' the problem. Focusing on the drug-affected person at the expense of your own needs and the needs of others close to you.

Believing the person has to hit 'rock bottom' before they will be ready to change. People often put all their energy into supporting the person who is using alcohol or other drugs and trying to fix the problem. However, by looking after yourself and others close to you, you will be better able to continue supporting your relative or friend.

How are different family members affected?

Your relationship with the drug-affected person may also affect how you cope with their alcohol or drug use.

If your child is using drugs or alcohol, you may be worried about their safety and want to protect them at all costs. You may blame yourself for their behaviour, or cover up for them so that they don't have to take responsibility for their actions. In other cases, if your brother or sister is using drugs or alcohol, your response may depend on your relationship with them and your parents.

You might feel sorry for your sibling and want to protect them. Or you may feel angry that your parents don't seem to care about you anymore. Even more, if one of your parents is using drugs or alcohol, you may be scared to admit that there is a problem. You may even feel that it is up to you to fix or hide your parent's use.

If your spouse or partner is drug-affected you may be taking on more of their responsibilities and trying to keep your relationship and the family going. You may also

cope by taking drugs or alcohol yourself, hiding their use and pretending everything is normal.

If you are caring for your grandchildren and they or your children are drug-affected, you may find it difficult to understand their drug use. You may be overwhelmed by having to be a parent again and may need support and advice.

Remember - no matter what relationship you have with the alcohol or other drug affected person, it's okay to talk about it and to get help.



**Activity 15.3 Discuss the following in a paragraph each.**

1. What is the difference between peer pressure and independent will?

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2. Why should we get help when we face drug use problem?

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3. Why is betel nut considered a drug?

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4. Which two drugs are common in your society and why do people take them often?

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## Summary

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You have come to the end of lesson 15. In this lesson you have learnt that:

- Drugs have only few advantages but has a lot of negative disadvantages. Therefore the disadvantages out weight the advantages and so it is a problem to the society in the long run.
- The good news is that there are ways available to help young people avoid harmful drugs. Even more there are people like the social workers or church organization available to help drug users come out of the drug and become productive member of the society.
- Drug taken for medication should only follow doctor's advice and should not go beyond the doctor's advice.
- It is better to prevent than to cure so learn about bad effects of drug early helps us to avoid the bad habit.

**NOW DO PRACTICE EXERCISE 15 ON THE NEXT PAGE**

**Practice Exercise 15**

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In Papua New Guinea today drug use is now linked to criminal activities. In at least three paragraphs, discuss how it is so. To make it easier cut a newspaper article on drug related crimes. Follow this layout to present your findings:

1. The actual news

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2. What type of crime is committed?

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3. How did the drug help the people to commit the crime?

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**CHECK YOUR WORK. ANSWERS ARE AT THE END OF TOPIC 4**

## Answers to Lesson Activities

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### Activity 15.1

1. Not it is hard keeping something so important to you up. It takes a lot of work to keep the things that are important from falling.
2. It is even more difficult without using your hand. This is what it is like to use drugs and not have all your abilities or senses available to keep these important things up. More it is like; you will focus more on the drug and neglect or fail to keep other people or things/activities that are important to you.
3. Yes it was frustrating trying to keep them aloft.
4. You felt anger or fail to achieve your goal of keeping it aloft.
5. Yes, by all means we need help from other people.
6. Not much because we are all handicap.
7. Most they want to do something to keep them busy or they want to gain more or extra. In the case of drug is to get High and have that feelings. Refer to lesson 13 for more reasons on why people take drugs.

### Activity 15.2 Your paragraphs should touch individual, community and nation

As the nation grows, so does the impact of drugs within society. Social and cultural factors have helped to influence the supply and demand of drugs. In some social circles, drugs have had a major influence over behaviors, choices, and attitudes. Everyday stressors, such as work and family life, can help to increase drug usage. Individuals, who use drugs, believe that escaping their daily problems of life. The impact that drugs have had on individual society has been negative because it has increased criminal activities, health issues, addictions, and overcrowded the criminal justice system. Even though many organizations and groups have stepped forward to start anti-drug groups and have encouraged members of society to become drug free, the process has been slow.

Throughout life, there will continue to be individuals who will always struggle with their interpersonal conflicts and think that using drugs is a way to solve their problems. There are on-going studies and methods of research that view the perspectives of drug usage and its effect on society. Some people even feel that if drugs are legalized, then they would become less desirable. Actually, an addict will only stop once they feel that they had a need to do so. Drugs, within society, possess the thoughts of the addict and continue to allow for them to not realize their problem until it is too late. Society realizes

that drugs can create addicts and that the topic of drug usage will always remain a controversial issue; therefore, it is necessary to continue to review how drugs affect social groups within society. Overall, creating a drug free society is a dream that many individuals wish could happen, but realistically know that it will not happen.

### Activity 15.3

1. Peer pressure is when your friends force you to take a drug against your will or wishes. While independent will is when you make your own decision to take or consume the drug.
2. It is better to get help early because there are people who care and prepare to help people in need. To be healthy requires us to be willing to get help so that it is not too late. It is too late when the drug takes total control of you and the most severe case of smoking is lung cancer or with marijuana is to be mentally affected.
3. This is because it has the chemical that can affect our central nervous system. In most cases it has a stimulant as discussed in lesson 13. It arouses the state of mind by increasing the activities of the brain. Therefore it is considered a drug.
4. In my society, Alcohol and betel nut are the two common drugs widely used everywhere in my community. They are easily available to us. Even though betel nut is banned, still it is sold and consumed on the street. In the like manner, there are many black-market sellers that sell alcohol even to young children under 18 years of age.

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## Answers to Practice Exercises 12-15

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### Answers to Practice Exercise 12

1. Define the term drugs?

Drugs are chemical substances other than food that changes the physical, mental or emotional state of the body

2. List the following drugs under these two headings: medicinal drug and dangerous drugs. (Aspirin, Tobacco, Insulin, alcohol, Heroin, Heart tablets, Marijuana, Antibiotics, Ecstasy )

Medical drugs are aspirin, heart tablets, heroin, and antibiotics

Dangerous drugs are ecstasy, marijuana, insulin, tobacco

3. Write a definition of a social acceptable drug. List the drugs that fall into this category?

People take recreational drugs because they find their effect more pleasurable. Various drugs have different effects on the brain. The most common recreational drugs are alcohol, nicotine and betel nuts (buai).

4. Over the past years what sort of drugs have you taken? What about your parents?  
Individual answers may vary.

5. Apart from medicinal purposes, are there any other positive uses of drugs? List at least one possible reason.

Yes, there are, they are;

- To feel better
- To improve your sporting performances
- To cover up poor communication skills

### Answers to Practice Exercise 13

- i. Recreational drugs - drugs used for recreational/ fun/ entertainment purposes.
- ii. Medical drugs – drugs used for medicinal or to cure illness or diseases.
- iii. Illegal drugs – drugs that are not allowed by the law to be used in a particular country.
- iv. Legal drugs – drugs allowed by law to be used in a particular country.
- v. Marijuana - a usually illegal drug made from dried leaf or flower of the cannabis or hemp plant (*Cannabis sativa*). It produce a feeling of relaxation if smoked or eaten.
- vi. Alcohol – a colourless liquid which can make you drunk.
- vii. Depressants -drugs that decrease alertness by slowing down the activity of the central nervous system.
- viii. Stimulants - drugs that increase the body's state of arousal by increasing the activity of the brain

- x. Hallucinogens Drugs that alter perception and can cause hallucinations, such as seeing or hearing something that is not there
- ix. Psychoactive drugs are drugs affect the central nervous system and alter a person's mood, thinking and behaviour.

### **Answers to Practice Exercise 14**

Answer the following questions in detail. Have at least two to three paragraphs to explain each question.

#### **1. How would the drug affect the user economically?**

It will be a heavy financial burden to the user because drugs cost money and one would spend more money every now and then to enjoy that drug. Even worse, the user begin to sell his/her personal belongings, phones, music iPods, personal jewelry that the parents gave etc., as the user will need more money to buy more drugs. Remember that there is a big drug dealer who is making money out of the user's situation. They use the user's money to do more organized crime and we all get to suffer the consequences.

#### **2. How have drugs made a positive and negative impact on our body/lifestyle?**

Pharmaceutical grade drugs have saved countless lives. Diseases like malaria, small pox, and measles have practically been wiped out. Tuberculosis which used to require extended hospitalization can be avoided with a simple injection. Eye drops are saving the eye sight of malnourished people in Africa. Millions of people enjoy extended lives thanks to cholesterol lowering meds; diabetics well-being is insured not just by proper diet but with the addition of medications. When I think of what my physician has prescribed for me, I can include low dose aspirin, multiple vitamins, fish oil, anti-depressants, diuretics (yes it seems I'm a walking medicine cabinet), and more. These medications allow me to life a lovely, high quality life.

Any of these drugs taken improperly can have a negative impact. Overdoses are common among the elderly or those with dementia who forget taking their medication and innocently take a second round of meds. Conversely, they may forget to take their medications which can also have a negative impact on their bodies.

Taking up a friend who offers one of their pills for a headache or other ailment can have a negative effect. These pills can interact negatively with physician prescribed medications and cause undesirable side effects. Antibiotics save lives, but people who stop taking them because they feel better and hold the balance of their prescription back in case they become ill again in the future are only fooling themselves. Half of the dosage will not have the intended effect of containing an



infection, and the patient runs the risk of a rebound effect of the original illness returning.

Then, of course, there are that are either illegal or illegally provided. Illegal drugs run the gamut of cocaine, heroin, meth, and marijuana, generally used because of the user enjoys the high. Once the high is gone, though, the user has to go looking for more drugs in order to get that feeling again. Drug overdoses are common resulting in an array of conditions from anxiety to death.

Illegally provided pharmaceuticals have their own negatives. Improperly used, the drugs can cause adverse interactions with other drugs being used, unexpected allergic reactions, and in the case of antibiotics, over used (prescribed or otherwise) lose their value as the antibodies the drug was intended to kill off will mutate and become immune to that antibiotic

### 3. Discuss at list five negative consequences of Teen age drug abuse.

Negative consequences of teen drug abuse might include:

- **Impaired driving.** Driving under the influence of any drug can impair a driver's motor skills, reaction time and judgment — putting the driver, his or her passengers, and others on the road at risk.
- **Sexual activity.** Teens who abuse drugs are more likely to have poor judgment, which can result in unplanned and unsafe sex.
- **Drug dependence.** Teens who abuse drugs are at increased risk of serious drug use later in life.
- **Concentration problems.** Use of drugs, such as marijuana, might affect a teen's memory, motivation and ability to learn.
- **Serious health problems.** Ecstasy can cause liver damage and heart failure. High doses of or chronic use of methamphetamine can cause psychotic behaviour. Chronic use of inhalants can harm the heart, lungs, liver and kidneys. Abuse of prescription or over-the-counter medications can cause respiratory distress and seizures.

### Answers to Practice Exercise 15

In Papua New Guinea today drug use is now linked to criminal activities. In at least three paragraphs, discuss how it is so. To make it easier cut a newspaper article on drug related crimes. Follow this layout to present your findings:

#### 1. The actual news.

This news appeared on Post Courier of 6<sup>th</sup> of October 2015 about young men from a village drinking homebrew and smoking marijuana attacked and killed a young man in Lae Sialum compound. The relative of the deceased retaliated and burnt three houses

belonging to the suspected tribes of the trouble makers. Three of the suspects are now in police custody.

**2.** What type of crime is committed?

Drinking illegal home brew alcohol and smoking illegal smoke – marijuana.

Murdering a young man.

Burning down of innocent people's house.

**3.** How did the drug help the people to commit the crime?

After drinking home brew and smoking marijuana, the drugs in both the alcohol and smoke affected the central nervous system of the drug user thus affected their normal sense or rational thinking. This means they are not able to think properly to tell the difference between what is right and wrong.

Therefore they ended up committing the crimes and now the Law is after them for breaking the law.

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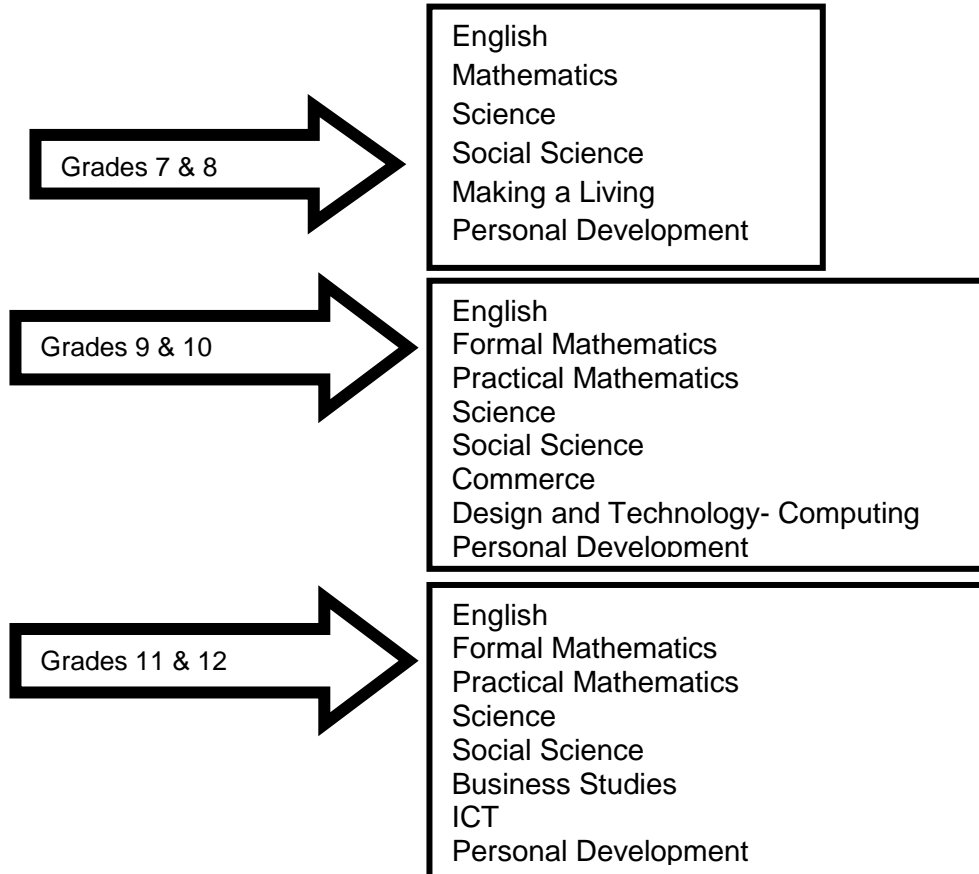
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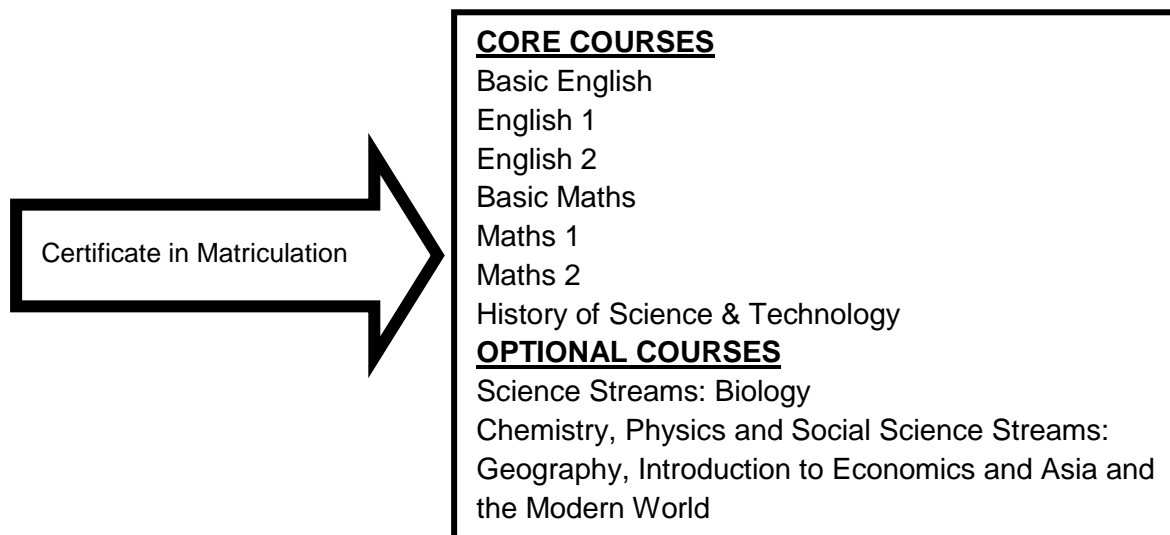
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## SUBJECT AND GRADE TO STUDY



### REMEMBER:

In each grade, you must study English, Formal Mathematics, Science and Social Science. Commerce and Practical Math are optional. Your Provincial Coordinator or Supervisor will give you more information regarding each subject.



### REMEMBER:

You must successfully complete 8 courses: 5 compulsory and 3 optional

## FODE PROVINCIAL CENTRES CONTACTS

PC N O.	FODE PROVINCIAL CENTRE	ADDRESS	PHONE/FAX	CUG PHONES	CONTACT PERSON	WIRELESS PHONES	SENIOR CLERK	CUG PHONE
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2	KEREMA	P. O. Box 86, Kerema	6481303	72228124	Mr Billy Samuel	77522842	Mr David Saria	72229049
3	CENTRAL	C/- FODE HQ	3419228	72228110	Mrs Susan Saiho	77522843	Mr Aubi Elodo	72229050
4	ALOTAU	P. O. Box 822, Alotau	6411343 / 6419195	72228130	Ms Kay Ariall righta	77522844	Mr Albi Bapera	72229051
5	POPONDETTA	P. O. Box 71, Popondetta	6297160 / 6297678	72228138	Mrs Cecilia Gangai	77522845	Mr Stansen Sevese	72229052
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7	GORALL RIGHTA	P. O. Box 990, Gorall righta	5322085 / 5322321	72228116	Mr Jagolo Sogone	77522847	Ms Ovin Tuki	72229054
8	KUNDIAWA	P. O. Box 95, Kundiawa	5351612	72228144	Mr David Kimin	77522848	Mr Denge Gundu	72229056
9	MT HAGEN	P. O. Box 418, Mt. Hagen	5421194 / 5423332	72228148	Mrs Joyce Pogla	77522849	Mr Robert Maki	72229057
10	VANIMO	P. O. Box 38, Vanimo	4571175 / 4571438	72228140	Mrs Ere Kamaso	77522850	Mrs Isabella Danti	72229060
11	WEWAK	P. O. Box 583, Wewak	4562231/ 4561114	72228122	Mr Michael Sirias	77522851	Mr David Wombui	72229062
12	MADANG	P. O. Box 2071, Madang	4222418	72228126	Mrs Esther Makis	77522852	Mrs Applonia Bogg	72229063
13	LAE	P. O. Box 4969, Lae	4725508 / 4721162	72228132	Mr Appo Ibos	77522853	Ms Cathrine Kila	72229064
14	KIMBE	P. O. Box 328, Kimbe	9835110	72228150	Mrs Shirley Haiveta	77522854	Mrs Bernadette Litom	72229065
15	RABAU	P. O. Box 83, Kall rightopo	9400314	72228118	Mr Ereman Pinia	77522855	Mrs Verlyn Vavai	72229067
16	KAVIENG	P. O. Box 284, Kavieng	9842183	72228136	Ms Betty Boas	77522856	Mr John Lasisi	72229069
17	BUKA	P. O. Box 154, Buka	9739838	72228108	Mr Simon Kelle	77522857	Mr Marlyne Meiskamel	72229073
18	MANUS	P. O. Box 41, Lorengau	9709251	72228128	Vacant	77522858	Ms Roslyn Keket	72229080
19	NCD	C/- FODE HQ	3230299 Ext 26	72228134	Mrs Erica Inai	77522859	Mrs Marina Tomiyavau	72229081
20	WABAG	P. O. Box 259, Wabag	5471114	72228120	Mr Paul Nepao	77522860	Mr Salas Kamberan	72229082
21	HELA	P. O. Box 63, Tari	73197115	72228141	Baja Hadaja	77522861	Mr Ogai John	72229083
22	JIWAKA	c/- FODE Hagen		72228143	Vacant	77522862	Joseph Walep	72229085