

**CBSE Test Paper 05**  
**CH-02 Sports and Nutrition**

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1. What are fats?
2. What do you mean by components of diet?
3. What is Glycemic Index?
4. What do you mean by growth food?
5. Enlist two sources of calcium and iron separately.
6. Write in brief about important minerals requirement.
7. What are fats? Write a detailed note on its types. Also, mention its importance in the proper functioning of the body.
8. Discuss the precautions for taking food supplements.
9. What are the goals of eating during competition? Explain the two different categories of such nutrition, indicating the different requirements.
10. Write a detailed note on functions of fats in our body along with its daily recommendation.

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**Answer**

1. Fats provide us with twice as much energy as carbohydrates. We can store extra fat in our body to be used later. Butter, Ghee, and nuts are rich sources of fats, too much fat can lead to diseases like blood pressure, heart problem, and obesity.
2. The Components of Diet are Proteins, fats, carbohydrates, vitamins, minerals.
3. Glycemic Index (GI) is a scale of how much a particular type of food raises blood sugar

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over a two hour period compared to pure glucose.

4. Protein which is the combination of oxygen, carbon & hydrogen, helps for proper growth & development muscles & tissues.

5. Calcium- Milk, milk products,

Iron- Meat Fish, liver, eggs, green vegetables, wheat, grain, yeasts.

6. Important Minerals:

i. Iron: It is important for the formation of haemoglobin. Recommended daily allowance of iron is about 10 mg. Its sources are meat, fish, liver, egg, green vegetable, wheat grain and yeast.

ii. Calcium: Calcium is needed for the formation of strong bones and teeth and also for clotting of blood. Its sources are milk products. Daily recommended allowance of calcium is about 800 mg.

iii. Potassium: Potassium is important for growth and keeping cells and blood healthy. Its sources are green and yellow vegetables.

iv. Iodine: Iodine is essential for the function of thyroid. Its deficiency causes 'goitre', in which a gland in the throat swells up. Its sources are Iodized salt, sea food and water.

7. **Fats** - Fats are the energy boosters which provide us with twice as much energy as carbohydrates. We can store extra fat in our body to be used later. Butter, ghee, and nuts are rich sources of fats; too many fats can lead to diseases like blood pressure, heart problems, and obesity.

**Types-** Types Fats can be classified according to their structures. Different types of fats have different characteristics and these react in different ways inside the body. There are three different groups of fats in the diet which are saturated, polyunsaturated and mono-unsaturated fats. The intake of saturated fats increases the chances of heart diseases due to the increase of cholesterol in the blood. Polyunsaturated fats and monounsaturated fats help in lowering blood cholesterol.

**Importance:**

1. Fats are necessary for many body functions.

2. Fats keep up warm and give protection to organs.

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3. Fats also help in the production of hormones.
  4. Fatty acids provide the raw materials which help in the control of blood pressure, blood clotting and other body functions.
  5. Fats are also important energy sources.
  6. Fats help in transportation of fat soluble vitamins like A, D, E and K.
  7. Fats maintain skin and hair.
8. Precautions for taking food supplements: - :-Do not pay heed to the words of salesmen or advertisements which claim that these supplements will improve child's brain. ;- first of all ensure that there is a lack of essential nutrients in a child needs to take food supplements or not. ;- before purchasing an individual should ensure that it is free from preservatives, contains no fillers and does not contain any added sugar.
9. The goals of eating during competition are to
- i. stay hydrated
  - ii. provide immediate fuel
  - iii. boost performance
  - iv. preserve muscle and
  - v. improve recovery.

The two different categories of this nutrition are

- i. Competitions less than two hours long, and Competitions more than two hours long. For the first category, the main focus should be on hydration. This is especially true if you're using good pre-and post-training nutrition. So make sure you consume plenty of water. However, if you're exercising in the heat and sweating a lot, sports drinks may be useful since they have electrolytes that help speed hydration and recovery.
  - ii. For the second category, sports drinks are helpful. Every hour you will need 15 grams of proteins and 30 to 45 grams of carbohydrates, which can be taken in the form of liquids, gels or solid food. However, ensure that you get enough electrolytes, especially sodium. This can be in the form of table salt added to any drink.
10. Fats: The most important from the biological point of view, fats are found partly as

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neutral fat in adipose tissue. (fatty tissue), partly as triglycerides (3 fatty acids), phospholipids and cholesterol. All fats are made up of fatty acids. The fatty acid, known as linoleic acid, has to be provided in the diet since it cannot be synthesized in the body. A fat free diet carries a high risk of vitamin deficiency. Human body can synthesize triglycerides and cholesterol (99% in the adipose tissue in the form of triglycerides).

Fatty acids are divided into saturated fatty acids and unsaturated fatty acids (mono-unsaturated, poly-unsaturated). One gram of fat provides 9.3 K Cal.

Sources of Fat:

- i. Animals fat: Animal fats are ghee, butter, milk, cheese, eggs, meat and fish.
- ii. Vegetable fats: Some plants store fat in their seeds e.g., groundnut, mustard, sesame, coconut, peanut and olive oil, sunflower, corn and soyabean.
- iii. Other sources: Small quantity of invisible fats are found in cereals, pulses, nuts, e.g., bajra carries 6.5% fat.

Functions: Fat is important for the proper functioning of the body.

- i. Fatty acids provide the raw materials which help in controlling of blood pressure, blood clotting and other body functions.
- ii. Besides providing energy, fat serves as vehicles for fat soluble vitamins (vitamin A, D, E and K).
- iii. Fat maintains skin and hair.
- iv. Fats in the body support Viscera such as heart, kidney and intestine and fat beneath the skin provides insulation against cold.
- v. Fats are called stored energy foods. Since our body can store food, they work as energy banks. The energy is provided when there is a need.

Recommendations:

Total fat consumption on a daily basis should not exceed 30% of the total calorie intake. Out of which saturated fat should be limited to 10% of the total calorie for the day and remainder of the day's fat (i.e., 20%) intake should be equal amount of mono-unsaturated and poly-unsaturated fat. Diets high in fat lead to increase the risk of obesity (overweight) and heart diseases.