



BASIC INFORMATION: Gestational Diabetes Mellitus

Department of Endocrinology, Diabetes & Metabolism

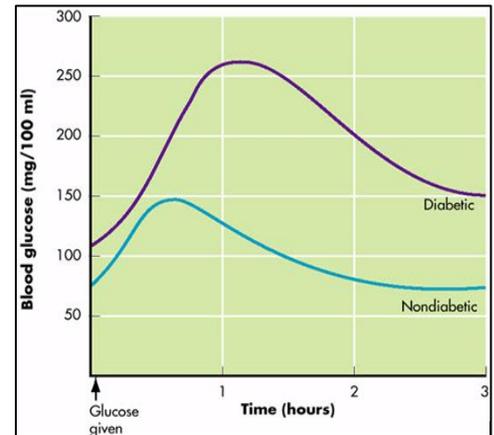
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*Diabetes during pregnancy is a condition requiring continuing medical care, ongoing education & support to prevent complications to mother and the baby. Education that improves understanding and self-management is one of the **best ways to manage diabetes related problems**. This information will help you get started but you need to continue communication with your health care provider.*

1. What is diabetes?

Diabetes means that your blood glucose [also called blood sugar] is too high. Glucose is essential to provide energy for the normal functioning of the body. Normally our blood sugar (glucose) level before eating is 60-95mg/dl and the peak glucose after eating is less than 140mg/dl (usually at 1-2 hours). But, too much glucose in the blood is not good for your health and also for your baby. **DIABETES DURING PREGNANCY**, known as gestational diabetes (GDM) is diagnosed if your fasting is ≥ 92 mg/dl, 1 hour post glucose ≥ 180 mg/dl or 2 hour post glucose ≥ 153 mg/dl.



2. Why are high sugars not good in pregnancy? - What are the complications of diabetes during pregnancy?

Problems of high blood sugar – poor control

Problems in Mother

•Pregnancy

Anxiety
Abnormal wt gain
High blood pressure +/- fits
Birth trauma (secondary to macrosomia)
Increased rate of
Cesarian

•Later

Problems in Baby

•Fetal

Malformation
Early fetal loss
Big baby
Shoulder injury//Erb's palsy
Iatrogenic prematurity

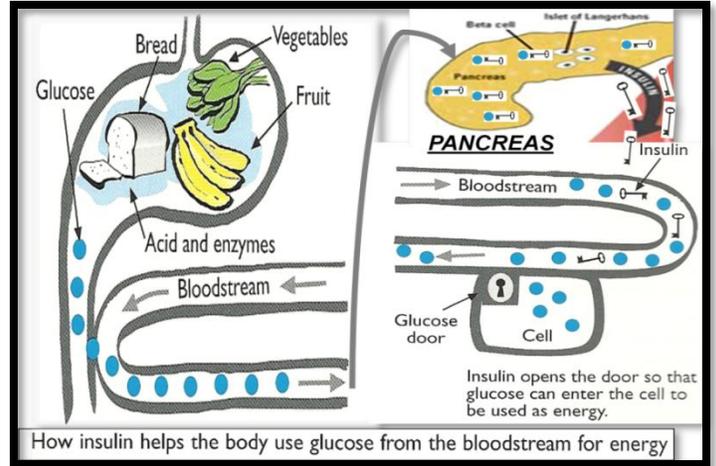
•Neonatal

Low sugars, Respiratory distress
Thick blood with high hemoglobin
Jaundice
Low calcium
Cardiac problem

Adult

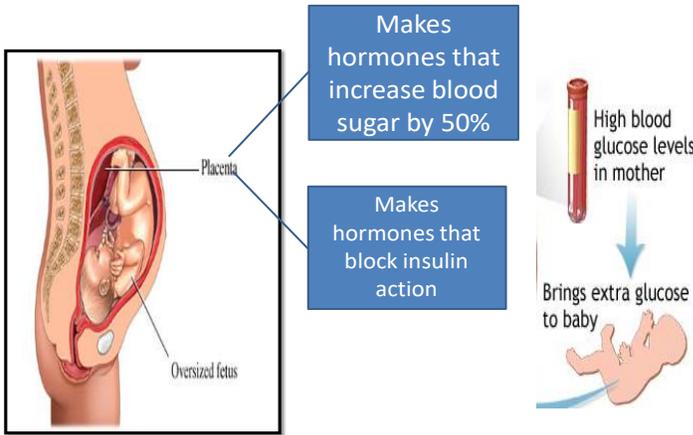
3. What happens normally when we eat and what is the role of insulin, why do we get high blood glucose?

- Every cell (muscle, liver, etc) in our body has small doors for the blood glucose to enter into them and a Key is needed to open the door of the cells. **Insulin** is a chemical that acts as the **KEY** which opens the door of the cells and help glucose (**energy**) to enter into the cells to be used. Without insulin glucose cannot enter into the muscles (also fat, liver) and hence do not get energy and sugar levels increase in the blood.



Diabetes develops when insulin is not adequately secreted by pancreas or the target cells are resistant to the action of available insulin.

4. Why diabetes during pregnancy?



Who are at Risk of developing diabetes during pregnancy?

1. Diabetes during earlier pregnancy
2. Overweight
3. Parents/siblings with diabetes
4. Previous big baby.

5. How do I manage diabetes? 4 simple steps are:

1 Healthy meal plan

BALANCED PLATE FOR DIABETES

2 Regular Exercise

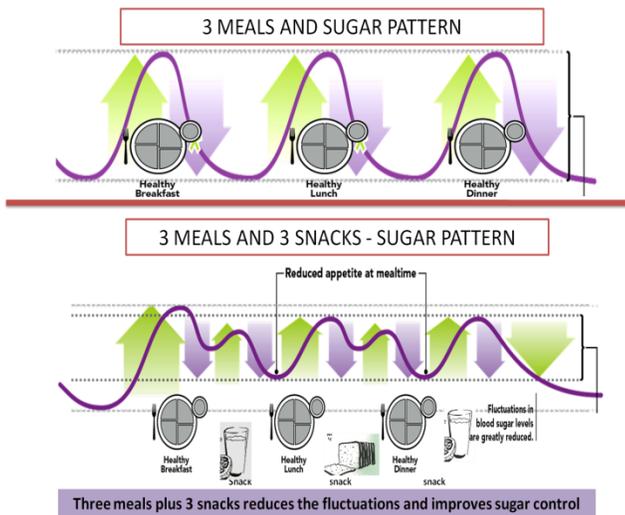
3 Take your medicines as advised

4 Regular check ups

HEALTHY EATING: EAT SLOWLY, AVOID SUGARS, AND RESTRICT CEREALS, SALT AND OIL.

THREE MEALS PLUS 3 SNACKS reduce the fluctuations and improve sugar control

Diet modification during pregnancy protein rich breakfast helps in better control (sundal with curd/milk/egg).



BED TIME SNACK is essential to avoid low glucose while sleeping. This may affect the glucose levels of your baby.

EXERCISE: To get maximum health benefit you should exercise at least 30-60 minutes a day, for at least 10 -20 minutes each time. Start by walking about 1 Km in 20 minutes after each meal. *Other exercises:* Some of the other activities like swimming, dancing, cycling, are also beneficial.

Be active for 10-20 minutes at a time, at least 3 times a day after meals.

Monitoring: Blood sugar monitoring is the key for blood glucose control and NORMAL growth of the baby. The targets are: Fasting blood sugar (60-95 mg/dl) and 1 hour post meal sugars (90-140 mg/dl).



Daily monitoring at least 4-6 times/day is essential to achieve good control of diabetes. If your blood sugar are well controlled your doctor/educator may tell you to monitor alternate days.

6. What are the medications used in diabetes control?

A. Insulin: Insulin is safe during pregnancy. There are a wide variety of different insulin preparations available now. These differ in onset of action, time to peak effect and duration of action. Your doctor will prescribe you that type of insulin which best suits your needs.

B. What are the tablets that can be used in diabetes during pregnancy? Only few oral medications are found to be safe in pregnancy. 1. Metformin is safe throughout pregnancy. 2. Tab. Glibenclamide can be used after 11 weeks of pregnancy.

7. Can I stop medicines when my diabetes is controlled?

In most of the cases gestational mothers require medicines throughout the pregnancy. Hence you should never stop the medicines even after blood glucose is controlled. Always take medicines according to your doctor's advice.

What are the FUTURE problems of Diabetes during pregnancy?

For Mother:

"Diabetes during pregnancy is a window that reveals an increased risk to type 2 diabetes". Those most of these women will have normal blood glucose levels after delivery; unto 50% of women with Diabetes during pregnancy develop type 2 diabetes mellitus over next 5-10 years.

For Baby:

Obesity, increased risk of Type 2 diabetes mellitus and hypertension.

8. What are the precautions I should take while on therapy for diabetes?–

A. What is Hypoglycemia?

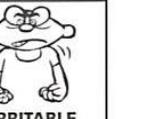
If your blood glucose drops too low (< 60mg/dl), you can have hypoglycemia. It is caused by missing a meal, delaying a meal, exercising more than usual or by taking too much diabetic medicines.

Note: If you can't check your blood sugar and have symptoms then treat it anyway because slightly higher blood sugar is less dangerous than low blood sugar.

(Low Blood Glucose)

Causes: Too little food, too much insulin or diabetes medicine, or extra activity.

Onset: Sudden, may progress to insulin shock.

SYMPTOMS			
 SWEATING	 DIZZINESS	 ANXIOUS	 HUNGER
 IMPAIRED VISION	 WEAKNESS FATIGUE	 HEADACHE	 IRRITABLE

Always carry Glucometer, glucose/ some sugar/candies/Raisins for emergencies if you are taking insulin.

B. Taking care of your feet:

A diabetic patient has a special reason to treat her feet well. Never walk barefoot- neither indoors nor outdoors. Examine your shoes every day for cracks, pebbles, nails and other irregularities which may irritate the skin.



Each one of you, who manages her diabetes carefully during pregnancy, will increase the chances for successful pregnancy outcome.



Healthy family is a happy family