

CLASS: JSS1

TOPIC: DISEASES and DISEASE VECTORS

INTRODUCTION: The need to always keep ourselves and our environment cannot be over emphasized. Therefore we need to pay adequate attention and care to what we eat and also make sure that our environment is always clean.

DISEASES

Disease is the disruption of body function which may alter a person’s activity. Diseases occur when the germs (microorganisms) which cause the disease, enter the body and overcome the body defense, causing illness or unhealthy conditions of the body.

Causes of diseases

examples of diseases

Food deficiencies <ul style="list-style-type: none">• Lack of protein• Lack of vitamin• Lack of iodine	<ul style="list-style-type: none">• Kwashiorkor• Beri-beri, scurvy, pellagra, bleeding gum etc• Goiter (inflammation of the thyroid gland)
Heredity	<ul style="list-style-type: none">• Diabetes, sickle-cell anaemia, colour blindness etc
Microbes	<ul style="list-style-type: none">• Malaria, tuberculosis, leprosy, polio, cholera etc
Smoking	<ul style="list-style-type: none">• Heart and respiratory diseases
Drug abuse	<ul style="list-style-type: none">• Mental illness
Stress\lack of rest	<ul style="list-style-type: none">• High blood pressure
Allergies	<ul style="list-style-type: none">• Diseases that arise due to individuals sensitivity to certain substances.
Occupational diseases	<ul style="list-style-type: none">• Diseases that arise from exposure to specific substances in a work place.

TYPES OF DISEASES

Diseases can be classified into communicable and non-communicable diseases.

1. **Communicable diseases:** these are diseases that can be passed from person to person or from animal to man. Communicable diseases may be due to direct or indirect contact of the disease-causing germs or the micro-indirectly through water, food, air, vectors etc. example tuberculosis, cold, catarrh etc

2. **Non-communicable diseases:** these are diseases that are not passed on to other people except through hereditary or feeding disorder example sickle cell anaemia, asthma, kwashiorkor etc

VECTOR: a vector is an animal which can carry micro-organism that causes diseases from one animal to another. Example of vectors are rat, flies, tick and other insects such as mosquitoes and lice. Without vectors, some diseases do not have means of being transmitted from one person to another.

DISEASE VECTORS

1. **The Mosquito:** the vector for malaria is the female anopheles mosquito which is the carrier of the micro-organism called **plasmodium** which transmits malaria. it feeds on human blood.
2. **The tse-tse fly:** tse-tse fly carries the sleeping sickness parasite. The parasite is a small living organism known as trypanosome. The tse-tse fly spread the disease of man and other farm animals like goat, sheep, pig, monkey, horses and donkeys by biting them. The bite is usually painful. The parasite is passed to the bitten animal through the saliva of the tse-tse fly. The victims of the bitten tse-tse fly suffer from fever, headache and sleepiness. The victim may die if not treated.
3. **Black fly and bugs:** This insect transmits a worm that causes blindness. Although this small fly called "black", it is often yellow or grey in colour. It has thick antennae, short mouth part, humpy back, two broad gauze-like wings. The mouth is adapted for blood sucking.
4. **Aedes mosquitoes:** these are carriers of viruses that cause yellow fever.

Characteristics of vectors

1. It is a small animal, sometimes an insect.
2. It passes germs from a person to another.
3. The germs grow and develop inside the vector to a stage that they can infect another person, when introduced into the person's body.

4. The vector is not made sick by the fact that it has the disease-causing germs in its body.

Control of mosquitoes and malaria

1. Reduction of mosquito breeding sites by;
 - i. clearing gutters.
 - ii. clearing empty cans in the environment.
 - iii. clearing tall grasses around the home.
 - iv. drying stagnant pools and ponds.
2. Destruction of mosquitoes in the young stage by;
 - i. spraying insecticide on stagnant water.
 - ii. Covering stagnant water with kerosene or oil so that the mosquito larvae and pupae die because they cannot breathe.
3. Killing of adult mosquitoes by;
 - i. Direct attack
 - ii. Using insecticides
4. Preventing mosquito bites by;
 - i. Using mosquito-proof nets to cover windows.
 - ii. Sleeping under treated mosquito net.
 - iii. Using insect repellants.
5. Preventing mosquitoes from reproducing
6. Treatment of patients
7. Taking of drugs that prevents malaria

Home work

1. Describe four general ways of controlling the spread of diseases.

2. What are vectors? Give three examples and how they can be controlled.