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Chapter-2

Sports and Nutrition

Nutrition :- Essential substance present in food. Sports nutrition are both aspects of nutrition science that related to the interaction of nutritional and physical activities ✓

Balanced diet :- A diet that contains right amount of carbohydrates, proteins, fats, minerals, salt, vitamins and water is called a balanced diet. ✓

Macronutrients :- Macronutrients are the chemical ~~intension~~ compounds which human consume in large quantity to store energy.
Ex:- Proteins, fats, water and carbohydrates. ✓

Carbohydrates :- These are the main sources of energy in all activities. They provide quick energy to the body and are not stored in the body for long. Carbohydrates are carbon, hydrogen and oxygen. ✓

Source of carbohydrates :-

The main sources of carbohydrates are food, milk, potatoes, honey, milk product, carrot, beans, jalebis, candy, bread, chana, moong, rajma ✓



Functions of carbohydrates:-

The primary functions of carbohydrates is to provide energy for the body especially brain and nervous system. The body break down starch and sugar into substance called glucose to be used by energy.

Recommendation:- 50% to 60% of our body total calories should be comes from carbohydrates excess of carbohydrates is converted into fat by the liver

1 gm carbohydrates = 4.2 calorie

Fats:- The most important from the biological point of view fats are found at natural fat in fatty tissue. All fats are made up of fatty acids. A fat free life carries a height of vitamin deficiency. Fatty acids are divided into saturated and unsaturated fatty acids

1 gm fat = 9.3 calories

Protiens:- Protiens are constituents of all the body cells of most important substances that regulate metabolic structure. The basic structure of protien is a chain of amino acids that contains, carbon, hydrogen, nitrogen etc. The daily requirement of protien by our body is about 20 gm.



Sources:- The best source are:- Milk, egg, meat, grains, fruits and vegetables.

Functions:- The cells of muscles ligament tendons are maintain protein are the main components of muscles, organ and gland. Proteins are require for the formations enzymes and haemoglobin.

Water:- It is consist of hydrogen and oxygen in ratio of 2:1. Our blood tempts 90% of water in our body. It's main functions is to supply essential nutrients to different cells of our body. It also helps in extension of massage from our body. In various form such as chlorine, faeces and vapours through its faecal breath.

Micro-nutrients:-

i) Vitamins	} Fat soluble water soluble
ii) Mineral	

Micro nutrients:- Micro nutrients of the vitamin minerals and antioxidant that are essential for good health.

Vitamins:-

These are nutrients are required to keep our body healthy. If there is a lack of vitamin it may result is variable efferning. decreases such as quakes, seen by osteoporosis weak immune system. Vitamin are two types.



- * Fat soluble vitamin
- * water soluble vitamin

Minerals :- These also play an important role in our body as they constitute about 4% of our body weight. Minerals are essential for keeping our body, teeth and muscles strong. Minerals also serve various purposes in our body like transmission of nerve pulse, maintenance of heart beat and formation of hormones.

Antioxidants :-

These are widely used to reduce the risk of cardiovascular disease and mental stress. Antioxidants have many uses such as preservatives in food and to prevent the degradation.

Sports Nutrition and its effect on performance:-

Pre, During and Post:- The dietary nutrient taken at different amount of in take of nutrients pre, during and after the competition.

Pre competition Nutrition:- The pre event meals is an important parts of the athletes pre competitive preparation a high carbohydrates meal 3 to 4 hours before the event start to have a positive on performance a small snack 1-2 hours before the event may also benefit performance in meal high infats are poor proteins is likely to increase the risk of digestive discomfort. It is recommended that meals just before the competition should be high in carbohydrates and more not to gastric problems.

During Competition Nutrition:- Athletes to performance endurance are high intensity imperative events for them are more at risk of glycogen hypoglycemia and fatigue during exercise. Sports drinks that contains 6 to 8% of carbohydrates are a popular and convenient choice among athletes. Consumption of 6-12 ounces of sports drink instant has been so to extent the capacity of athletes.



Post competition nutrition :- The goal of post competition are recovering nutrition is to replace electrolytes and glycogen that was lost during activities. Make new muscles proteins RBC and other cellular components and provides carbohydrates and amino acids and minerals to promote proper immune system both. Carbohydrates and insulin are needed to optimize glycogen sports.

Food myth :- These are unscientific reason or thoughts about food item there are more of a psychological reason than actual. Wrong information flows around the and without knowing the game we start following it. Or creates myths without hiding the truth.

Food Intolerance :- It means having difficulty in digesting a particular food. In tolerance to several foods are groups of the food is the causes of chronic illness. Food intolerance are food sensitivity occurs when a person has difficulty in digesting a particular food. This can lead to symptoms such as intestinal gas & abdominal pain or diarrhea. Food intolerance affect the digestive system. Food allergy affects the immune system.

Symptoms of Intolerance :-



- i) Abdominal pain,
- ii) Anidity
- iii) constipation
- iv) Fatigue
- v) Headache
- vi) Sickness

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