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Health, Hygiene And Diseases

The health body of the United Nations, also known as the **World Health Organisation** or **WHO**, defines health as the mental and physical well being of a person. The mental well being refers to the relaxed mind. The physical well being means that the body is fed nutritious food, given adequate rest and exercise.



Food and Health

Our body needs five essential nutrients in addition to water and roughage to maintain a healthy state. The essential nutrients are:

Health – Complete physical and mental well being.



Potato



Wheat



Fruit juices



Corn

Carbohydrates

These are energy-giving foods. Rice, potato, wheat, fruit juices, corn etc., are examples of some carbohydrate rich foods. They are required in large amounts by people indulging in a lot of physical labour.

Fats

Fats are also energy-giving foods but they give more energy than carbohydrates. Vegetable oil, butter and ghee are rich sources of fats. They are required in less quantity by all as excess fat is stored away in the body, leading to increase in body weight.



Vegetable oil



Ghee



Butter



Proteins

Proteins are body-building foods. They are required in large amounts by growing children and patients recovering from an illness. Milk and milk products, eggs, meat and fish are rich sources of proteins.

Vitamins and Minerals

They are protective foods that build the body's **immunity** against diseases. Vitamins and Minerals are abundantly found in fresh fruits and green leafy vegetables. Though they are required in very minute amounts, their deficiency can cause serious health problems.



Orange




Spinach



Apple



Cabbage

 **Immunity** – The body's ability to fight diseases.

Water and Roughage

Ans D1 (Water helps to flush out the toxins from our body and also helps in transportation of useful substances to various parts of the body.) Water also forms an essential component of our body. We must drink at least eight to ten glasses of water per day.



Cucumber

Roughage is obtained from the raw fruits and vegetables in our diet. It adds bulk to the food in the digestive canal making it easier to push it down the gut.

Balanced Diet

A diet consisting of all the five vital nutrients in adequate amount is called a **balanced diet**.



Aerobics



Swimming



Tennis

Maintaining a correct posture is also important for a healthy body.



Siting



Reading



Sleeping



Walking

Quick Revision:

Write True or False against the given statements:

1. Proteins are energy rich foods.
2. Excess fat is stored in the body.
3. Carbohydrates improve the immunity of the body.
4. Roughage is obtained from raw fruits and vegetables in our diet.
5. A balance diet contains all the nutrients in adequate amount.

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Hygiene and Health

Health is directly related to the standards of hygiene that we maintain.

Hygiene – The standards of personal cleanliness.

In order to maintain good hygiene we should follow certain steps in our daily life:



- ✓ Take a bath regularly with a medicated soap and wash hands before and after having food, after returning from play.
- ✓ Use our personal towels to clean ourselves.



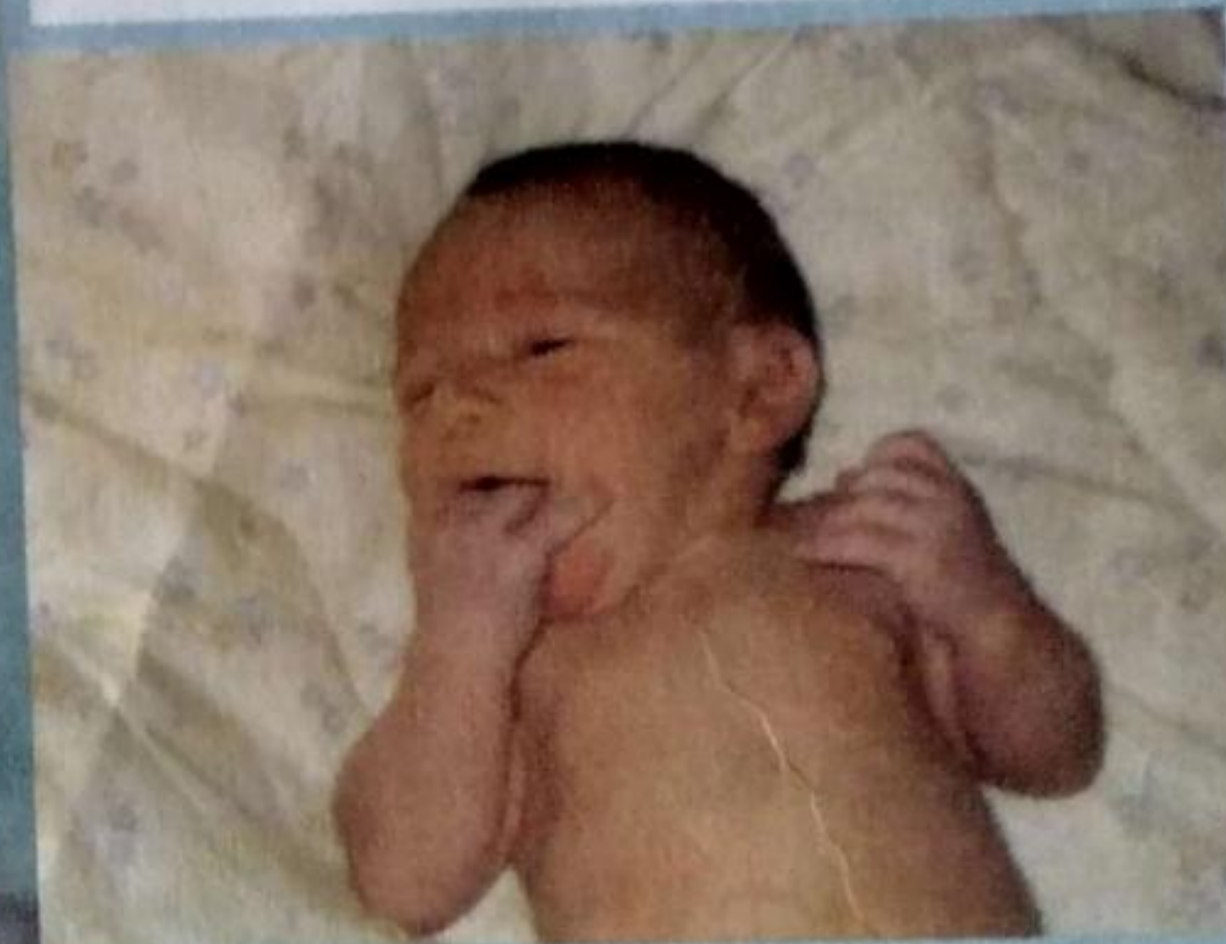
Disease	Deficiency	Foods Rich In the Nutrient	Effect
Night blindness	Vitamin A	Green leafy vegetables, papaya, carrot, mango, milk, butter and egg yolk.	The patient cannot see in dim light.
Beriberi	Vitamin B1	Milk, peas, cereals, and green vegetables.	Weakness and pain in the limbs.
Rickets	Vitamin D	Milk and milk products, egg yolk.	Softening of bones leading to fractures.
Scurvy	Vitamin C	Amla, orange, lemon, and tomato.	Bleeding of gums.
Goitre	Iodine	Iodized salt, sea food.	Leads to swelling in the neck region.
Anemia	Iron	Spinach, apple, guava, brinjal, and meat.	Leads to weakness and pale complexion.



Goitre



Rickets



Anemia



Scurvy

Quick Revision:

Fill in the blanks:

- The articles of patients should be washed separately and disinfected.
- Germs are disease causing organisms.
- Amla and Orange are rich sources of vitamin C.
- Deficiency of vitamin A causes Night blindness.
- The swelling of neck takes place in Goitre.

Communicable Diseases

The deficiency diseases cannot be transferred from one person to another. They are **non-communicable diseases**. **Communicable diseases** are those in which the germs are transferred from the diseased person to the healthy person. The germs that cause communicable diseases may be bacteria, protozoa or virus. They enter the body through the mouth or nose of the person. *For eg. Cholera, measles, ringworm etc.*

Ans D5 There may be many ways in which the germs are transferred:

1. By direct contact, by sharing towels, handkerchiefs etc.

The diseases like chicken pox, common cold, measles, ringworm, whooping cough etc., spread through direct contact.



2. Through infected food and water

Diseases like cholera, typhoid, diarrhea, jaundice and polio are either **water-borne** or **food-borne**. The flies and other insects carry germs from the filth that they sit on. These are transferred to the exposed food on which they later sit. The dirty hands of the vendors also contaminates the food.



❖ **Water Borne** – Diseases in which germs are transferred through contaminated water.

❖ **Contaminated** – Full of germs.

Through the air we breathe

The germs of diseases like the common cold, influenza, cough etc., spread through the air that we breathe in.)



Through insects

The insects like the mosquito are the carriers of the germs of deadly diseases like malaria, dengue and chickungunya.



Mosquito bite

Ans D2

Malaria

Malaria is caused by a parasite called **Plasmodium**, which is transmitted via the bites of infected mosquitoes. In the human body, the parasites multiply in the liver, and then infect red blood cells. Symptoms of malaria include fever, headache, and vomiting, and usually appear between 10 and 15 days after the mosquito bite. If not treated, malaria can quickly become life-threatening by disrupting the blood supply to vital organs. In many parts of the world, the parasites have developed resistance to a number of malaria medicines.

Chickungunya

(Chikungunya disease is a viral disease transmitted in humans by the bite of infected mosquitoes. *Aedes aegypti* mosquito (also called yellow fever mosquito) is the primary transmission agent of **Chikungunya Virus**. *Aedes aegypti* bites during day time and hence day time mosquito bite is the main reason for transmission. The fever severely affects the joints of the patient.)

Dengue

The dengue mosquito usually bites in the morning or at evening. After being bitten by a mosquito carrying the virus, the incubation period ranges from 3 to 15 (usually five to eight) days before the signs and symptoms of dengue appear. Dengue starts with chills, headache, pain upon moving the eyes, and low backache. Painful aching in the legs and joints occurs during the first hours of illness. The temperature rises quickly as high as 104° F (40°C), with relative low heart rate and low blood pressure. The eyes become reddened. A flushing or pale pink rash comes over the face and then disappears. The glands (lymph nodes) in the neck and groin are often swollen.



Anopheles



Aedes aegypti



Aedes aegypti

Prevention of Breeding of Mosquitoes and Mosquito Bites.



Add kerosene oil to stagnant water



Remove broken pots



Empty cooler tanks before monsoons



Use mosquito nets



Use mosquito repellants



Keep surroundings clean and dry

Ans D6

Prevention of communicable diseases:

- ✓ Isolation of the patient.
- ✓ Disinfection of the patient's clothing and belongings.
- Fumigation with insecticides by the municipal authorities in case of an epidemic.
- Destruction of breeding grounds of mosquitoes and other carriers.
- ✓ Well lit and well ventilated homes.
- ✓ Supply of clean drinking water and hygienic foods.
- Immunization against communicable diseases. It is the process of injecting a small amount of medicine in a person that develops immunity towards a particular disease.



Fact File

There was a sudden massive surge of patients with tooth decay, the year coke was launched! Guess why?

- 💡 **Insecticides** – Chemicals used to kill insects.
- 💡 **Fumigation** – Spraying of insecticides.
- 💡 **Epidemic** – The condition where a particular disease affects a large group of people.

New Words

Balanced Diet

– A diet consisting of all important nutrients in the right amount.

Food Pyramid

– The arrangement of essential nutrients according to their amounts required by the body.

Disease

– A state of the body marked by malfunctioning of some part.

Deficiency Diseases

– Diseases caused due to deficiency of a particular nutrient in the body.

Communicable Diseases

– (The diseases that can be transferred from one person to another.

Carriers

– The organisms that carry germs of a disease and infect a healthy person.

Immunization

– The injection of a small amount of a particular medicine in a person to develop immunity against a particular disease.

Let's Revise

1. People indulging in a lot of physical labour require more of carbohydrate rich food.
2. Excess fat is stored away in the body.
3. Growing children and patients require more proteins.
4. Vitamins and minerals provide immunity to the body.
5. Roughage adds bulk to the food we eat.
6. Exercise improves blood circulation and keeps us fit.
7. Immunization can prevent many communicable diseases.

Let's Answer

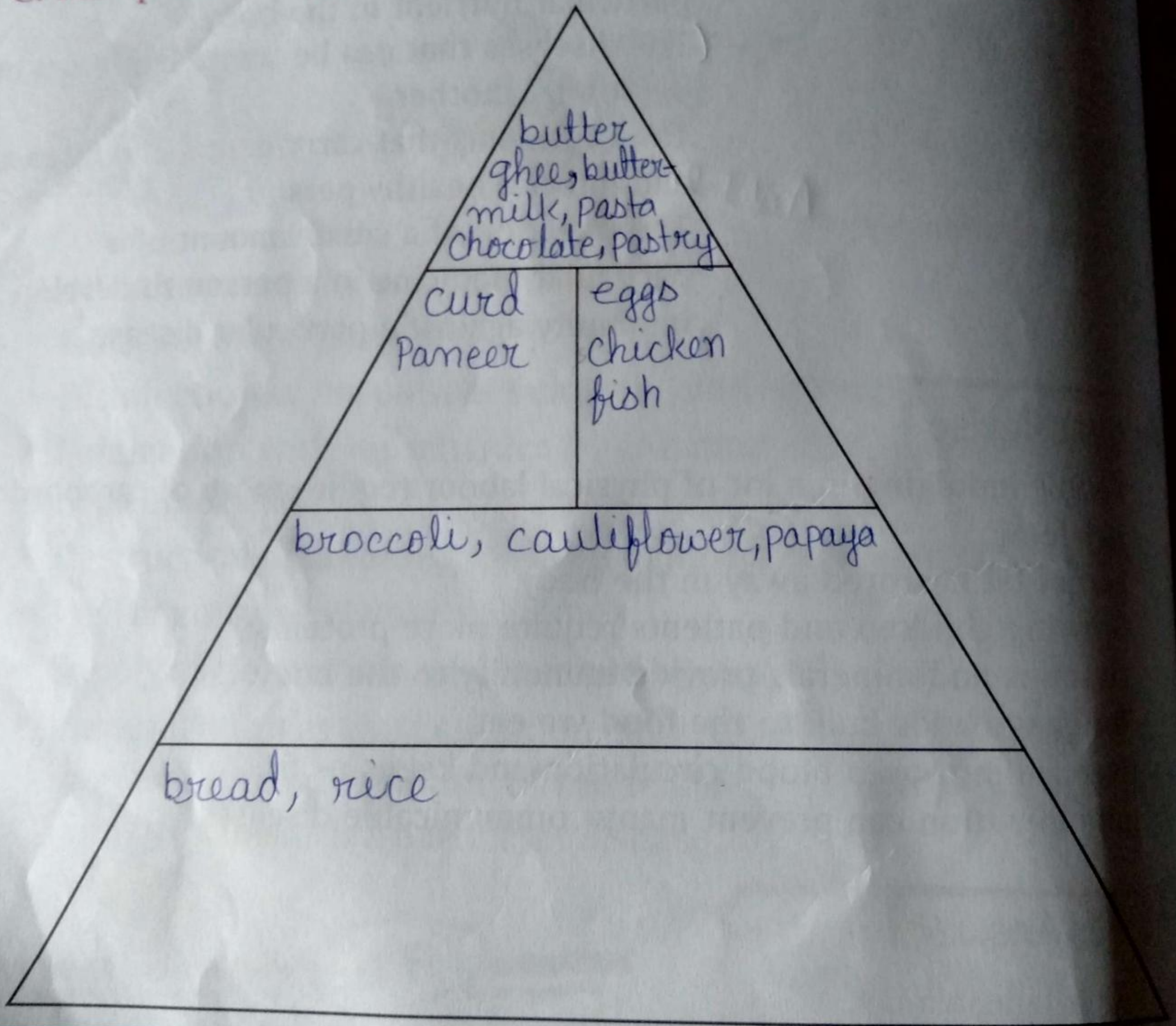
A. Fill in the blanks:

1. Fumigation with insecticides helps in containing infection during epidemics.
2. Communicable diseases can be transmitted from one person to another.
3. The muscles become flabby and weak when not used for a long time.
4. Dirt and filth attract carriers like houseflies and mosquitoes.
5. Rickets is a disease of bones.

B. Match the nutrients to their sources:

- | | | |
|-----------|---|----------|
| I | | II |
| Vitamin A | — | Orange |
| Iron | — | Egg yolk |
| Vitamin D | — | Sea food |
| Iodine | — | Carrot |
| Vitamin C | — | Spinach |

C. Fill up the food pyramid taking help from the box given below:



- | | | | | |
|--------|-----------|--------|------------|-------------|
| bread | eggs | butter | broccoli | cauliflower |
| rice | curd | ghee | buttermilk | chicken |
| pasta | chocolate | fish | papaya | paneer |
| pastry | | | | |

D. Answer these:

1. What is the role of water in our body? Pg. no. - 45
2. Discuss in detail any one disease caused by a mosquito bite. Pg. no. - 51
3. State any three steps to maintain personal hygiene. Pg. no. - 47 and 48
4. What are communicable diseases? Give examples. Pg. no. - 50
5. Discuss any three ways in which communicable diseases are spread. Pg. no. 50 & 51
6. How can the spread of communicable diseases be contained? Pg. no. 52

E. Read the clues and fill up the crossword with the names of various deficiency diseases.

1. Lack of vitamin D
2. Lack of vitamin A
3. Lack of iron
4. Lack of vitamin B
5. Lack of iodine
6. Lack of vitamin C

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