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## Nutrition During Pregnancy

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Nutrition of the fetus begins at conception. Hence, the nutrition of the mother is important from before conception as well as throughout pregnancy and breast feeding. Increasing number of studies have shown that the nutrition of the mother will have an effect on the child including the risk for cancer, cardiovascular disease, hypertension and diabetes throughout life.

An inadequate or excessive amount of some nutrients may cause malformations or medical problems in the fetus, and neurological disorders and handicaps are a risk that is run by mothers who are malnourished. Personal habits such as smoking, alcohol, caffeine, using certain medications can negatively and irreversibly affect the development of the baby, which happens in the early stages of pregnancy.

Caffeine is sometimes assumed to cause harm to the unborn baby but there is not enough evidence to say if this is true.

Folic acid supplementation is recommended prior to conception, to prevent development of spina bifida and other neural tube defects. It should be taken as at least 0.4 mg/day throughout the first trimester of pregnancy. Supplementing one's diet with foods rich in folic acid, such as oranges and dark green leafy vegetables.

Iodine levels are frequently very low in pregnant women, and iodine is necessary for normal thyroid function and mental development of the fetus. Pregnant women should take iodised salt.

Polyunsaturated fatty acids, specifically docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) are very beneficial for fetal development. Several studies have shown a small drop in preterm delivery and in low birth weight in mothers with higher intakes. The best dietary source of omega-3 fatty acids is oily fish. Some other omega-3 fatty acids not found in fish can be found in foods such as flaxseeds, walnuts, pumpkin seeds, and enriched eggs.

Iron is needed for the healthy growth of the fetus and placenta, especially during the second and third trimesters. Iron aids proper growth of the fetus and helps in reducing postpartum haemorrhage.

For women with low calcium diets, taking calcium supplementation can reduce their risk of preeclampsia. It has also been suggested that calcium can reduce numbers of births that happen before the 37th week of pregnancy (preterm birth).

### **Water**

During pregnancy, one's mass increases by about 12 kg. Most of this added weight (6 to 9 L) is water because the plasma volume increases. 85% of the placenta is water and the fetus itself is 70-90% water. This means that hydration is an important aspect of nutrition throughout pregnancy. It is recommended to increase intake by 300 mL per day compared to the normal intake for non-pregnant women, taking the total adequate water intake (from food and fluids) to 2,300 mL, or approximately 1,850 mL/ day from fluids alone.

### **Weight gain during pregnancy**

A normal person with BMI between 18 - 25 can have a weight gain between 12-15 kgs .If the person is obese than the weight gain should be restricted to 8 kgs.

### **Nutrition after pregnancy**

Proper nutrition is important after delivery to help the mother recover, and to provide enough food energy and nutrients for a woman to breastfeed her child. Women need iron supplements to prevent iron deficiency anaemia during pregnancy and postpartum. During lactation, water intake may need to be increased. Human milk is made of 88% water, and the IOM recommends that breastfeeding women increase their water intake by about 300 mL/day to a total volume of 3000 mL/day (from food and drink); approximately 2,400 mL/day from fluids.

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