

Balance Diet and Metabolism

SUMAIRA ASLAM

Balanced diet

Balanced diet is a combination of different varieties of nutrients, To maintain good health and physical efficiency the diet should contain adequate amount of all nutrients. On the basis of their predominant functions food are sometimes grouped as

Energy yielding food –

carbohydrates and fat Body building food –

protein Protective food –

vitamins and minerals

Carbohydrate

- ▶ **Carbohydrate** contain carbon, hydrogen and oxygen. The main functions of carbohydrate in the body is to provide energy. The glucose formed by the digestion of starch and sugar is absorbed mainly in to the blood through the walls of intestine and carried to the liver. When carbohydrate are supplied in the diet in excess that will be converted in to fat and stored as such in the adipose tissues.

Uses:

- ▶ Quick source of energy
- ▶ It produces heat and energy.
- ▶ It regulates amount of sugar circulation in the body.
- ▶ It assist in body's absorption of calcium.
- ▶ It helps in lowering cholesterol level and regulate blood pressure.

Sources:

- ▶ Rice, potatoes, sugarcane, wheat, dates, bread sugar, beef
etc

FAT

Fat is a component used in the production of several hormones like compounds which helps to regulate blood pressure, heart rate, blood vessel constriction, blood clotting and nervous system. But too much fat can have a negative impact on health. A high fat diet can increase the risk of heart disease, high blood cholesterol, diabetes, liver disease etc.

Uses:

- ▶ Delayed source of energy.
- ▶ Better source than carbohydrate.
- ▶ Helps to maintain body temperature.
- ▶ It lubricates and smoothens the body.
- ▶ It protects delicate organs against being injured.
- ▶ Helps to maintain healthy hair ,skin etc.

Sources:

- ▶ Ghee, cheese, milk products, egg (yolk), oil seeds, fish oils, Badam, nuts etc.

Protein

Proteins are made up of Amino acids. Out of 23 amino acids eight are essential and they cannot be manufactured in body and are to be supplied from outside. proteins are present in all living tissues – both in plant and animal. Proteins are very large organic compound, which contain carbon , hydrogen, oxygen, nitrogen etc. Even though plants are primary source of protein animal proteins are considered superior to vegetable source because they contain all the essential amino acids needed by the body.

Uses:

- ▶ For building new tissues.
- ▶ Maintenance of tissues already built and replacement of regular losses.
- ▶ Functions as regulatory substances for internal water and acid base balance.
- ▶ It also produces heat and energy in the absence of carbohydrate.

Sources:

► Plant:- pulses, cereals, papayas, beans, nuts, oil seeds, etc

Animals;- meat, egg(albumin), milk products , fish etc

Minerals

- ▶ Minerals provide material for the growth and development of bones and teeth. they are also needed for the growth of body cells, especially the red blood cells. They are ingredients of various body fluids and are more important for proper functioning of the circulatory and nervous system.

Uses

- ▶ They maintain acid balance in the body
- ▶ They regulates normal system in the heart beat.
- ▶ They regulate normality in reaction time.
- ▶ Formation of bones and teeth.
- ▶ It activates the digestive system and strengthens muscles and nerves.

sources:

- ▶ carrot, green leafy vegetables, egg, meat etc

Vitamins

- ▶ Food contains certain chemical substances in small amounts. these are called vitamins. Vitamins plays a key role in most chemical reactions in the body but they do not provide energy . Many of the cell reactions are carried through enzymes. it is made by the combination of vitamins and minerals. if one item happens to be missing that enzyme cannot be formed and some important functions of the body cannot be carried out. so no one can survive without vitamins.

Uses:

- ▶ It facilitates the digestive action.
- ▶ For proper growth of the body.
- ▶ It produces disease resistance and destroying capacity.
- ▶ For proper physical reproduction.

Sources:

- ▶ Green vegetables, milk, egg, dhal, lemon, grapes, liver, banana

WATER

- ▶ Water is a medium in which most of the chemical reactions connected with metabolism and life take place. Man cannot live without water and it is best fluid to drink in any form. 75% of the body consists of water. An average adult need to take 2 to 3 liters of water a day because the same amount is eliminated from the body in the form of urine, perspiration and water vapors in the process of breathing.

uses:

- ▶ It helps in elimination of poisonous elements and waste products from the body in the form of sweat and urine.
- ▶ It helps in digestion of food.
- ▶ It regulates the body temperature.

THANK YOU