

Unit - IVth

Nutritive Aspects of Carbohydrates, Proteins & Fats -

Carbohydrate is an economical source of calories & provides rapidly available energy for a variety of body functions, the body can fulfill its energy & carbon requirements from proteins & fats.

Nutritional

① Importance of Carbohydrates :-

- Dietary Carbohydrates are the chief source of energy.
- They contribute to 60-70% of total caloric requirement of the body.
- The brain & other parts of central nervous system are dependent on glucose for energy.
- Excess consumption of carbohydrates leads to the formation of fat.
- The role of carbohydrates such as cellulose & hemicellulose in providing fiber is essential to a healthy condition of the intestine.
- ~~Carbohydrates provided energy in 1 gram~~
- Energy provided by 1 gram of carbohydrates is 4 calories.

② Nutritional importance of Proteins:-

- It is a component of every cell in the human body.
In fact, hair & nails are mostly made of protein.
 - Human body uses protein to build & repair tissue.
 - Body need it to make enzymes, hormones & other body chemicals.
 - It is an imp. building block of bones, muscles, skin & blood.
 - 10-15% of the total body energy is derived from proteins.
 - During starvation, proteins serve as the major suppliers of energy.
 - Protein is also used to make antibodies to fight disease.
 - Protein can also supply human body with energy when there is not enough carbohydrate or fat in the diet.
 - Helps transport imp. nutrients such as iron & cholesterol around the body.
 - Eat quality protein during the day to assist with weight loss & a healthy body.
- The amount of protein required daily, which beyond early childhood may range from about 40 to 60 g. depends on the body demand.
- Energy provided by 1 gram of protein is 4 calories, same as a carbohydrate.

- ③ Nutritional importance of fats: → fats are an ~~imp~~
essential part of our diet & is imp. for good health.
→ Dietary fats is imp. for many body processes. for eg - it helps
move some vitamins around the body & also helps with making
hormones.
- Acting as a source of energy, assisting with the absorption of
fat-soluble vitamins (A, D, E & K) & maintaining healthy skin
& cell membrane structures.
 - fat is the most concentrated source providing 9 kcal per
1 gm. consumed, which is more than double the energy
content of protein or carbohydrates (4 kcal per gram).
 - It is a major fuel source for human body (means it
provides a lot of calories) & also the main way
to store energy.
 - Omega-3 fats, a type of unsaturated fat, are imp.
for optimum nerve, brain & heart functions.
 - Energy provided by 1 gram of fat is 9 calories.