Gestational Diabetes Mellitus
(GDM)

Gestational diabetes mellitus (GDM) is diabetes that occurs only during pregnancy. This happens when the body cannot properly handle the glucose (*sugar*) that increases in the blood after eating. During pregnancy, insulin resistance (*reduced sensitivity to insulin*) occurs because of the release of hormones from the placenta. Usually, the pancreas of pregnant women produces enough insulin to overcome the resistance that occurs. However, in gestational diabetes, the insulin is there but it does not work effectively. If the resistance is severe enough that the pancreas does not produce enough insulin, extra glucose builds up in the blood.

WHO IS AT RISK FOR DEVELOPING GESTATIONAL DIABETES?

- Women with a history of diabetes in the family.
- Women over age 25.
- Women who are overweight.
- Women in certain ethnic groups (Hispanic, African American, Native American, Asian and Pacific Islander).

WHAT CAN HAPPEN TO THE BABY?

If the mother's blood glucose is too high while she is pregnant, the extra sugar will travel through the umbilical cord to the baby. Some of the problems the baby may have are:

- **Large Baby -** If the baby receives too much sugar, the baby will gain more weight. This may cause the baby to be too large to be born normally (*vaginally*) and a Cesarean section (*C-section*) may be needed.
- **Low Blood Glucose** (*hypoglycemia*) – The baby makes extra insulin, in response to the extra sugar its gets from its mother. When the baby is born and no longer needs this extra insulin, the baby's blood glucose level may drop.
- **Jaundice** (*yellow coloring of the skin and eyes*) – This is fairly common in babies. It is caused from a build-up of the chemical called bilirubin. This is rarely serious, but is seen more often in babies whose mothers had gestational diabetes.

RISKS TO THE MOTHER

Women who have had gestational diabetes may be at higher risk for some problems, including:

- Preeclampsia or toxemia, which includes problems with high blood pressure. Blood pressure and protein levels in the urine must be checked frequently.
- Infections.
- Cesarean section (*C-section*) for delivery.
- Developing Type 2 diabetes later in life. About 30-50% will develop diabetes later, especially if obese.

DIAGNOSIS

The hormones that cause insulin resistance are highest at about 24-28 weeks of pregnancy. If symptoms are experienced, they are much like symptoms you would normally expect during pregnancy.

GDM is often diagnosed using a two part method:

1. After 24-28 weeks of pregnancy, the woman drinks a glucose solution and takes a blood test. If the glucose level is high, a second test will be given.
2. Oral Glucose Tolerance Test (OGTT) which is 3 hours long – After not eating overnight, the blood glucose is checked. The woman drinks a glucose solution, and hourly blood glucose tests are taken.

If the woman has risk factors for GDM, the caregiver may test earlier than 24 weeks of pregnancy.

TREATMENT

Treatment of GDM is directed at keeping the mother's blood glucose level normal, and may include:

- Meal planning.
- Taking insulin or other medicine to control your blood glucose level.
- Exercise.
- Keeping a daily record of the foods you eat.
- Blood glucose monitoring and keeping a record of your blood glucose levels.
- May monitor ketone levels in the urine, although this is no longer considered necessary in most pregnancies.

HOME CARE INSTRUCTIONS

While you are pregnant:

- Follow your caregiver's advice regarding your prenatal appointments, meal planning, exercise, medicines, vitamins, blood and other tests, and physical activities.
- Keep a record of your meals, blood glucose tests, and the amount of insulin you are taking (if any). Show this to your caregiver at every prenatal visit.
- If you have GDM, you may have problems with hypoglycemia (*low blood glucose*). You may suspect this if you become suddenly dizzy, feel shaky, and/or weak. If you think this is happening and you have a glucose meter, try to test your blood glucose level. Follow your caregiver's advice for when and how to treat your low blood glucose. Generally, the 15:15 rule is followed: Treat by consuming 15 grams of carbohydrates, wait 15 minutes, and recheck blood glucose. Examples of 15 grams of carbohydrates are:
  - 1 cup skim or low fat milk.
  - ½ cup juice.
  - 3-4 glucose tablets.
  - 5-6 hard candies.
  - 1 small box raisins.
  - ½ cup regular soda pop.
- Practice good hygiene, to avoid infections.
- **Do not** smoke.

SEEK MEDICAL CARE IF:

- You develop abnormal vaginal discharge, with or without itching.
- You become weak and tired more than expected.
- You seem to sweat a lot.
- You have a sudden increase in weight, 5 pounds or more in one week.
- You are losing weight, 3 pounds or more in a week.
- Your blood glucose level is high, and you need instructions on what to do about it.

SEEK IMMEDIATE MEDICAL CARE IF:

- You develop a severe headache.
- You faint or pass out.
- You develop nausea and vomiting.
- You become disoriented or confused.
- You have a convulsion.
- You develop vision problems.
- You develop stomach pain.
- You develop vaginal bleeding.
- You develop uterine contractions.
- You have leaking or a gush of fluid from the vagina.

AFTER YOU HAVE THE BABY:

- Go to all of your follow-up appointments, and have blood tests as advised by your caregiver.
- Maintain a healthy lifestyle, to prevent diabetes in the future. This includes:
  - Following a healthy meal plan.
  - Controlling your weight.

- Getting enough exercise and proper rest.
- **Do not** smoke.
- Breastfeed your baby if you can. This will lower the chance of you and your baby developing diabetes later in life.

For more information about diabetes, go to the American Diabetes Association at: www.americandiabetesassociation.org.

For more information about gestational diabetes, go to the American Congress of Obstetricians and Gynecologists at: www.acog.org.

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