

# PHYSICAL EDUCATION

## CHAPTER 2: SPORTS & NUTRITION



## SPORTS & NUTRITION

### Sports And Nutrition



Sports and nutrition both are interrelated. Without proper nutrition sportsman will not be able to perform well, no matter how skill-full an Athlete he is.

Every physical activity needs energy to perform, and without proper nutrition, our body is unable to release sufficient energy.

Nutrition plays a very vital role in our growth and development. It is required to maintain good health.

Nutrition is the science of food in which consumed food is digested, nutrients are absorbed and distributed to the tissue for utilisation.

#### **Nutrition And Diet:**

Nutrients are the chemical compounds in foods which are most essential for our life and health. It provides us with energy for work, It is the building blocks for repair and growth.

#### **There are five major nutrients:**

Carbohydrates, Fats, Proteins, Vitamins, Minerals. Nutrients are divided into two categories Macro and Micronutrients.

### Balance Diet



A balanced diet in nutrition is a diet which contains all nutrients (macro and micro) in a correct proportion for efficient working of the body.

In other words, it is the intake of the appropriate type and adequate amount of food, to supply energy and to support growth and development of an individual.

#### Functions of Balance Diet:

- It provides sufficient energy It helps in optimum growth and development.
- It improves the proper functioning of organs.
- It helps to recover fast. The immune system becomes strong.
- It improves health status.
- It also improves metabolism.
- It prevents a deficiency disease.
- Helps in maintaining body weight.
- The overall efficiency of the body improves.

#### Factor affecting diet:

The type of Tournament depends upon various factors like fund available, time periods, infrastructure, staff, facilities, level of teams etc.

- Age.
- Gender.
- Workout or Profession.
- Bodyweight.

- Specific sports diet.
- Sufficient roughage.
- Pregnant or feeding mother.
- Diet during a health problem.
- Seasonal food.
- Climatic conditions.

### Nutritive Components of Diet

- Carbohydrates.
- Fat.
- Protein.
- Vitamin.
- Mineral.

### Carbohydrates:

Carbohydrates are the main source of nutrition. It supplies energy for all types of physical and mental activities. It is the major fuel for muscular contraction.



It provides instant energy, but this energy does not store for a long. Carbohydrates are also termed as energy-yielding food.

Carbohydrates are the compound of Carbon(C), Hydrogen(H), Oxygen(O). One gram of carbohydrates provides 4 calories of energy.

That means, if we consume 400 gram during a day, we get 1600 calories from only

carbohydrates. So, we have to be very calculative while taking it.

It should be taken as per our physical activities. Extra carbs which don't burn will convert into Fats.

### Types of Carbohydrates:

#### Simple Carbohydrates:

This kind of carb in nutrition provides immediate energy. There are various kinds of sugar present in this, like Glucose, fructose, lactose, galactose. These carbs are soluble in water.

**Sources:** Fruits, low fat milk, table sugar, honey, jam, vegetables like potatoes, candy, etc.

#### Complex Carbohydrates:

Complex carb is starch which contains various types of sugar molecules to form glycogen. This glycogen releases slow energy as compared with simple carb. They are not soluble in water.

**Sources:** Bread, cereals, vegetables, whole pulses.

### Proteins:

## Foods High in Protein



Meat and fish



Cheese



Eggs



Beans



Bread



Hummus



Nuts and seeds

Protein carries the basic structure of all living cells. They are complex organic compounds which form chains of amino acids which contain Carbon, Hydrogen and Nitrogen. It is also called bodybuilding food.

One gram of protein provides 4 Kcal. Thus, if you take 50 gram of protein, you are

getting  $50 \times 4 = 200$  calories.

Daily protein requirements depend upon individual activities. One kilogram of body weight needs one gram of protein.

Thus, if your body weight is 70 kg you need 70 gram of protein every day, and if your workout is heavy, you need even more protein than normal.

**(CAUTION:** High Intake of protein creates an overload on Kidney and liver. Also, it leads to dehydration.)

Protein deficiency diseases are MARASMUS and KWASHIORKOR.

### **Types of protein:**

There are two types of protein-

#### **1. Essential protein:**

There are 9 essential amino acids which we have to take from external food sources because they are not produced in our body.

The sources of essential proteins are pulses, milk, dairy products, soybeans, egg, meat, etc. They are required for the growth of tissues.

# COMPLETE PROTEIN FROM PLANTS IS EASY

## ESSENTIAL AMINO ACIDS:

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### ✔ HISTIDINE

Rice, wheat, legumes, potatoes, cantalope



### ✔ THREONINE

Watercress, spirulina, pumpkin, leafy greens, hemp & chia seeds



### ✔ LYSINE

Beans, soy, quinoa, pumpkin seeds, seitan and pistachios



### ✔ VALINE (BCAA)

Legumes, spinach, broccili, sesame and hemp seeds



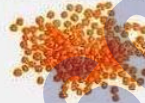
### ✔ PHENYLALANINE

Avocado, beans, rice, almonds, seaweed, pumpkin and spirulina



### ✔ LSOLEUCINE (BCAA)

Lentils, beans, oats, rye, soy, quinoa, brown rice and cabbage



### ✔ TRYPTOPHAN

Oats, spinach, soybeans, sweet potatoes



### ✔ METHIONINE

Sunflower seeds, hemp seeds and chia seeds



### ✔ LEUCINE (BCAA)

Peas, pea protein, whole grain rice, sesame seeds, pumpkin, seaweed



## 2. Non-essential proteins:

There are more than 13 non-essential proteins, the body requires them in less quantity. It helps in the synthesis of essential protein.

## Amino Acid Categories

**9 Essential CANNOT be made by the body**

1. Histidine
2. Isoleucine
3. Leucine
4. Lysine
5. Methionine
6. Phenylalanine
7. Threonine
8. Tryptophan
9. Valine

• Know these

**12 Nonessential can be made from nitrogen & CHO intermediates.**  
**1 Non-Standard- not in humans \***

1. Alanine
  2. Arginine +
  3. Asparagine +
  4. Aspartic acid
  5. Cysteine +
  6. Glycine +
  7. Glutamic acid
  8. Glutamine +
  9. Proline +
  10. Tyrosine +
  11. Serine +
  12. Selenocysteine
  13. Pyrrolysine \*
- + can become essential in some cases

The sources of non-essential proteins are grain, dry fruits, vegetables.

## Fats

Fat contains Carbon, Hydrogen and Oxygen. It is one of the important sources of nutrition. Fats are energy yielding food which stores inside our body and are used as an emergency source of energy. It converts into fatty acid.

One gram of fat provides 9 kcal. Thus, if you take 50 gram of protein, you are getting  $50 \times 9 = 450$  calories.

### Types of Fatty acids:

There are two types of fatty acid present in food:

#### Saturated fatty acid:

They contain chains of Carbon atoms. Intake of saturated fat increases the chances of heart disease due to an increase in high cholesterol in the blood. It provides high-density lipoprotein (HDL).

**Sources:** Animal fat, full cream milk, cream, butter, coconut oil, palm oil, ghee and all fast foods.

#### Unsaturated Fatty Acid:



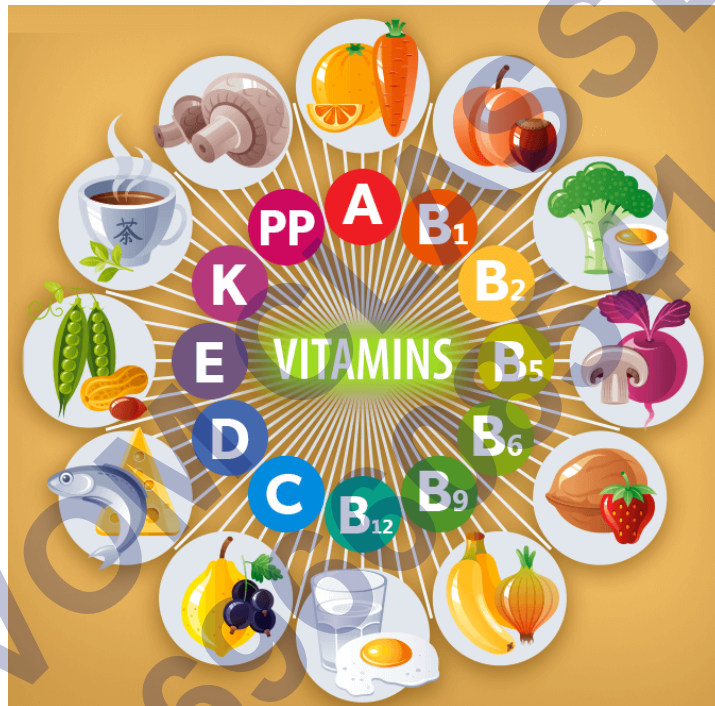
It provides low-density lipoprotein (LDL) which is good for our body. It helps in lowering blood cholesterol.

It is further divided into two categories

- Polyunsaturated Fatty acid.
- Monounsaturated Fatty acid.

**Sources:** Peanut oil, olive oil, Soya oil etc.

## Vitamins



Vitamins are complex compounds of Carbon. It is micronutrients. Vitamins are very essential for the normal functioning of our body. Absence of any kind of vitamin causes certain deficiency disease.

**Vitamins are divided into two groups:**

**Fat Soluble Vitamin** – These are Vitamins mins A, D, E and K. These vitamins are soluble in fat.

**Water-Soluble Vitamin** These Vitamins are soluble in water. These Vitamins are vitamin B and C.

### Fat Soluble Vitamin

Vitamins	Helps	Deficiency	Sources
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Vitamins	Helps	Deficiency	Sources
<b>Vitamin A</b>	Eyes and skin	Night blindness	Milk, butter, egg, carrot, tomatoes
<b>Vitamin D</b>	Strong bones and teeth	Rickets	Milk, Butter, vegetables, sunlight.
<b>Vitamin E</b>	Protect cell membrane	Anaemia	Milk, Butter, meat
<b>Vitamin K</b>	Blood clotting and heal wounds	Anaemia	Cabbage, soyabean, fish, wheat, egg, meat

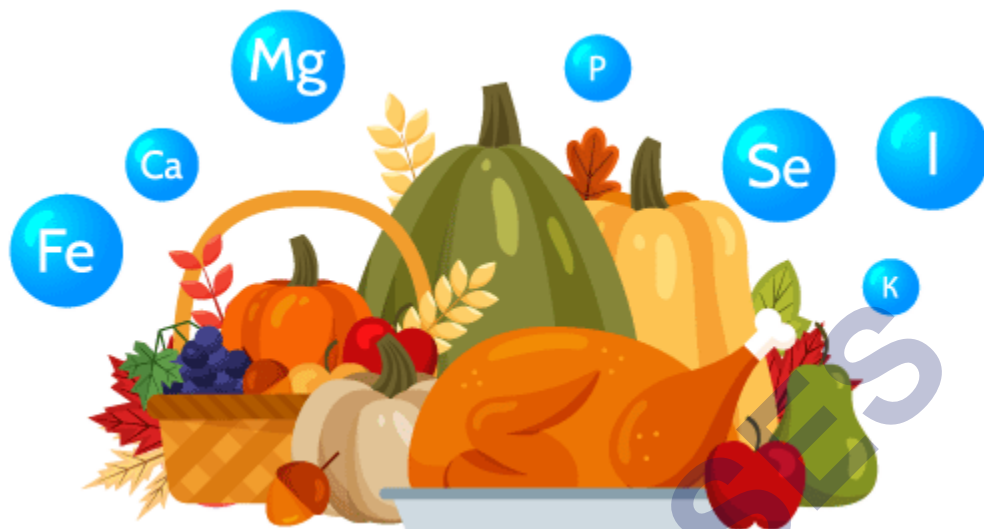
### Water Soluble Vitamin

Vitamins	Helps	Deficiency	Sources
<b>Vitamin C</b>	Healing wounds, maintain ligaments, tendons	Scurvy	Lemon, orange, Amla, tomatoes
<b>VITAMIN B COMPLEX</b>			
<b>Vitamin B1 (Thiamine)</b>	Metabolism of Carbohydrates. Maintains liver, Kidney	Beri-Beri	Black beans, lentils, Asparagus
<b>Vitamin B2 (Riboflavin)</b>	Growth of Red Blood Cells (RBC)	Retarded growth	Cereal, bread, egg, vegetables

<b>Vitamin B3 (Niacin)</b>	Lower cholesterol, ease arthritis and boost brain function	Pellagra (lost skin sensitivity)	Meat, poultry, red fish, cereals
<b>Vitamin B5 (Pantothenic)</b>	Making blood cells	Insomnia, Depression	Cereals, mushrooms, nuts, milk
<b>Vitamin B6 (Pyridoxine)</b>	Form haemoglobin	Lips corner crack, Depression	Fish, peanut, soyabean, Oats
<b>Vitamin B7 (Biotin)</b>	Metabolize fats, carbohydrates, and protein	Hair loss, red rash in the face	Bread, cauliflower, mushrooms
<b>Vitamin B9 (Folic Acid)</b>	Reproduction, growth, and development	Anaemia	Beans, peanut, sunflower seed, seafood
<b>Vitamin B12 (Cobalamin)</b>	Metabolism, energy transfer	Reduction in blood cells	Meat, fish, milk, cheese

## Minerals

Minerals are required for healthy teeth, bone, and muscles. It helps the transmission of nerve impulses, the formation of hormones, maintenance of Heartbeat etc.



Mineral are classified into two groups macro and micro-Minerals.

### Macro Minerals

Minerals	Helps In	Deficiency	Sources
<b>Calcium</b>	Growth and development of bones and teeth	Rickets	Cheese, milk, yoghurt, cereals, vegetables
<b>Potassium</b>	Make nervous system strong	Fatigue, muscle cramps and abnormal heart rhythms.	Banana, tomatoes, peanut
<b>Sodium</b>	Muscular activities and transmission of nerve impulses	Nausea, headache and fatigue	Table salt, pickles, Butter
<b>Magnesium</b>	Repairs and maintain body cells	Fatigue, muscle cramps, mental problems	Meat, brown rice, whole grain
<b>Phosphorus</b>	Formation of bones and teeth	Rickets, osteoporosis	Fish, milk, cod liver, egg

### Micro Minerals

Minerals	Helps In	Deficiency	Sources
Iodine	Production of hormones in the thyroid gland.	Goitre (Swollen Thyroid Gland)	Iodised salt, sea food
Iron	Production of haemoglobin	Anaemia	Liver, meat, banana, spinach
Chromium	Stimulates insulin activities	Diabetes	soyabean, carrots, Bajra, barley.

### Non-Nutritive Components of Diet



Components which do not provide energy

#### Water

Our body consist of 70% of water in total body weight. An n adult needs 2 – 3 litres of water daily for a normal life.

Water in the blood helps in the transportation of nutrients to various cells of the body.

#### Importance of water:

- Excretion of waste products.

- Regulates body temperature.
- Transportation of nutrients
- Maintains body fluids
- Eliminates body toxin
- Lubrication of joints
- Improves skin quality
- Kidney function improves
- Boost physical performance
- Improve digestion

### **Roughage**

It is known as fibre, which is a very important part of nutrition. It is the indigestible portion of food.

Fibre comes from the part of plant-based foods. It helps in digestion, prevent constipation, and helps to manage cholesterol levels.

### **Eating for weight control**

A stable weight based on a balance between the energy which you get from food and the energy you use. We must provide good nutrition for our body to maintain a healthy weight.

If calorie consumption is more than calorie burn, then our body stores extra calories, and converts them into fat. When a person burns up more calories than they consume, they lose weight.

We use energy during a day in three ways

- Energy expended during rest (Basal Metabolism)
- Energy used to break down food (Thermogenesis)
- Energy used during activities

### **Healthy weight**

Healthy weight leads a healthy life with a reduced risk of diseases. It means that an individual who has a healthy weight, he can lead a healthy life.

Healthy weight lowers an individual's risk of various health problems, such as heart disease, stroke, high blood pressure, diabetes, etc.

A healthy weight can be calculated by Body Mass compound. BMI can be calculated by...

$$\text{BMI} = \text{Weight (Kg)} / \text{Height in m}^2$$

Category	Men	Women
Under weight	Below 20	Below 18
Healthy weight	20 – 25	19 – 24
Overweight	26 – 29	25 – 29
Obese	30 above	30 above

#### Methods to control healthy body weight:

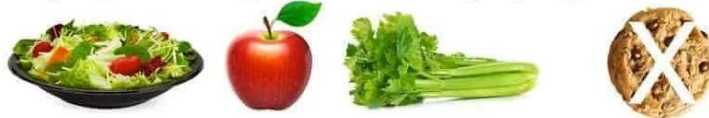
- Take a balanced diet.
- Drinks lots of water.
- Eat a lot of fibrous food.
- Regular Medical Check-up.
- Avoid Fatty foods.
- Do regular physical Activity.
- Avoid drinking alcohol.
- Avoid junk food.
- Eat meals in small shifts.
- Do not do crash dieting.
- Never try slimming pills.
- Avoid overeating.

#### Pitfall Of Dieting

# WHAT EXACTLY IS FLEXIBLE DIETING?

## *Strict Dieting / Clean Eating:*

Eating only “diet-friendly” foods and avoiding anything considered unhealthy



## *How Many Perceive Flexible Dieting:*

Eating all unhealthy foods and still losing weight because it “fits your macros”



## *Actual Flexible Dieting:*

Eating mostly healthy foods, but also enjoying less healthy foods that you love in moderation (80% whole, healthier choices and 20% less ideal choices)



### **YOU'RE NOT UNDISCIPLINED FOR EATING A COOKIE. YOU'RE EDUCATED.**

Flexible Dieting is a sustainable, effective approach that allows you to enjoy foods you love in moderation knowing they won't offset your progress.

An individual who is overweight wants to reduce weight by any means and methods, without realising its side effects.

They starve to reduce weight. Many times, they skip meals to lose weight, sometimes take slimming pills. This causes serious health problems.

### **Major Pitfalls of Dieting:**

- Extreme Reduction of Calories sometimes takes less than 1000 calories a day.
- Restriction on some nutrients like Carbohydrates, fat
- Often skipping meals
- Intake only liquid food
- Intake of only labelled and processed foods.
- Consume low energy diet

### **Food Intolerance:**

Food Intolerance is when a person has difficulty in digesting a particular food. Food



cannot be properly digested by the digestive system.

The main cause of food intolerance in any human being is the complete absence of enzymes, which is responsible for breaking down or absorbing the food elements.

**Symptoms:** Nausea, Vomiting, Pain in joints, headache and rashes on the skin, Diarrhoea, sweating, palpitations, burning sensations on the skin stomach.

### Food Myths:

**Myth:** Eggs increases cholesterol level.

**Fact:** Eggs are one of the best sources of energy. Egg provides various nutrients, so taking at least one egg daily is advisable.

**Myth:** Food which has very low fat or no fat is good.

**Fact:** Our body needs fats for energy, tissue repair and to transport vitamin A,D, E, K.

**Myth:** Crash Dieting or Fasting lose weight.

**Fact:** It may give fast results but has a lot of side effects.

**Myth:** Food eaten late-night is more fattening.

**Fact:** It doesn't make much change.

**Myth:** Low-fat milk has less calcium than full-fat milk.

**Fact:** Skimmed and semi-skimmed have more calcium

**Myth:** Vegetarians cannot build muscles.

**Fact:** Vegetarians can build muscles by eating veg food rich in proteins, like pulses, nuts, milk

**Myth:** Healthy food is very expensive.

**Fact:** All tinned, stored, packed food is expensive. Whereas local & seasonal foods are not so expensive.

## Important Questions

### ➤ Multiple Choice Questions:

1. Balanced diet consists high source of

- a) Protein
  - b) Fruits
  - c) Fats
  - d) All the components in balanced form
2. Nutrients are the chemical in food which are \_\_\_\_\_
- a) Are needed for replacement of tissues
  - b) Are essential for our growth
  - c) Our body needs
  - d) All the above
3. Which of the following is a salient feature of a balanced diet
- a) It should be in definite proportion
  - b) It contains all the essential nutrients
  - c) It makes our tummy full
  - d) It should contain more fats
4. Which one of the following is not a macronutrient?
- a) Fats
  - b) Carbohydrate
  - c) Roughage
  - d) Protein
5. Which of the following micronutrients help us in keeping our body warm
- a) Carbohydrate
  - b) Protein
  - c) Vitamin
  - d) Fat
6. The main source of protein is
- a) Fish, meat, eggs
  - b) Green vegetables
  - c) Wheat and rice
  - d) Sunlight and water
7. Which macromineral helps in hydro balance in the body?

- a) Potassium
  - b) Calcium
  - c) Sodium
  - d) Phosphorus
8. Which of the following is not a form of carbohydrate
- a) Multiple
  - b) Simple
  - c) Complex
  - d) All of this
9. Which of the following is not an element of carbohydrate
- a) Carbon
  - b) Nitrogen
  - c) Hydrogen
  - d) Oxygen
10. Proteins are turned into which acids by our digestive system
- a) Ascorbic acid
  - b) Hydrochloric acid
  - c) Amino acid
  - d) Lactic acid
11. Name the most concentrated form of energy present in our food
- a) Fats
  - b) Carbohydrate
  - c) Vitamins
  - d) Minerals
12. Which among the following vitamin is not fat-soluble
- a) Vitamin B
  - b) Vitamin A
  - c) Vitamin D
  - d) Vitamin E
13. Which among the following are energy-yielding foods

- a) Carbohydrate
- b) Protein
- c) Vitamins
- d) Minerals

14. Kinds of cereal like wheat, rice, maize, and pulses are good sources of which of the following

- a) Fats
- b) Protein
- c) Carbohydrates
- d) Minerals

15. Which fruit is a good source of potassium

- a) Orange
- b) Apple
- c) Kiwi
- d) Banana

➤ **Very Short Question:**

- Q.1. Mention the types of carbohydrate?
- Q.2. List down simple types of carbohydrates?
- Q.3. State complex carbohydrates types?
- Q.4. How many amino acids are found in proteins?
- Q.5. State two Non Nutritive components of Diet?
- Q.6. Which type of Vitamin B are found in diet?
- Q.7. Mention two diseases which come from deficiency of protein?
- Q.8. Name the macro minerals which should be part of our diet?
- Q.9. List down four myths about dieting?

➤ **Short Questions:**

- Q.1. Write importance of protein for our body?
- Q.2. Write difference between types of carbohydrate simple and complex carbohydrate?
- Q.3. Mention five pitfalls of dietry.
- Q.4. How water is useful for us? Explain Briefly?

Q.5. How food intolerance is treated? What are systems Explain in brief?

Q.6. What do you mean by bulimia Nervosa? Mention causes?

### ➤ Long Questions:

1. What is Balanced Diet ? How it is important for individual body ?
2. What factors which can affect for making Balanced Diet ?
3. State four Myths of Dieting?

### ➤ Assertion & Reason Questions:

1. For two statements are given-one labelled Assertion and the other labelled Reason. Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.

**Assertion (A)** Intolerant foods cannot be properly processed by our digestive system

**Reason (R)** Absence of certain enzyme do not let the food be properly processed

- (a) Both A and R are true and R is the correct explanation of A
  - (b) Both A and R are true and but R is not a correct explanation of A
  - (c) A is true but R is false
  - (d) A is false, but R is true
2. For two statements are given-one labelled Assertion and the other labelled Reason. Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.

**Assertion (A)** Vitamins are compounds of carbon that are essential for the normal growth and working of the body

**Reason (R)** Vitamin D is essential for the normal growth of the body. Deficiency of Vitamin A leads to night blindness and also affects the kidney, nervous system, and digestive system

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true and but R is not a correct explanation of A
- (c) A is true but R is false
- (d) A is false, but R is true

### ✓ Answer Key-

### ➤ Multiple Choice Answers:

1. (d) All the components in balanced form

2. (d) All the above
3. (b) It contains all the essential nutrients
4. (c) Roughage
5. (d) Fat
6. (a) Fish, meat, eggs
7. (a) Potassium
8. (a) Multiple
9. (b) Nitrogen
10. (d) Lactic acid
11. (a) Fats
12. (a) Vitamin B
13. (a) Carbohydrate
14. (c) Carbohydrates
15. (d) Banana

### ➤ Very Short Answers:

1. Two types Simple & Complex.
2. Glucose, Galactose, Fructose, Maltose, Sucrose lactose.
3. Starch, Glycogen, Dextine, Cellulose are the types of complex carbohydrates.
4. 23 amino acids and 9 are essential for us.
5. Ans. Water & Fibers or Roughage coloured, flavoured.
6. Vit. V = 6 Vit. B.
7. Kwashiorkan & Marasmars.
8. Calcium, Iron, Sodium, Phosphorus, Iodine, Potassium.
9. (i) Healthy food is expensive.  
(ii) Dieting makes you loose weight.  
(iii) No fat diet is good.  
(iv) Don't take milk immediately after eating fish.

### ➤ Short Answer:

1. Proteins are basic structure of all living cells. Proteins are main components of muscles, tendons ligaments, organs, glands and all living body fluids like enzymes hormones and blood.

Proteins are needed for growth & development of body. It helps to repair or replace the worn out tissues. It does not provide energy in normal routine whereas it acts as energy source only under extreme starvation. Proteins are required for making blood, muscle, Nails, skin, Hair and body parts and repair them when needed and are important in some situation like early development and maturation, pregnancy lactation, or injury like burn etc.

- 2.

(i) Simple carbohydrate give quick energy on the other hand complex carbohydrates release slow energy.

(ii) The types of simple carbohydrates are Glucose, Galactose, Fructose, Maltose, Sucrose, Lactose. Complex are starch, Glycogen, Dextine and Cellulose.

(iii) Simply Carbohydrate are called mono saccharides while complex are called polysaccharides

(iv) Complex Carbohydrate are sweet in taste but complex are sweet in taste

(v) They can be absorbed quickly other side complex carbohydrates takes time

(vi) Simple carbohydrates can be disolves in water but complete not.

3. **Following are pitfalls of dietary-**

a) **Extreme Reduction of Calories:** – Person reduces the diet considerably which causes low level of energy thus person feels tiredness body aches.

b) **Skipping meals:-** People often skip meals to reduce weight where as in react meal they take large amount of food.

c) **Low energy diet:-** The person take diet without fats and less carbohydrates by which health is affected.

d) **Not performing Physical Activity:-** People offer Consider that reducing diet 13 good for controlling weight then they neglect physical activity which in equally important for healthy Lifestyle.

e) **Taking less Liquid:-** People often think that drinking water or liquid makes them to gain weight which is wrong.

4. Water in very useful component of our diet because. Blood comprises 90% of water with help of water through blood the nutrients are carried to various deals of body. It important for secretion of waste products. It regulators body temperature. Our body loses approximately 2% of our body weight or water per day. We compensate thus loss of water by drinking water and by intake of food substances. It also functions as a

lubricant keeps the skin moist and protects the body from shock. Amount 20% of water intake comes from food and remaining intake come from drinking water.

- Food intolerance is treated by medical help where we know the food which causes problem. food intolerance is more common than food allergy. Food intolerance is a term used widely for varied physiological response associated with a particular food. The individual elements of certain foods that cannot be properly purposed and absorbed by our discolored system.

**Systems of Food Intolerance :** – Food intolerance can cause nausea, stomach pain, Diarrhoea, Vomitting, Flatulence Gas, Cramps heart burn, headache, irritability, or nervousness etc.

- It is eating disorder characterized by binge eating and consuming a large amount of food in short time and after taking food persons try to get rid of one of consumed food, by vomiting taking a laxative or excessive exercise to reduce weight.

**Two causes of Bulimia Nervosa:**

**(1) Purging Type** – Individual which has this type of vomit (self induced), a use of laxatives or diuretics (water pills) to avoid gaining weight from binge.

**(2) Non purging type** – Individual engages self in regular fasting or excessive exercise.

(i) Abnormal levels of Hormones

(ii) Dietary.

### ➤ Long Answer:

- Balanced diet in that diet which consisted of various constituents of food in accurate and appropriate in quantity and quality according to the requirement of an individual and helps in growth and development of our body.

**Importance:**

- Energy Resource:-** It gives sufficient energy to body for various activities.
- For optimum growth & Developments:-** It helps individual to grow and to achieve the aim of all round development.
- Proper function of Organs:-** By help of balanced diet every organ functions well and properly.
- Faster Recovery:-** It helps to repair and replace the worn out tissues thus faster recovery.
- Strong immune system:-** It make better resistance power to body to make good immune system.
- Improves fitness Level:-** It improves overall health states and resulting in fitness of body by preventing diseases.



- g) **Improves Metabolism:-** Quality of metabolizing and thus efficient release of energy.
- h) **Prevents Deficiency Diseases:-** It gives all necessary nutrients to body so deficiencies diseases cannot takes place.
- i) **Maintaining body weight:-** It helps individual to maintain proper body weight.
- j) **Overall efficiency improves:-** It improves all physiological systems of body then more of efficiency level of individual. In this way Balanced diet is useful for as.

## 2. Balanced Diet

- a) **Age:** – Age plays great role in making diet for like in growing age a child need more protein but old aged people should avoid more proteins and fats but should take more minerals & vitamins
- b) **Gender:-** Sex difference causes variation in diet more caloric requirement to male & less for female.
- c) **Profession:-** Heavy physical Activities work out needs more calories demand & less physical activities work out less calories demand.
- d) **Body weight:-** Obese person need fibrous food more while slim or lean needs more protein.
- e) **Specific Sports Diet:-** Various sports need specific diet like long distance runner need more fat, contact body games player need more protein, explosion strength player needs more carbohydrates.
- f) **Sufficient Roughages:-** It is non nutritive but important It consist fibers that found in fruits & Vegetables.
- g) **Pregnancy or feeding Mother:-** Pregnant mother needs extra diet- carbohydrates, protein, fat, vitamins, minerals etc.
- h) **Diet During Health Problems:-** Injured person should take more protein and minerals patients should be given diet full of mineral & vitamins.
- i) **Seasonal Food:-** Seasonal food is easily available and economical moreover the nutritional value is high.
- j) **Climatic Condition:-** The effects the diet Like in hot places food should be has oily fried, while in coaster region the food should be more liquid.
- k) **Natural Diet:-** Natural sources of diet are early digested by body, less polluted not synthetic food.
- l) **Doctor's Recommendation:-** Diseased or sick person should take accords to doctor recommendation and patient ovoid fried food jaundice patient avoid protein.
- m) **Eating habits & social customes:-** They also effect the diet individual some take low vegetables veg. other don't take it so it is according to customs also.

### 3. Myths of Dieting

**(i) Myth:** Low fat or No fat diet are good for you

**Fact:** This is not true cutting down saturated fat and eating unsaturated fat is good body needs fat for energy, tissue repair and transport Vitamins A,D,E,K.

**(ii) Myth:** Fasting Makes you loose weight.

**Fact:** True for short period by hinder weight loss. In long term it leans tissues so exercise is recommended for weight loss.

**(iii) Don't drink water while taking food:** It digest food It don't hamper metabolism so It is not true.

**(iv) Myth** milk should not be taken immediately after fish

**Fact:** It is not true It will not give any allergy or irritation scientist don't think so.

**(v) Fruits and vegetables one more nutritive than cooked foods ones:**

**Fact:** Scientist discovered in recent years that cooking actually boost levels of important compound in some fruits and vegetable and cooking also breaks down fiber making it easier for your body to process.

**(vi) Myth – Eat less nuts they are too fattening**

**Fact:** It is true that nuts contain a lot of fat but it is mostly the good kind. Recent research suggested that eating nuts as part of a healthy diet may even help you lose weight.

#### ➤ Assertion and Reason Answers:

1. (a) Both A and R are true and R is the correct explanation of A
2. (b) Both A and R are true and but R is not a correct explanation of A