

An Approach to Nutrition and Pregnancy

Aneela Bawani*

Royal College of Physicians of Ireland, Canada

***Corresponding Author:** Aneela Bawani, Royal College of Physicians of Ireland, Canada.

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Nutrition is defined as "Obtaining the food required for our health and growth."

According to WHO, "Nutrition is the intake of food, considered in relation to the body's dietary needs."

Importance of a Balanced Diet

Adequate and proper nutrition plays an important role in our wellbeing, growth and development. Healthy nutrition is an adequate, well balanced diet combined with regular physical activity and is considered as a cornerstone of good health. On the other hand, poor nutrition can lead to reduced immunity, which increases susceptibility to diseases and infections, impaired physical and mental development. As good diet has its own benefits, poor diet is associated with many complications e.g. blindness, anemia, scurvy, kwashiorkor and metabolic diseases like diabetes and osteoporosis.

A balance is required in the diet which we eat because inadequate and imbalanced diet leads to malnutrition. Excess of calories causes Diabetes and Obesity which is considered as a "Global Epidemic".

Nutrients and Nutrition

Nutrients are divided into two groups: Macro-nutrients which are required in large quantity [carbohydrates, proteins, fats, fiber and water]. Micro-nutrients includes minerals and vitamins.

Nutrition is considered as a separate science and a large number of people are taking interest in this field. In many schools, it is taught to students as an important subject to create awareness among youngsters about proper/healthy diet and its benefits. Certified dieticians provide evidence based advice to individuals and nutritional treatment plan. Their role is also important in cases of chronic diseases where proper diet plan is considered as an important pillar for speedy recovery. It has been shown that good nutrition along with supplements also helps people with mental disorders.

It has been proven that if awareness is given to all about healthy and balanced diet, it has good effect on memory and it increases the academic performance too.

Our "Eating Habits and its Effects"

Discussing the demerits of our eating habits, Cancer is an example. Consuming smoked food increases the risk of cancer of stomach, liver and esophagus. Cigarette smoking increases the risk of not only lung cancer but also cancers of the mouth, larynx, esophagus, throat, kidney, liver, pancreas, stomach, colon, cervix, bladder rectum and acute myeloid leukemia.

In females, Obesity and Diabetes Mellitus are the predisposing factors for developing the Endometrial Cancer.

Nutrition and Pregnancy

Healthy eating habits are deemed necessary during pregnancy to reduce the risks of developing complications to the mother and newborn because the food what mother eats is the only source of nutrients for the baby. Approximately 300 extra calories are required

daily to maintain a healthy pregnancy. These calories should be from a balanced diet of protein, vegetables fruits, and whole grains, with sweets and fats kept to a minimum.

Folic acid supplements 0.4mg are necessary for all during pregnancy once it is confirmed until 12 weeks of gestation to reduce the risk of neural tube defects. Those who are on antiepileptic medications or who are diabetics, should be advised to take 5 mg daily. Woman who had a previous history of a baby with neural tube defects, should be advised to start taking 5 mg of folic acid when contemplating pregnancy.

During pregnancy, women should be asked to avoid excessive weight gain as it will increase their chance of getting Gestational diabetes and Macrosomia (baby will be Large for Gestational age/LGA). Women who develop gestational diabetes are at increased risk of developing it in subsequent pregnancies and developing type 2 diabetes in later life. Large for gestational age babies are at risk of shoulder dystocia, fracture clavicle/humerus, birth asphyxia and even death. Women having LGA babies are at increased risk of obstructed labor, prolonged labor, failure to progress and caesarean deliveries. Children born to diabetic mothers may develop hypoglycemia, hyponatremia, and hypocalcemia, increase chances of admissions to neonatal intensive care and developing childhood obesity.

Malnutrition and Pregnancy

Improper diet during pregnancy can cause growth retardation, low birth weight, birth defects, premature birth, spontaneous miscarriage and stillbirth. It increases child's risk of developing chronic diseases such as cardiovascular disease, high blood pressure, diabetes mellitus, obesity and osteoporosis.

To be avoided during Pregnancy

Alcohol should be avoided in pregnancy. Risks of Binge drinking (taking more than 5 units) should be discussed with the women pre-conceptually. Awareness should be given about Fetal Alcohol Syndrome which is associated with excessive Alcohol intake.

Some of the foods should be avoided during pregnancy because of the harmful effects to the baby. Undercooked/raw meat should be avoided as it can cause Toxoplasmosis. Fish with high mercury should also be not taken. Soft cheese and unpasteurized milk can cause listeriosis which can causes miscarriages, and fetal death. Vegetables are safe, and a necessary part of a balanced diet. However, it is essential to make sure they are washed properly. Teratogen are the agent that causes a birth defect during the critical period in development called organogenesis that is between 6 - 12 weeks of gestation, should be avoided. Tobacco, marijuana and cocaine should be avoided during pregnancy as they can cross placenta and lead to profound negative effects on the offspring's development and future health along with causing withdrawal symptoms in the newborn after birth.

Recommendations during Pregnancy

Fruits and vegetables are required by pregnant women every day as they have vitamins that are important for the mother and for the growth of the baby. One should eat at least one green and one citrus vegetable each day. Milk and dairy products are important for the growth of the baby.

One should opt for the low fat products, which has high quality protein, calcium and vitamin D we need but with less of the fat and calories.

All pregnant women are now advised to take vitamin D supplements. Vitamin D deficiency has been associated with a range of adverse neonatal and childhood outcomes, including infantile rickets (with severe deficiency), while during pregnancy vitamin D supplementation has been linked with reduced childhood wheezing and reduced type 1 diabetes in children as well as improvements in bone mineral augmentation. Vitamin K comprises a group of lipid-soluble vitamins which should be given to women after 36 weeks of gestation who have obstetric cholestasis to reduce the risk of post-partum hemorrhage and periventricular hemorrhage in newborn. It is also recommended for women on enzyme inducing drugs e.g. antiepileptic.

The iron in red blood cells is an important constituent which helps to carry oxygen to our organs, tissues, and baby. More iron is required in the diet during pregnancy to support the growth of the baby and to produce extra blood. The recommended daily amount of iron one should consume while pregnant is 27 milligrams, which is found in almost all vitamin supplements. Women who do not have enough iron stored in their bodies before pregnancy may develop anemia. Anemia in pregnancy increases the risk of preterm birth, low birth weight babies, post-partum hemorrhage and postpartum depression. Some women may need extra iron in the form of an iron supplement or even blood transfusion, which itself has its own risks and complications.

Weight gain during Pregnancy

Overweight and obese women are at increased risk of several pregnancy problems. These problems include gestational diabetes, pregnancy induced hypertension, preeclampsia, and cesarean delivery. For women with a BMI of 30 or greater, a weight gain of between 11 pounds and 20 pounds is recommended during pregnancy. For women with a BMI of 40 or greater, a modest weight loss during pregnancy may be recommended.

Being underweight by 10% or more at the onset of pregnancy or gaining too little weight during pregnancy increases the risk of delivering a low-birth-weight baby/constitutionally small for dates.

Summary

Eating a balanced diet is vital for good health and wellbeing. Food provides our bodies with the energy, protein, essential fats, vitamins and minerals to live, grow and function properly. During pregnancy, eating healthy diet contributes to the proper growth and development of the baby.

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