

## PREGNANCY

- **Why additional diet is required during pregnancy?**

Pregnancy is physiologically and nutritionally a highly demanding period. Extra / additional food is required to meet the needs of the growing foetus along with maintaining the health of the mother. Additional foods are required to improve pregnancy weight gain and birth weight of infants,

- **What are the nutritional requirements of a pregnant woman?**

The daily diet of pregnant women should contain:

- Additional 350 Kcal (for the 2<sup>nd</sup> and the 3<sup>rd</sup> trimester)

<b>Recommended additional protein intake during Pregnancy, for a 10 kg gestational weight gain</b>		
<b>First trimester</b>	<b>Second trimester</b>	<b>Third trimester</b>
Additional 0.5g/day	Additional 6.9g/day	Additional 22.7 g/day

- 30 gram visible fat
- 1200 mg/d of calcium
- 35 mg/d of iron

- **Why do we need to fortify Supplementary Nutrition?**

Recognising the importance of micronutrients for optimal growth and development of infants, pre-school children and Pregnant & Lactating women, nutritional norms for providing micronutrients at the level of **50 percent of daily recommended dietary allowances (RDA)** through supplementary feeding fortified with essential micronutrients under ICDS have been prescribed. Folic acid, taken throughout the pregnancy, reduces the risk of congenital malformations and increases the birth weight.

- **What are the financial norms for providing Supplementary Nutrition (ICDS)?**

The financial norms for children (6-72 months) are Rs. 4 per beneficiary per day, for severely underweight children (6-72 months) Rs. 6 per beneficiary per day and for pregnant women and nursing mothers Rs. 5 per beneficiary per day.

<b>Category</b>	<b>Revised Rate (per beneficiary per day)</b>	<b>Calories (K Cal)</b>	<b>Protein (g)</b>
Pregnant women and Nursing Mothers	Rs.7.00	600	18-20

**Note:** MoWCD (G.O.I.), has also mandated the use of Double Fortified Salt (DFS) i.e. salt with both iodine and iron in National Programmes - ICDS

- **How can the pregnant woman meet the nutritional demands?**

The pregnant woman should eat a wide variety of foods to make sure that her own nutritional needs as well as those of her growing foetus are met. The usual dietary pattern need not be modified, however, the quantity and the frequency of usage of the different foods should be increased.

- **What are the major food sources for the required nutrients by a pregnant woman?**  
A pregnant women needs to take a variety of foods every day to maintain good health of both her and the growing foetus. The various food sources to ensure proper nutrition are:
  - **Energy** : Cereals (Wheat, Rice, Millets, Bread, Oats etc.)  
: Oils/Fats
  - **Proteins** : Milk, Milk Products, Fish, Meat, Poultry  
: Pulses, Nuts
  - **Vitamins/Minerals**: Seasonal fruits and vegetables
- **What should be the weight gain during a pregnancy?**  
Optimal weight gain during pregnancy is 10-12Kgs.
- **Why is folic acid needed in higher amounts during pregnancy? What are its sources?**  
Folic acid is essential for the synthesis of haemoglobin. Its deficiency leads to macrocytic anaemia. Pregnant woman need more of folic acid.  
Folic acid supplements should be consumed by the pregnant women to increase birth weight and reduce congenital anomalies.  
Food sources for folic acid are: green leafy vegetables, nuts and liver.
- **Why is iron important during pregnancy?**  
Iron is needed for haemoglobin synthesis, mental function and body defence of the growing foetus. Deficiency of iron leads to anaemia. Iron deficiency during pregnancy increases maternal mortality and low birth weight in infants. Hence, intake of iron and maintaining adequate iron reserves during pregnancy is very important.
- **What are the dietary sources of iron?**  
Foods containing iron are legumes, dried fruits, green leafy vegetables, meat, fish and poultry.
- **How to increase the bioavailability of iron from diet? Or how to increase iron absorption from food?**  
Fruits rich in Vitamin C like amla, guava, and citrus fruits improve iron absorption from plant foods.  
Beverages like tea/coffee bind iron and make it unavailable. Hence, they should be avoided before, during or soon after the meals.
- **How should the diet be modified if a pregnant woman is facing nausea (or morning sickness)?**

Nausea or morning sickness is a common problem in all pregnant women. The pregnant women should be advised as follows to minimise the nausea and maintain good nutrition:

- Eat small, frequent meals and snacks (every 1.5 to 2h hours).
- To eat a biscuit or a dry toast on waking up.
- Drink plenty of fluids (including shakes) between meals.
- Lemonade, lemon in sparkling water, sour lemon candies
- Eat foods which are easily digestible.
- Don't stop eating and drinking all together, this worsens the nausea.
- Don't eat high fat or oily foods, which take much longer time to be digested.

- **What diet should be given if the woman is having vomiting? Or diet management when a pregnant woman is having episodes of vomiting?**

Vomiting causes fluid and electrolyte losses from the body, hence the foremost task is to have the pregnant woman well hydrated. To ensure this:

- Drink plenty of fluids, including those containing electrolytes (electral, lemonade) and juices in small amount throughout the day.
- Snacks with high water content (e.g.: watermelon, canned fruit, fruit juice bars, flavoured ices cubes) should be consumed.
- Low fat foods which are easy to digest should be consumed.

- **What is gestational diabetes?**

Gestational diabetes is high blood sugar that starts or is first diagnosed during pregnancy. Women with gestational diabetes tend to have larger babies at birth, which increases the chance of problems at the time of delivery.

- **What are the goals for nutrition therapy in gestational diabetes?**

Medical Nutrition Therapy in Gestational Diabetes (GDM) is:

- Meal pattern should provide adequate calories and nutrients to meet the needs of pregnancy.
- Calorie requirement depends on age, activity, pre-pregnancy weight and stage of pregnancy.
- Approximately 30-40 Kcal/ Kg ideal weight or an increase of 350 kcal above the basal requirement is needed in 2<sup>nd</sup> and 3<sup>rd</sup> trimester.

**Source:** Seshiah et al. Gestational Diabetes Mellitus – Indian Guidelines. JAPI, Vol. 54 August, 2006.

- **What diet pattern should be followed by a pregnant woman with gestational diabetes?**

For a pregnant woman with GDM it is important that:

- Small frequent meals should be taken.
- 3 major meals (breakfast, lunch, dinner) should be interspaced by 3 small snacks i.e. **3 + 3** meal pattern should be followed.

- Diet should consist of complex carbohydrates (whole cereals and pulses, fruits and vegetables).
  - Refined cereals and products (maida, maida products) should not be consumed.
  - Proteins should be incorporated in every meal and snack.
- **What should be done if a pregnant woman has BMI less than 18.5/ low weight gain/ weight loss during pregnancy?**
    - The first foremost step is to identify the cause of low weight gain or loss of weight (e.g.; lack of food, body image concerns, an eating disorder, poor appetite, prolonged nausea, vomiting and stress).
    - Small frequent meals should be taken.
    - Snacks of high calorie content (with milk, starchy vegetables, ghee/oil/butter, and nuts) should be taken.
    - Don't skip meals
    - Don't in excessive exercise or physical activity.
- **How to manage high maternal weight (BMI greater than 25) or excessive weight gain during pregnancy?**

If a pregnant woman has high BMI or is gaining excessive weight, it is imperative to bring it under control. The following modifications in diet need to be made:

    - A healthy eating pattern of regular meals and snacks with nutrient dense foods lower in calories should be consumed.
    - Increase high fibre foods in diet (fruits, vegetables, whole cereals and pulses).
    - Consume low fat dairy products and meats.
    - Increase intake of water, caffeine free/non caloric beverages.
    - Moderate exercise should be incorporated in daily routine.
    - Don't skip meals or have meals after long intervals.
- **How to tackle poor appetite in pregnancy?**

Poor appetite is a common problem during pregnancy and should be resolved as soon as possible, to prevent poor nutritional status of both the mother and the growing foetus. In order to increase the appetite:

    - Small and frequent meals should be eaten.
    - Sipping juices/ nutritious shakes should be tried.
    - Increase physical activity to stimulate appetite and metabolism.
- **What should be done in case of heartburn?**

To prevent heartburn during pregnancy or to reduce the effect of heartburn during pregnancy, one should:

    - Eat small frequent meals.
    - Low fat/non spicy easily digestible food/snacks should be taken.
    - Eat food slowly.
    - Stay upright after eating food.
    - Take a stroll after meals.
    - Wait for at least 2hours after eating meals to lie down.
    - Avoid spearmint, peppermint and caffeine.

- **How to manage edema during pregnancy?**

Following should be done to manage edema during pregnancy:

- Monitor weight gain and blood pressure.
- Rule out hypertension and the appearance of proteinuria.
- Don't eat foods with high salt (sodium) content.

- **What diet should be given to an anaemic pregnant woman?**

Inadequate intake of iron in diet leads to anaemia (deficiency of iron in the body) and results in poor outcome of pregnancy. To avoid anaemia or to increase the iron content in the body the following should be done:

- Consume high iron foods (meat products, legumes and fortified cereals).
- Green leafy vegetables should be consumed.
- Consume foods rich in Vitamin C along with meals to increase the bioavailability of iron from diet.
- Don't consume coffee or tea along with meals/ immediately after meals, this inhibits iron absorption.
- Use iron supplements as advised by the doctor.

- **What diet modifications should be made in times of constipation during pregnancy?**

Constipation during pregnancy is common. Following diet modifications should be made to ease its effects:

- Consume plenty of fruits and vegetables.
- Consume plenty of fluids.
- Don't use mineral oils or other natural remedies.
- Don't use laxatives.

Source:

- Seshiah et al. Gestational Diabetes Mellitus – Indian Guidelines. JAPI, Vol. 54 August, 2006.
- Dietitian's pocket guide to nutrition, *Herbold et al.* 2010
- Dietary Guidelines for Indians- A Manual. National institute of Nutrition, 2010.