

Worksheet

Class 10th (science)

Chapter 1st Food and Human Health

- **Human Health**

1. Properties of drinking water and harmful effects of polluted water
2. Obesity
3. Blood pressure

1. Properties of drinking water and harmful effects of polluted water

Potable water should have the following properties-

- Water should not have visible particles and vegetation,
- Should not have harmful microbes,
- PH of water should be balanced,
- Water must have adequate amount of dissolved oxygen.

Harmful effects of contaminated water :

Many disease groups us if the potable water is contaminated. These diseases are caused by the presence of pathogenic microorganisms in the water, which enters into the body with water.

- The main pathogens are viruses, bacteria, protozoa, and worms. These pathogens causes cholera, dysentery, like diseases and can easily affect anyone.
- Contaminated water can cause many communicable diseases.
- It may also cause dangerous diseases like hepatitis, flu, typhoid, jaundice etc.

Note :- Dracunculiasis (Naru disease) was once a serious problem in Rajasthan. A worm *Dracunculus medinensis* is the causing agent. Government's efforts Naru abolition stops the disease after the year 2000.

Prevention methods:-

- Drinking water should be filtered, boiled and cooled before use.
- Bathing, washing clothes in rivers, ponds should be prohibited and water reservoir should be cleaned frequently because "Healthy tomorrow is where, there is healthy water".

2. **Obesity**

Obesity is that condition when excessive body fat gets accumulated in the body to the extent that it starts to have harmful effect on health.

This could reduce the potential age.

- Body Mass Index (BMI) is the ratio of human weight and height.
- When the BMI is between 25 to 30 kilogram per meter square it is pre obesity stage and when the BMI is over 30 kilogram per meter square than it is obesity.
- Obesity is associated with many diseases such as, heart disease, diabetes mellitus, sleep apnea, many types of cancer and osteoarthritis.

Reasons for obesity:-

1. Obesity and weight gain is due to the imbalance between intake of energy and its use.
2. Eating high fatty food, Junk food, and synthetic food.
3. Less exercise, hypothyroidism, sedentary life style, without proper physical work, fat starts to accumulated in the body.

3. Blood pressure

Pressure exerted on the walls of the blood vessels by blood flowing in it is called Blood pressure.

1. Arteries are those blood vessels which carries blood from the heart to all the tissues and organs in the body.
 2. Blood pressure of a person is expressed in systolic/diastolic like 120/80
 - Systolic:-** Systolic is the above number that shows pressure of arteries when the heart contracts and pumps the blood into arteries.
 - Diastolic:-** Diastolic is the number below that shows the pressure of arteries when the heart relaxes and its muscles becomes loose.
- The systolic blood pressure of a normal person is between 90 to 120 mm Hg(mm mercury level) and diastolic blood pressure is between 60 to 80 mm Hg.
 - **The equipment used for measuring blood pressure is called sphygmomanometer.**
 - **Facts:-** Stephen Hales in 1733 measured the blood pressure of horse for the first time and Coplan had defined blood pressure in 1983.

Types of blood pressure

1. Low blood pressure
 2. High blood pressure
1. Low blood pressure
 - It is when the blood pressure in your arteries and veins is abnormally low.
 - When the blood pressure is extremely low then the oxygen and the nourishing food don't reach the important organs like heart, brain and kidneys, thus these organs stops working properly and can damage the organs permanently.
 2. High blood pressure
 - It is due to excessive pressure in arteries.
 - It is caused by anxiety, anger, jealousy, confusion, eating more food than needed.
 - Consumption of white sugar, spices, oil, ghee, pickle, sweets, meat, tea, cigarette, alcohol, sedentary life and absence of exercise also cause high blood pressure.

Timely diagnosis of high blood pressure is important.

Such patients should eat food containing potassium, like fresh fruits, packed food stuff should be avoided, amount of calcium and magnesium in food should be balanced. Eat more food item that contain fibre, Saturated fats (Meat and vegetable ghee) should be reduced. In addition exercise regularly, walking for 30 minutes is the best exercise. Yoga, meditation, pranayam should be done daily, smoking and drinking alcohol should be avoided.