

Importance of Nutrition during Pregnancy in Women

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DESCRIPTION

All pregnant women should take proper nutrition counseling as a fundamental part of their prenatal care. Because the nutritional status of a woman affects not only their health but also the course of her pregnancy and the health of her fetus and neonate due to the fact that they are very different from those of non-pregnant women doctors and other healthcare professionals need to be aware of dietary needs during pregnancy. Additionally it is advised to use a personalized approach to nutritional doctor that takes into account a woman's Body Mass Index (BMI), financial level, race, ethnicity, and cultural dietary preferences. Because many of the recommendations are designed for pregnancies without issues, changes must be made when complications such as gestational diabetes occur. Dietary counseling and interventions can be facilitated by a nutritionist or registered dietician, and typical exposures when pregnant can be managed.

Energy expenditure during pregnancy

During pregnancy, calorie intake should rise by about 300 kcal per day. This is calculated from an estimate of the 80,000 kcal required to sustain a full-term pregnancy and takes into consideration both the growing fetus and placenta as well as increased maternal and fetal metabolism. The 300 kcal/day estimate for the entire pregnancy is obtained by dividing the gross energy cost by the average pregnancy duration of 250 days after the first month. Energy needs, however, are predicted to be 340 kcal and 452 kcal per day in the second and third trimesters, respectively, and are essentially the same as those of non-pregnant women in the first trimester. In addition, a woman's energy needs change dramatically with her age, BMI, and level of activity. Therefore, calorie intake should be customized based on these factors.

Laboratory testing during pregnancy

The normal ranges of various laboratory values are altered during pregnancy due to physiological changes. Both the overall red blood cell mass and the plasma volume grow during pregnancy, but the plasma volume does so more significantly,

which causes their dilution and anemia consequently, during the second trimester, anemia is defined as having a hemoglobin level below 10.5 g/dl or a hematocrit below 32%. Compared to non-pregnant women's, serum total protein and albumin similarly fall by about 30%. Because oestrogen promotes the hepatic production of certain proteins, corticosteroids, sex steroids, thyroid hormones, and vitamin D bind to proteins more strongly during pregnancy, lowering their free levels.

Nutrients

Macronutrients: Doctors suggest pregnant women's to consume 60 g of protein per day. To put it another way, this increase reflects a shift from 0.8 g of protein per kg/day for non-pregnant states to 1.1 g of protein per kg/day during pregnancy. Servings of whole grains should be consumed daily as carbohydrates, which should account for 45 to 64 per cent of total calories. Similar to non-pregnant women, the daily recommended percentage of total fat intake should range from 20 to 35 per cent.

Micronutrients: The "Recommended Dietary Allowances"(RDA) data define the suggested daily micronutrient consumption for a pregnant woman. The Food and Nutrition Board of the Institute of Medicine (IOM) has determined that these RDA levels of essential nutrient intake are sufficient to meet the known nutrient needs of nearly all healthy individuals. The RDA has been adjusted for expectant mothers.

Gestational weight gain

Pregnancy has always been associated with weight gain rather than weight loss. The required weight gain throughout pregnancy is around 8 kg which takes into account the fetus, the placenta, the volume of amniotic fluid, and modifications to the mother's tissues (e.g., uterus, breast, blood volume). If the weight increase is modest where the mother's protein and adipose tissue will be used to support the pregnancy. The metabolic alterations that occur in pregnant women who lose weight are not well understood. However, a period of fasting during pregnancy, ketonemia, increased urine nitrogen excretion, and decreased gluconeogenic amino acid synthesis occur due to the rise in

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insulin resistance and the higher likelihood of developing ketonuria and ketonemia. Thus, pregnancy is frequently referred to as a period of "Accelerated Hunger". Given that maternal ketonemia or ketonuria may later be linked to poor fetal growth or later neurocognitive development, this physiologic alteration is crucial to take into account in the context of weight loss during pregnancy.

Multiple gestations

The maternal metabolic rate is roughly 10% higher in twins than in singletons. Furthermore, repeated gestations worsen the physiological alterations that occur with a singleton pregnancy. This also increases in plasma volume, which further reduces hemoglobin, albumin, and water-soluble vitamins. Although there are no conventional dietary recommendations for multiple gestations, singletons have been used to make assumptions about them a suggested macronutrient mix is 20 per cent protein, 40 per cent fat, and 40 per cent carbohydrates. A woman's nutritional status during a twin pregnancy is thought to be maintained by eating a diet that is 40% greater in calories. Twins have 2.4–4.0 times the rate of iron deficiency anemia as singletons do, and twins have an anemia rate that is 8 times higher than that of singletons due to foliate insufficiency. Therefore, a 1 for twin pregnancies, a daily dosage of 1 mg of folic acid has been suggested.

Pregnancy after bariatric surgery

The fertility frequently increases a bariatric surgery operation, and pregnancy after weight loss surgery is not unusual given the potential for micro-and macronutrient shortages caused by bariatric procedures, pregnant women who have undergone bariatric surgery should pay close attention to their nutritional status. Patients with bariatric surgery have nutritional deficiencies

may worsen during pregnancy. Because lack of certain requirements like calories, vitamins, and minerals during pregnancy. Iron, foliate, and vitamin B12 deficiency are the most common deficits that develop bariatric surgery. A closer eye should be kept on pregnancies that follow malabsorptive surgeries since they increase the risk of nutritional deficiencies. However, restrictive techniques (such as laparoscopic adjustable gastric banding) have the potential to cause nutrient imbalances as well. Consequently, it may be reasonable to check all expectant mothers for nutritional inadequacies after bariatric surgery.

Lactation

The preferred method of new-born feeding around the world is breastfeeding and breast milk. This assertion has the endorsement of the world. Nutritional suggests breast feeding at least the first years of baby or for the first six months of an infants. Similar to pregnancy, lactation and breastfeeding have different nutritional and energetic needs.

CONCLUSION

The cornerstone of prenatal treatment for all pregnant women is nutrition advice, which also covers lactation. Clinicians need to understand how the physiological changes that take place during pregnancy and lactation affect the nutritional requirements of these women. The monitoring of a woman's food and physical activity during pregnancy is one area of research that would help doctors and women meet their nutritional needs and gestational weight gain goals. A woman's nutritional status must be improved in order to achieve the gestational weight gain objectives.