



**NAHAR**  
GLOBAL SCHOOL

Formerly SHREE NAHAR CONVENT CBSE SR. SEC. SCHOOL

Affiliation No. 1030403 | Opp. JayantSenDham, Bibdod Road, Ratlam (M.P.) - 457001  
Ph. No. 9479792429, 07412-232234 | shree\_naharconventschool@yahoo.co.in

---

Class – 12<sup>th</sup>

Subject – Physical Education

**Index**

**(Syllabus for April 2020-21)**

- Chapter 1** - PLANNING IN SPORTS
- Chapter 2** - SPORTS AND NUTRITION
-

**Unit : I**  
**PLANNING IN SPORTS**

---

**Meaning and objectives of planning:**

Planning is an intellectual process of thinking in advance about setting of goals and developing strategies which are required to attain the goals efficiently.

**Meaning and objectives of planning :** “Planning is a way to systematize, direct and organize the events or competitions and extract the advantage and benefit of the available resources.”

“Planning is the process of making a sequence of work for a future line of action”

The success of Physical education programs depends upon efficient staffing, food, direction, proper control, well supervision, good co-ordination and minimize the chances of lapses.

**Objectives of planning:**

- a. To keep control over all activities which suggests that planning & control are connected with each other.
- b. it also helps in keeping a good control in organizing a tournament.
- c. b. Reduce the chances of mistake
- d. It suggests programmes can be conducted with proper coordination with least mistakes rather focusing on success.
- e. To promote innovative ideas.
- f. To provide direction towards the goal
- g. To reduce undue pressure
- h. To provide proper co-ordination among the committees.

---

i. To have good control over all the activities. j. To improve efficiency.

k. To reduce the chances of mistakes.

l. To increase the creativity.

m. To enhance the sports performance.

n. To protect existing facilities.

o. Provide new facilities to meet demand.

p. Helps in decision making.

### **Various committees and responsibilities:**

Different committees work together for the smooth conduct of the sports events. The various committees are:

(i) Technical Committee: This committee is responsible for the technical conduct of the events. This committee selects various officials such as referees, judges, starters, umpires, time keepers etc.

(ii) Transport Committee: This committee is responsible for providing the facilities regarding transportation of various teams to the venue of sports events.

(iii) Reception Committee: The members of this committee are responsible to welcome the Chief Guest and spectators at opening and closing ceremonies.

(iv) Boarding and Lodging Committee: This committee is responsible for making necessary arrangements for providing accommodation and serving meals to the sports persons and other officials,

(v) Ground and Equipment Committee: This committee makes necessary arrangements of equipment related to events.

(vi) Medical and First Aid Committee: This committee is formed to provide medical assistance to participants round the clock

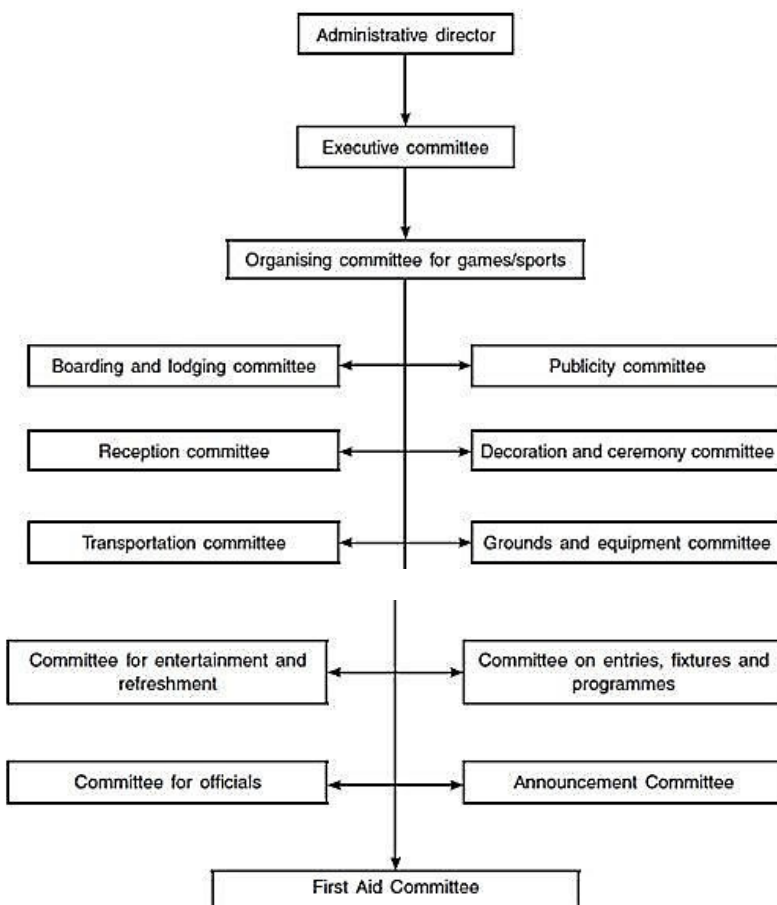
(vii) Protest Committee: In case of protest against a judgment, the members of this committee

decide about it.

(viii) Publicity Committee: All the press releases and press conferences are conducted by Who's committee.

(ix) Finance Committee: This committee is assigned to make the budget for the event and handle the expenses.

(x) Refreshment Committee :This committee is formed to provide refreshment to the participants.



## Tournaments:

A tournament is a competition involving relatively large number of competitors, all participating in a sports or game. It is a series of contests with several rounds in which many contestants compete, individually or as a team to decide the winner. In other words, tournament is a series of contests in which a number of contestants compete and the one

---

that prevails through the final round or that finishes with the best record is declared the winner.

**1.3 Tournament:** A series of sports competitions, in which, a team finally wins and rest of the participating teams lose the matches. It depends on various factors i.e... - No. of participating teams, availability of grounds and equipment, No. of days and funds.

Importance of tournaments are -

Source of Recreation; A large number of people go to watch various games and sports for getting recreation. Sports tournaments provide ample recreation to the spectators.

Development of Social Qualities: Social qualities such as cooperation, tolerance, sympathy, group cohesion, brotherhood and discipline are developed among participants through sports tournaments.

### **Importance of tournament**

- The sportsman learns the discipline by playing tournaments.
- The sportsman meets other sportsman at a single platform.
- He learns ethical values such as honesty, fair play, respect for others.
- Tournaments provides recreation to all, i.e... organizers, spectators, students.

### **Type of tournament:**

- **Knock out:** In this type of tournament, the team once defeated, gets eliminated from the tournament. Only the winning teams contest in the next rounds. Opportunities are given to the winning players/teams.
- **League:** In single league tournament all participating teams compete once, with each other, where as in double league, each team plays with every as in double league, each team plays with every other team twice, without any consideration of victory or defeat.
- **Combination Tournaments:** Combination tournaments are organized in group or zonal matches. Whenever there is a large number of teams, combination tournaments facilitate the Physical Education Teachers, job. It gives them elbow room to try out new experiments.

---

- **There are mainly four types of combination tournaments:**

1. Knock out cum Knock out
2. League cum league
3. Knock out cum league
4. League cum Knock out

- **Challenge Tournament:** This type of tournament comes handy when there are one to one contests or there are two players on each side. One player challenges the other and the other player accepts the challenge. Games in which such tournaments are held are - Boxing, Tennis, Table Tennis, Badminton etc

Fixtures in such tournaments are decided according to :

1. Ladder Method
2. Physical Method
3. Cobweb Method

Various types of tournaments are

- (i) Knock-out tournament
- (ii) League tournament
- (iii) Combination tournament
- (iv) Challenge tournament

**Knock out tournaments:**

In knock out tournaments the teams which gets eliminated gets automatically eliminated from the tournament.

In this type of tournament , if a team is defeated once, it gets eliminated. Only the winners continue in the competition. It is the fastest method to know about the winner team in the tournament.

---

**Seeding a Team:-** The sorting of the teams and fitting them in the fixtures so that the stronger teams do not meet each other in earlier rounds is known as Seeding. This method is good if we know the real strong teams. The organizers should find out the real strong teams from the previous tournaments or old records figure starting a new tournament.

**Bye:**

Bye is a privilege given to a team, given by drawing lots, exempting it from playing first round.

**Bye:-** The advantage given to a team usually by drawing a lot, and exempting it from playing a match in the first round is known as Bye. These are given to a specific number of teams in the first round. The number of byes are decided by subtracting the number of teams from the next higher number which is in power of two's.

Bye Next Higher No. of Team [ $2^n$ -no of teams]

The procedure of giving byes is as follows:

- The first bye is given to last team of lower half.
- The second bye is given to first team of upper half.
- The third bye is given to first team of lower half
- The fourth bye is given to last team of upper half.
- The next bye or byes will be given in the same order as described above.

Advantages of knock out tournament:

- These are less expensive.
- Helpful in enhancing standard of sports.
- It requires less time to complete the tournament.
- Minimum no. of officials are required.

Disadvantages of knock out tournament:

- There are many chances of elimination of good teams in preliminary rounds.
- There are many chances of weak teams to enter in the final round.
- Spectators may not have enough interest in the final round.

---

## Methods of Preparing Fixtures for Knock-out Tournaments:-

1. Total number of teams participating in the tournament
2. Total number of matches to be played in the tournament

Formula for calculating number of matches= $n-1$ , where  $n$  is the total number of teams participating in the tournament.

### 3. Total number of rounds played in the tournament depends upon two things:-

- a. The number of teams playing in the tournament
- b. The higher nearest number from the total number of teams of power of two's =  $2^n$

### 4. Method of determining the number of teams in upper half and lower half:-

a. If the number of teams is even, then equal number of teams will be divided in both halves i.e...-  $n/2$ , where  $n$  is the total number of teams.

b. If the number of teams is odd, the following method is applied:

Number of teams in upper half= $(n+1)/2$ , where  $n$ =number of teams.

Number of teams in lower half= $(n-1)/2$ , where  $n$ =number of teams

5. The number of byes in a knock-out tournament are decided by subtracting total number of teams from the next higher nearest number in power of two's

### Draw a knock out fixture of 17 teams?

No. of teams = 17,

Total No. of matches =  $N-1 = 17-1 = 16$

No. of teams in upper half  $N+1/2 = 17+ 1 = 9$

No. of teams in lower half  $N-1/2 = 17 - 1 = 8$

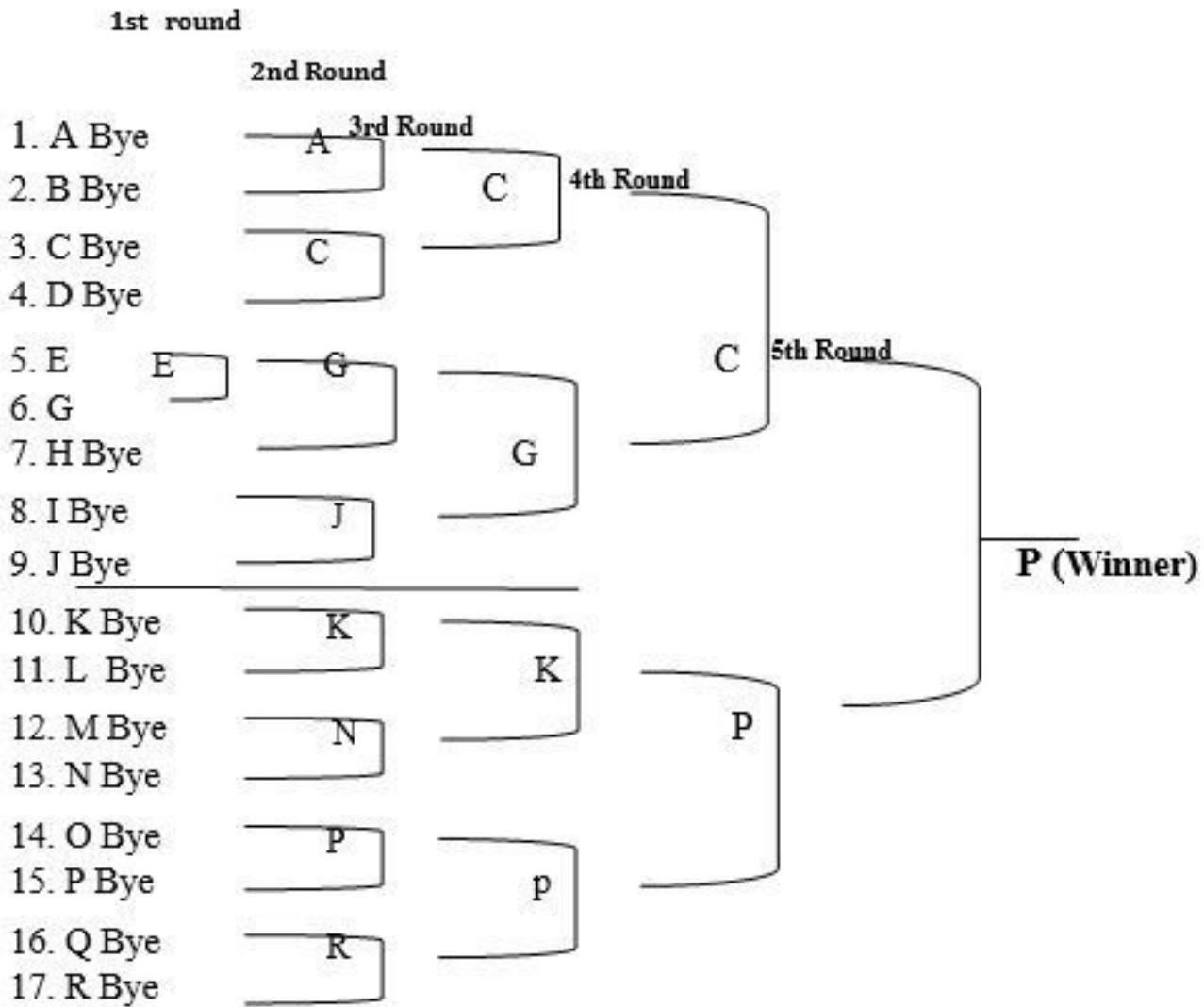
Total no. of byes =  $32- 17 = 15$  byes,

No. of byes in upper half =  $N-1/2 = 15 - 1 = 7$

No. of byes in lower half =  $N + 1/2 = 15 + 1 = 8$

Total rounds = 4





**League tournament:**

In this type each team plays with every other team once if it is a single league tournament and each team plays with every other team twice if it is a double league tournament.

**Cyclic method:**

In cyclic method, If the number of teams is in even number, the team number 1 is fixed on the top of right hand side and then other team numbers in ascending order consecutively downward and then upward on the left hand side and then from the next round teams will rotate in clockwise direction. If the number of teams is odd then the bye is fixed on the top of right hand side and rest of the procedure will remain same. If the number of team is even number than number of rounds will be (N-1). If the number of teams is odd number then number of rounds will be equal to number of teams.

Fixture- No of matches= $n(n-1)/2 = 8(8-1)/2 = 28$

No. of rounds= $N-1 = 8-1=7$

Fixture- Cyclic method

1st round	2nd round	3rd round	4th round	5th round	6th round	7th round
A-B	A-H	A-G	A-F	A-E	A-D	A-C
H-C	G-B	F-H	E-G	D-F	C-E	B-D
G-D	F-C	E-B	D-H	C-G	B-F	H-E
F-E	E-D	D-C	C-B	B-H	H-G	G-F

**(b) Cyclic Method :** In cyclic method, if the number of teams is even, the team number 1 is fixed on the top of right hand side and other teams in ascending order consecutively downward and then upward on the left side and rotate them clockwise. If the number of teams is odd, then bye is fixed on top right side and the rest procedure remains same. The number of rounds in case of even number of teams will be  $n - 1$ , where  $n =$  number of teams. The number of rounds in case of odd number of teams will be  $n$ , where  $n =$  number of teams.

**Example 1.** Draw a fixture of 6 teams on league basis according to cyclic method.

**Solution:** Total number of teams = 6

Total number of matches

$$\frac{n(n-1)}{2} = \frac{6(6-1)}{2}$$

$$= \frac{6 \times 5}{2} = \frac{30}{2} = 15$$

Number of rounds =  $n-1 = 6-1 = 5$  rounds.

**Fixtures**

I R	II R	III R	IV R	V R
6 ← ①	5 ← ①	4 ← ①	3 ← ①	2 ← ①

5 ← 2	4 ← 6	3 ← 5	2 ← 4	6 ← 3
4 ← 3	3 ← 2	2 ← 6	6 ← 5	5 ← 4

**1.4 B. Method for draw of fixture in league tournament:-**

**(a) Stair-case Method:** In stair-case method, the fixtures are made just like a ladder or a stair- case. In this method, no bye is given to any team and there is no problem of even or odd number of teams.

**Example :** Draw a fixture of 9 teams on league basis according to stair-case method.

**Solution: Fixture**

1-2								
1-3	2-3							
1-4	2-4	3-4						
1-5	2-5	3-5	4-5					
1-6	2-6	3-6	4-6	5-6				
1-7	2-7	3-7	4-7	5-7	6-7			
1-8	2-8	3-8	4-8	5-8	6-8	7-8		
1-9	2-9	3-9	4-9	5-9	6-9	7-9	8-9	

**Combination tournament:**

**Combination tournaments** are conducted when the matches are to be played on group basis or zonal basis. These tournaments depend on the suitability of the activity, the number of participating teams and the areas and distance from which they come to participate. Depending upon the number of teams in each zone and the availability of time, he tournament can be organized on the basis of knockout or league and after that national level tournament can also be conducted either on knockout or league basis.

**1.5 A INTRAMURAL AND EXTRAMURAL:MEANING, OBJECTIVES AND ITS SIGNIFICANCE**

**Meaning of Intramural:-**

Intramural is derived from the Latin word 'Intra" and "muralist'."Intra" means "within" and "Muralist" means 'Waif .So we can say that the activities, which are performed within the

---

walls or within the campus of an institution ,are called ‘Intramural’.

The intramural sports means competitions within the walls or within the school, i.e. being or occurring within the limits usually of a community, organization, or institution. This programme offers the school community the opportunity to participate in organized sports competition. The rules of the games/ sports are modified accordingly, if needed.

### **Objectives of Intramural:-**

- To provide opportunity to every student to participate in Games and Sports
- To develop Leadership Qualities among students
- To develop Feeling of Cooperation
- To provide Recreation
- To develop the Feeling of Sportsmanship
- To provide opportunity to learn a variety of games and Skills
- To provide opportunity to get Experience of Organization of Competitions
- To find out talented Sport persons
- To provide opportunity to Develop personality

### **Extramurals:**

Extramural sports satisfy the need for structured sports activities between students from various schools, organizations, or institutions. Extramural means competitions outside walls or boundaries, as of a city or town or a university. These tournaments will be organized on a zonal, regional, state or national basis.eg. CBSE tournaments, SGFI tournaments etc.

### **B. EXTRAMURAL:-**

Extramural is derived from the Latin words “Extra” and “Waif”. So, we can say that the activities which are performed outside the walls of an institution or school, are known as “extramural”.

### **Objectives of extramural:**

- To provide Experience to Students
- To improve the Standard of Sports
- To broaden the Base of Sports

- 
- To develop Sportsmanship and Fraternity
  - To provide knowledge of New Rules and Advanced Techniques

### **Significance of intramurals and extramurals:**

- Helps in providing the ways and means for the development self esteem, citizenship, responsibility, sportsmanship, and skills in co-operative behavior.
- Helps in providing take part in activities that encourages active participation, enjoyment, and fun without external pressure or reward.
- Helps in providing to reinforce the concept that winning is less important than preparing to win. Losing should not be the same as failure, nor success the same as winning.
- Helps in providing to determine participation by interest rather than skill, not limiting activities to the gifted or early maturing athlete.
- Helps in providing opportunities for students and expose them to a wide variety of sports, skills and activities so that the may refine interest and make choices to suit their personal abilities and needs.
- Helps in providing opportunities for students, faculty, and staff to actively engage in activities involving sports, recreation, and play while providing structure for an experimental education.

### **1.6 SPECIFIC SPORTS PROGRAM MME**

Sports and games programs *are arranged* in the world as well as in our country to promote the games and *sports for a* specific cause. Every country in the world has some *or other* cause for promoting specific sports programs.

The programs motivate and *create* the feeling to take part in these sports programs. People become health-conscious and try to remain fit and stay healthy for as long *as* possible. These specific sports programs are usually organized by the federations, state government, NGO etc. to create health consciousness among the people and take part in health-related sports programs.

More and more people of all age groups should take part in such sports programs. Specific sports programmes are such programmes of sports which are not usually related to competitions. These programmes have various objectives such as creating awareness among peoples regarding unity, health & diseases etc.

---

The *various* important specific programs are:-

**I. SPORTS DAY–**

A. School–Annual Sports Day

B. NATIONAL SPORTS DAY

2. HEALTH RUN: these are organised by health departments to ameliorate the standard of health in a country along with raising funds for charity.

3. RUN FOR FUN: It is also organised to spread the message among masses to remain healthy and fit. It may be organised to motivate the people to remain fit.

4. RUN FOR UNITY: It is organised to show unity and peace among the people of different religions. Its purpose may be national and international integration and brotherhood.

5. RUN FOR SPECIFIC CAUSE: This is the run related to specific or noble cause. Most of the social non- profit organisations organises these runs for creating awareness about AIDS, Educating the girl child, Cancer, etc. Mumbai and Chennai Marathons are organised for such noble purpose.

## UNIT - 2

### SPORTS AND NUTRITION

---

#### **Key Points:**

- Balanced Diet and Nutrition: Macro and Micro Nutrients.
- Nutritive and Non-nutritive components of diet
- Eating for weight control - A healthy weight, the Pitfall of dieting, Food Intolerance and Food Myths.
- Sports Nutrition & its Effects on performance (Fluid & Meal intake, pre, during and post Competition).
- Food Supplements for children

#### **Balanced diet**

A diet which contains the proper amount of each nutrient, i.e. like carbohydrate, fat, protein etc is called Balanced Diet. A diet which consists of all the essential food constituents viz. protein, carbohydrates, fats, vitamins, minerals and water in correct proportion is called balanced diet. A balanced diet contains sufficient amounts of fiber and the various nutrients (carbohydrates, fats, proteins, vitamins, and minerals) to ensure good health. Food should also provide the appropriate amount of energy and adequate amounts of water.

**3.1 A. Balanced Diet:** - A complete food, a diet contains adequate amounts of all the necessary nutrients required for proper growth & maintenance of body.

#### **Nutrition**

Nutrition is a dynamic process in which the body is made healthy by the consumption of food.

**B. Nutrition:** - It is the process of obtaining & consuming food or breaking down food & substances taken in by the mouth to use for energy in the body.

**C. Nutrients:** - The energetic food in our diet consists of various types of essential chemicals

---

for our body termed as nutrients: - e.g. Protein, fat, carbohydrates, vitamins & minerals.

### **Goals of nutrition**

- (i) stay hydrated
- (ii) provide immediate fuel
- (iii) boost performance
- (iv) preserve muscle and
- (v) improve recovery.

### **Sports nutrition**

It is the study and practice of nutrition and diet as it relates to athletic performance. It is concerned with the type and quantity of fluid and food taken by an athlete, and deals with nutrients such as vitamins, minerals, and organic substances such as carbohydrates, proteins and fats.

### **Macro nutrients**

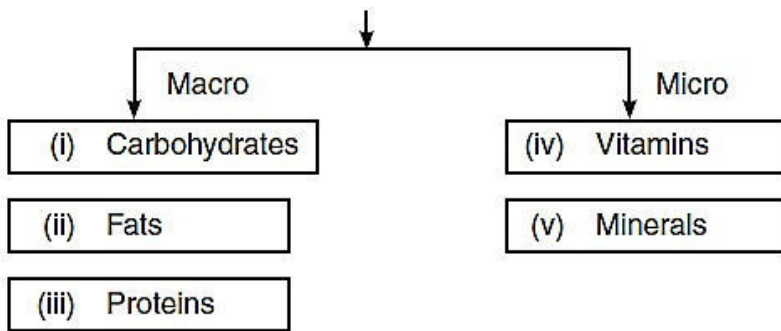
Macronutrients mainly include carbohydrates, proteins and fats and also water which are required in large quantities and their main function being the release of energy in body. Macronutrients include Carbon, Oxygen, Hydrogen, and Nitrogen.

### **Micro nutrients**

Micronutrients mainly comprise vitamins and minerals which are required in minute quantities. However, both macro nutrients as well as micro nutrients are essential. Micro nutrients are chlorine, iron, manganese, zinc, boron, sodium, copper, molybdenum and nickel.

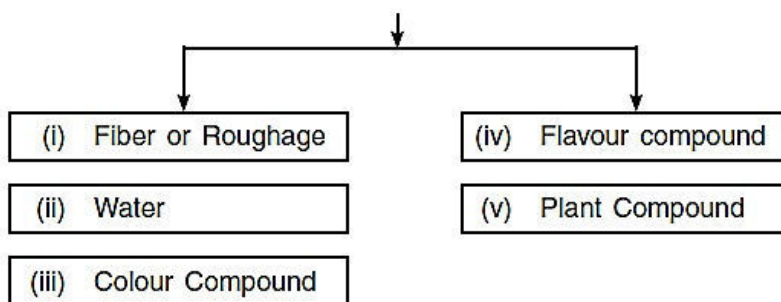
### **Components of Diet (Nutrients)**





### 3.2 Non-Nutritive Components of Diet

#### Non-Nutritive



### 3.5 Eating for weight control :-

(i) A healthy weight is a weight that lowers your risk for health problems, generally body mass index (BMI) and waist size are good ways to achieve healthy weight.

Methods to calculate BMI = Weight in Kg/(Height in m) <sup>2</sup>

Category	BMI
Under Weight	< 18.5
Normal Weight	18.5 – 24.9
Over Weight	25 – 29.9
Obesity Class I	30-34.9
Obesity Class II	35-39.9
Obesity class III	> 40

### Nutritive components of diet

---

**CARBOHYDRATES-** Carbohydrates are needed to provide energy during exercise.

Carbohydrates are stored mostly in the muscles and liver. Complex carbohydrates are found in foods such as pasta, bagels, whole grain breads, and rice. They provide energy, fiber, vitamins, and minerals. These foods are low in fat. Simple sugars, such as soft drinks, jams and jellies, and candy provide a lot of calories, but they do not provide vitamins, minerals, and other nutrients.

**PROTEIN-**Protein is important for muscle growth and to repair body tissues. Protein can also be used by the body for energy, but only after carbohydrate stores have been used up. Only strength training and exercise will change muscle. Athletes, even body builders, need only a little bit of extra protein to support muscle growth. Athletes can easily meet this increased need by eating more total calories (eating more food).

**Fat-**It provides the highest concentration of energy of all the nutrients. One gram of fat equals nine calories. One pound of stored fat provides approximately 3,600 calories of energy. **Saturated fats** are found primarily in animal sources like meat, egg yolks, yogurt, cheese, butter, milk. This type of fat is often solid at room temperature. **Unsaturated fats** include monounsaturated and polyunsaturated fats, which are typically found in plant food sources and are usually liquid at room temperature.

**Vitamin-**A well-planned and nutritionally adequate diet should meet an athlete's vitamin and mineral needs. Supplements will only be of any benefit if your diet is inadequate or you have a diagnosed deficiency, such as an iron or calcium deficiency. Use of vitamin and mineral supplements is potentially dangerous and they should not be taken without the advice of a qualified health professional.

**Minerals:** - Mineral are very essential in our diet. Four percent of our body weight is made up minerals. These are required for healthy teeth, bones and muscles. It is also used by body for various activities such as transmission of nerve, impulses formation of hormones and maintenance of heart beat etc.

**Macro Minerals:** - **a) Calcium:** Calcium is among the top macro-minerals in terms of growth and development of our bones and teeth. It helps in blood clotting. Its deficiency may cause rickets. The sources are cheese, milk, orange, juice, eggs, green leafy vegetables and cereals.

---

**b) Potassium:** Potassium is one of the most required minerals in diet. It is helpful in keeping the nervous system and muscular system firm and active all the time. It helps in maintaining the amount of water in blood and tissues. Its main sources are banana, tomatoes, green leafy vegetables, beans etc.

**c) Sodium:** It helps in muscular activities. It also helps in transmission of nerve impulses. The sources are table salts, pickles and butter etc.

**d) Magnesium:** It repairs and maintains body cells. It is found in meat, brown rice, beans and whole grains etc.

**Phosphorus:** Phosphorus helps in the formation of bone and teeth. It keeps the muscles and nerve activities normal. The sources are egg, fish, liver, milk, and unpolished rice etc.

**Micro Minerals:** **a) Iodine:** It produces the hormones for the thyroid gland. It is also significant for proper growth and development. Lack of iodine can cause goiter (swollen thyroid gland) and mental retardation. The sources are iodized salt, fish and sea food.

**b) Iron:** It is essential in the production of hemoglobin. Its deficiency causes anemia. The sources are meat, egg, dry fruits, spinach, banana and green leaf vegetables.

**c) Chromium:** It is essential in the production of hemoglobin. Its deficiency may cause diabetes. The sources are soya beans, black gram, carrot, tomato, groundnuts, bajra and barley.

### **Non nutritive components of diet**

a) Water

b) Roughage

c) Artificial sweeteners

d) Preservatives

e) Plant products

**Fibre or roughage** has no nutritive value. It is undigested part of the food or it can be said that it cannot be digested by human intestinal tract. It consists of water and improves

---

intestinal function by adding bulk to the food. It helps the individual to satisfy the appetite. It prevents constipation.

### **Eating for weight control**

A healthy weight is considered to be one that is between 19-25 BMI. If the BMI is between 25-29 an adult is considered overweight and if it is above 30, the person is considered to be obese.

Since, 3500 calories equals both one equals about one pound of fat, if you cut 500 calories from your typical diet each day, you will lose one pound weight a week.

Here are some useful tips for weight control with proper eating:

**a. Avoid common pitfalls:** diet, especially fat diets or quick fix pills and plans, often set you up for failure. Prepare a plan that is more realistic.

**b. Put a stop to emotional eating:** We don't always eat simply to satisfy hunger. All too often, we turn to food for comfort and stress relief. When this happens, we frequently pack on pounds.

**c. Tune in what you eat :** Do not eat while at your desk or working, and in front of the TV screen. The result is that we consume much more than we need, often without realizing it. Counter this tendency by practicing "mindful" eating: pay attention to what you eat, savor each bite, and choose foods that are both nourishing and enjoyable

**d. Fill up with fruit, veggies and fibre:** to lose weight, you have to eat fewer calories. But that doesn't necessarily mean you have to eat less food. You can fill up while on a diet, as long as you choose your foods wisely.

**e. Indulge without overindulging:** Do not avoid some type of food (ice cream or cookies or chips) completely. Instead of denying yourself the unhealthy foods you love, simply eat them less often.

**f. Take charge of your food environment:** Set yourself up for success by taking charge of your off environment: when you eat and what foods are available.

**g. Make healthy lifestyle changes:** You can support your dieting efforts by making healthy

---

lifestyle choices .

### **Eating for weight control :-** Factors to control body weight

- Balanced diet
- Drinks lots of water
- Eating lot of fibrous food
- Regular Medical Checkup
- Avoid Fats
- Medicine only by doctors advice
- Physical Activity
- Avoid Drinking
- Avoid junk food
- Meals in small shifts
- Follow Hygenic Habits
- Do not Dieting
- Never try sliming pills
- Avoid over eating
- Balancing the intakes of calories and expenditure of calories.

### **Food myths:**

a. Eggs increases cholesterol level so avoid them: There is no doubt that eggs are good source of health. An egg provides you various nutrients. It is as per daily requirements of cholesterol by our bodies. So, if you take one egg daily there is no problem of cholesterol level.

b. Drinking while eating makes you fat: The actual fact behind this misconception is that enzymes and their digestive juices will be diluted by drinking water while eating which slows down your digestion which may lead to excess body fat.

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

**Fact:** Body needs fats for energy, tissue repair and to transport vitamin A,D, E,K. Just cut down on saturated fat eating unsaturated fats.

**(ii) Myth Crash:** Dieting or Fasting may loose weight.

---

**Fact:** It may be true in short term but ultimately it hinder weight loss. Loosing over the long term burns off fat whereas crash dieting or fasting not only removes fat but who leans muscles.

**(iii) Myth:** Food eaten late night is more fattening.

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

**(iv) Myth:** Low fat milk has less calcium that full fat milk.

**Fact :-** Skimmed and semi skimmed actually have more calcium because it is in watery part and not in creamy part of milk.

**(v) Myth:** Vegetarian cannot build muscles.

**Fact:** Vegetarian can built muscles as meat eaters by getting their proteins from vegetables such as cheese nuts pulses. Etc.

**(vi) Myth:** Healthy food is expensive.

**Fact:** Tinned, stored, packed food is expensive. Whereas local & seasonal food is inexpensive.

## . PITFALL OF DIETING

An individual who is overweight wants to reduce weight they starve for reducing weight many times skip meals to lose weight, sometimes take slimming pills.

- Extreme Reduction of Calories.
- Restriction on some nutrients
- Skipping meals
- Intake of calories through drinking
- Under estimating the calories.
- Intake of tabelled foods.
- Not preferring physical activities.
- low energy diet.
- Taking less liquids
- Starving

## C. Food Intolerance

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

---

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

**Food Intolerance** means the individual elements of certain foods that can not be properly processed and absorbed by our digestive system. The main cause of food intolerance is the complete absence of enzymes responsible for breaking down or absorbing the food elements. Food intolerance can cause nausea, stomach pain, diarrhoea, vomiting, gas cramps, heartburn, headaches, irritability, etc.

**Causes :** Absence of activity of enzymes responsible for breaking down the food elements. These are usually innate sometimes diet related or due to illness.

**Management :** Change in diet causing reaction some therapies like fructose intolerance therapy, lactose intolerance therapy, histamine intolerance therapy can be applied.**D. Food Myths/Dieting Myths**

### **3.6 Sports Nutrition (Fluid & Meal in take, pre, during the post Competition)**

**Nutrition before competition:** At least a week before the competition sports person should take complex carbohydrate food which usually helps in increasing glycogen store. The fuel for the muscle is usually provided in meals 3-4 days prior to the competition. The diet should depend on the intensity of the activity. The diet should be rich carbohydrate, low in fat and protein. Two hours before the competition a high carbohydrate energy drink can be considered sufficient.

**Nutrition during competition:** It is important to stay hydrated and maintain sugar level so that sports person may not undergo fatigue. If the duration of the competition is more than 60 mins than  $\frac{1}{2}$  to 1 cup carbohydrate drink after 10-20 mins and if the duration is less than 60 mins than carbohydrate drink after every 20-30 mins.

**Nutrition after competition:** After competition it is important to recover properly, so the first preference should be given to replacement of fluid loss and this can be easily done by the intake of water or replacement drink. Meals after competition should be taken within 2 hours. For best glycogen restoration 100-200 grams of carbohydrate along with lean protein like meat or chicken should be taken. It will help in building, maintaining, and repairing of muscles. At least 20 gms of protein is required after completion for complete recovery.

---

## Food Supplement

Food Supplement means a nutrient that is added to your diet to nourish your body as you are not taking this nutrient in adequate amount in your regular diet. Food supplements generally includes vitamins, fibres, minerals, fatty acids among other substances.

### **Advantages of Food Supplements**

- (a) Supplements can contribute to improve muscular strength, endurance and overall physical performance.
- (b) Some supplements are used in combination with drugs as a method of complimentary or alternative treatment of health conditions.
- (c) Food supplements gives vitamin and minerals which protect the body from disease.

**Disadvantages of Food supplements** (a) Food supplements can cause adverse side effects also, if they are not consumed in the right quantity. They can damage liver and reduce bone strength.

(b) Weight-loss supplements may contain numerous untested ingredients that have not been examined for safety or effectiveness in children. The possibility of product contamination is the main safety concern about dietary supplements for both children and adults, but the danger may be greater for children.

### Precautions for 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.