
UNIT - 3

SPORTS AND NUTRITION

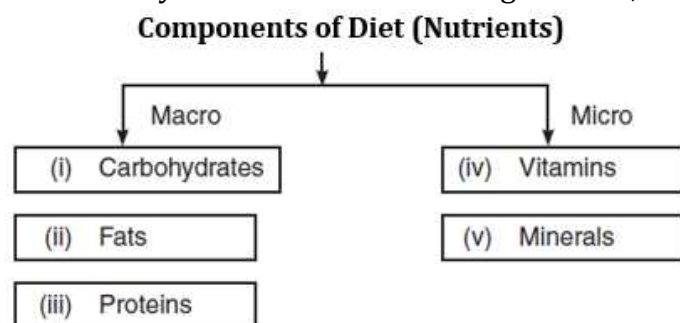
Key Points :

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

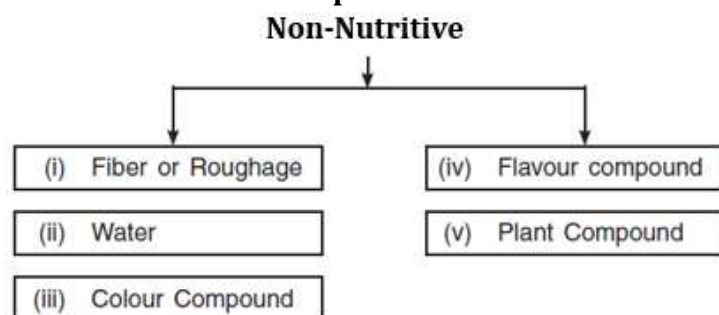
3.1 A. Balanced Diet :- A complete food, a diet contains adequate amounts of all the necessary nutrients required for proper growth & maintenance of body.

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.



3.2 Non-Nutritive Components of Diet



3.3 Eating Disorders - (i) Anorexia Nervosa & Bulimia.

A. Anorexia Nervosa - It is a serious & potentially life threatening mental illness. The eating disorder is characterized by self-starvation & excessive weight loss. It is caused by genetic predisposition & a combination of environmental, social & cultural factors.

B. Bulimia Nervosa :- It is an eating Disorder characterised by recurrent binge eating followed by compensatory behaviour such as purging or consuming large amount of

food in a short amount of time followed by frantic efforts to avoid gaining weight. By Self-induced vomiting, excessive use of laxatives, enemas or diuretics or excessive exercise.

Treatment: Psychological Therapy, medication, Hospital treatment, Balanced Diet, Eating Roughafe Education etc.

3.4 Effects of Diet on performance.

Good diet and nutrition can improve spending performance. Any diet which has all constituents of food, necessary for the maintenance and growth of body in sufficient amount is important for all people busy in simple work or in highly competitive sports.

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

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	35 – 39.9
	> 40

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.
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B. 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 labelled 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.

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, lisamine intolerance therapy can be applied.

D. Food Myths/Dieting Myths

(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 lose weight.

Fact: It may be true in short term but ultimately it hinders weight loss. Losing over the long term burns off fat whereas crash dieting or fasting not only removes fat but also loses 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 than full fat milk.

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

(v) Myth: Vegetarian cannot build muscles.

Fact: Vegetarian can build 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.

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

Eating Diet before exercise:

1. The meal should be taken at least three to four hours and snacks at least one to two hours before exercise, to give us time for digestion.
2. The diet should include starches such as cereal, bread and fruit, to give us a slow, steady release of energy.
3. We should avoid simple sugars because they increase insulin level, which in turn reduces our blood glucose and make us feel tired.
4. To avoid dehydration, include plenty of fluids in the diet.
5. As fat and protein take a longer time to digest, avoid such diets before exercise.

Eating Diet during exercise:

1. Take small sips of water and other fluids even if you do not feel thirsty.
2. Drinking liquid glucose to save your own limited stores of glycogen.

Eating Diet after exercise:

1. Drink lots of water and other fluids to replace any loss of fluid.
 2. The food should be rich in carbohydrate within an hour of exercising even if we do not feel hungry, to restore glycogen stores quickly.
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