

Diet During Pregnancy

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Union of sperm and ovum results in a full term baby at the end of 280 days. This means by the time a child is born, it is already nine months old. Growth rate in the foetus is very rapid in comparison to that in adult. A Zygote of some milligrams grows to a full term foetus of three Kilograms only in nine month time. Growth of foetus depends upon the provision of nutritious foods to the pregnant female. Therefore, this dictum is very true that a healthy mother begets a healthy child.

To maintain good health a female requires supply of a balanced diet. A young female of child bearing age requires at least 2200 calories per day and this caloric demand increases during pregnancy. The caloric allowance of pregnancy is roughly 600-700 calories per day. Thus the total caloric requirement of a pregnant female is round about 2800 calories per day.

In addition to increase in the caloric demand, there is a corresponding increase in the demands of all the nutrients, specially proteins, iron, calcium and vitamin 'A'. Therefore, a pregnant female must be provided with a suitable diet containing necessary calories and the special nutrients. The question is what should be a suitable and well balanced diet during pregnancy.

The cereals like wheat, rice and *bajra* are the chief source of calories in our diet. The energy provided by these grains is used for promoting growth in the foetus and to carry out the vital functions in the mother. These cereals supply an appreciable amount of proteins, vitamin B Complex and minerals also. Therefore, a pregnant female must consume at least 400 gms of these cereals daily to suffice the energy need of the body.

The importance of proteins in human diet need not be over emphasised. Proteins are the building materials of our cells, repair the damage and provide protection against the diseases. A pregnant female requires sufficient quantity of good quality proteins for foetal and maternal growth. Good quality proteins are present in meat, egg, fish for non-vegetarians and in milk, curd and cheese for vegetarians. These protein sources are very costly, therefore, a poor man can not afford. Another novel source of good quality proteins are cereal pulses mixture. If cereals are mixed with pulses in a proportion of 4 : 1, the mixture

provides the vegetable proteins of high biological value. This cereal protein mixture can be used as the only source of proteins for infant feeding during pregnancy, lactation and convalescence also. The protein allowance of the pregnancy is roughly 25-30 grams per day in addition to her normal requirement of 50 gms. Thus a pregnant female requires 80 gms of good quality proteins every day. Protein malnutrition during pregnancy causes improper foetal growth, malnutrition and a weak baby of low birth weight. Moreover, incidence of abortions, complications and mortality is very high in cases of maternal protein malnutrition.

Butter, ghee, oils and vegetable ghee are the principal articles of our diet. Fats are concentrated sources of energy as one gram of fat provides 9 calories whereas proteins or carbohydrates provides only 4 calories per gm. Apart from source of energy, fats serves many functions in our body i.e. (1) Presence of fats are essential for absorption of vitamin A, D, E, & K. and calcium from the intestines (2) Fats supply essential fatty acids to maintain the health of our skin. Daily requirement of fats has not been established well but normally 25-30 percent of the total calories must be derived from fat.

Minerals like calcium is utilized for the formation of bones, iron for the formation of blood haemoglobin in the foetus. If these minerals are deficient in diet there will be defective foetal bone formation and decreased haemoglobin synthesis. Mineral demand is increased by fifty percent during pregnancy. Formally a female requires 1 gm. calcium and 15 mg. iron daily and this requirement increases to 1.5 gm. calcium and 20 mg. iron during pregnancy.

Vitamins play a vital role in energy yielding reactions, acting as co-enzyme and help in growth of cells and in protection against the diseases. Vitamin requirements are increased to considerable extent during pregnancy. The food articles rich in vitamins and minerals are green leafy vegetables, apple, banana, grapes, watermelon, mangoes, juicy fruits, tubers, milk and grains. Only 250 gm. of green leafy vegetables are sufficient to supply all minerals and vitamins of B complex group.

The daily minimum requirement of vitamins in young women is more or less same as that of a man. The requirement for vitamins A-5000 I.U., D-400 I.U., B₁-1 mg, B₂-1 mg, B₃-10 mg, B₁₂-1 microgram and vitamin C-50 mg per day. The requirement increases during pregnancy as for vitamin A-7000 I.U., D-500 I.U., B₁-2 mg, B₂-2 mg, B₁₂-2 microgram and Vitamin C 80 mg per day.

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