

# Gestational Diabetes Mellitus

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# Gestational Diabetes Mellitus

- GDM General Facts
- Postpartum Considerations
- Other Recommendations

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# Gestational Diabetes Mellitus General Facts

7-8% OF PREGNANCIES ARE COMPLICATED WITH DIABETES AND ABOUT 86% OF THOSE CASES REPRESENTED WOMEN WITH GDM

GDM PLACES WOMEN AT RISK FOR PREECLAMPSIA, CESAREAN DELIVERY AND AN INCREASED RISK FOR DEVELOPING DIABETES LATER IN LIFE

OFFSPRING ARE AT INCREASED RISK OF MACROSOMIA, NEONATAL HYPOGLYCEMIA, SHOULDER DYSTOCIA, BIRTH TRAUMA AND STILLBIRTH

CURRENT GUIDELINES SUGGEST THAT ALL PREGNANT WOMEN SHOULD BE SCREENED FOR GDM USING BLOOD GLUCOSE LEVELS AT 24-28 WEEKS GESTATION

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## Gestational Diabetes Mellitus General Facts

HIGH RISK PATIENTS MAY NEED TO BE SCREENED EARLIER WHEN THEY FIRST FIND OUT THAT THEY ARE PREGNANT.

WHEN THOSE TESTS ARE NEGATIVE, IT IS STILL RECOMMENDED TO FOLLOW UP WITH SCREENING AT 24-28 WEEKS GESTATION

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## Gestational Diabetes Mellitus General Facts

Consider testing all women early who are overweight or obese (ie, have a BMI > 25 or >23 in Asian Americans) and have one or more of the following additional risk factors:

- Physical inactivity
- First-degree relative with diabetes
- High risk race or ethnicity (eg, African American, Latino, Native American, Asian American, Pacific Islander)
- Previously given birth to an infant weighing 4,000g (approximately 9 lb) or more
- Previous Gestational Diabetes Mellitus
- Hypertension (140/90 or on therapy for hypertension)

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## Gestational Diabetes Mellitus General Facts

### Risk Factors Continued

- High-density lipoprotein cholesterol level less than 35 mg/dL, a triglyceride level greater than 250 mg/dL
- Women with polycystic ovarian syndrome (PCOS)
- A1c greater than or equal to 5.7%, impaired glucose tolerance, or impaired fasting glucose on previous testing
- Other clinical conditions associated with insulin resistance (eg, prepregnancy BMI >40, acanthosis nigricans)
- History of cardiovascular disease

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## Gestational Diabetes Mellitus General Facts

WOMEN IN WHOM GDM IS DIAGNOSED SHOULD RECEIVE DIETARY AND EXERCISE COUNSELING AS FIRST LINE THERAPY

IF DIET AND EXERCISE ALONE FAILS, THEN MEDICATION SHOULD BE USED FOR MATERNAL AND FETAL BENEFIT

A<sub>1</sub>DM = DIET AND EXERCISE  
A<sub>2</sub>DM = MEDICATION

INSULIN IS THE PREFERRED TREATMENT MEDICATION

IN WOMEN WHO DECLINE INSULIN THERAPY OR WHO THE CARE GIVER DEEMS UNABLE TO SAFELY ADMINISTER INSULIN, METFORMIN IS A REASONABLE ALTERNATIVE CHOICE.

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## Gestational Diabetes Mellitus General Facts

MOST SCREENING PROTOCOLS USE THRESHOLDS FOR THE 1-HOUR GLUCOSE CHALLENGE TEST (50 G OF ORAL GLUCOLA) AT 140 MG/DL BLOOD GLUCOSE LEVEL

IF THE TEST IS > 140 MG/DL, THEN A 3-HOUR GLUCOSE TOLERANCE TEST (100 G OF ORAL GLUCOLA) SHOULD BE ADMINISTERED

BLOOD GLUCOSE LEVELS ARE THEN CHECKED AT FASTING, 1-HOUR, 2-HOURS AND 3-HOURS AFTER THE GLUCOLA WAS GIVEN

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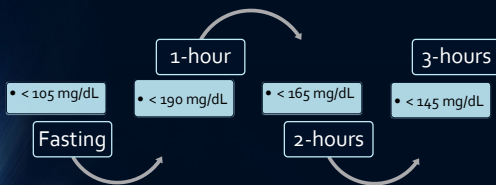
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## Gestational Diabetes Mellitus General Facts

### 3-hour OGTT Thresholds



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## Gestational Diabetes Mellitus General Facts

A DIAGNOSIS OF GDM REQUIRES THAT TWO OR MORE OF THE THRESHOLDS BE EXCEEDED, ALTHOUGH SOME CLINICIANS CHOOSE TO USE JUST ONE ELEVATED VALUE.

GENERAL RECOMMENDATION IS FOR DAILY GLUCOSE MONITORING 4 TIMES A DAY, ONCE AFTER FASTING AND AGAIN 1-HOUR AFTER EACH MEAL OR 2-HOURS AFTER EACH MEAL

FASTING VALUES SHOULD BE BELOW 95 MG/DL AND 1-HOUR POSTPRANDIAL VALUES SHOULD BE BELOW 140 MG/DL OR 2-HOUR POSTPRANDIAL BLOOD GLUCOSE VALUES SHOULD BE BELOW 120 MG/DL

THESE VALUES SHOULD BE REVIEWED WEEKLY UNLESS MANY ABNORMAL VALUES ARE SEEN, THEN MORE FREQUENT REVIEW IS APPROPRIATE

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## Gestational Diabetes Mellitus General Facts

- The ADA recommends nutritional counseling by a registered dietitian and development of a personalized nutrition plan based on BMI for all patients with GDM.
- A moderate exercise program is also recommended as part of the treatment plan for all women with GDM.

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## Gestational Diabetes Postpartum Considerations

- Carbohydrate intolerance usually resolves after delivery, however, up to one third of women with GDM will have impaired glucose metabolism or diabetes at postpartum screening.
- Screening at 4-12 weeks is recommended for all women who had GDM.
- A fasting glucose test and the 75 gm, 2 – hour OGTT have been used to diagnose overt diabetes in the postpartum period.
- Thresholds are for fasting > 125 mg/dl or 2-hour glucose > 199 mg/dl = diabetes
- Fasting 100-125 mg/dl or 2-hour glucose 140-199 mg/dl = prediabetes
- Fasting < 100 mg/dl or 2 – hour glucose < 140 mg/dl = normal

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## Gestational Diabetes Mellitus Other Recommendations

- Once nutrition therapy is initiated, surveillance of glucose levels is required to confirm that glycemic control has been established.
- Three meals and two snacks are recommended to distribute carbohydrate intake and to reduce postprandial glucose fluctuations.
- Women with GDM should aim for 30 minutes of moderate-intensity aerobic exercise at least 5 days a week or a minimum of 150 minutes per week.

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## Gestational Diabetes Mellitus Other Recommendations

- Screening at 4-12 weeks postpartum is recommended for all women who had GDM to identify women with diabetes, impaired glucose fasting levels, or impaired glucose tolerance.
- Women with impaired glucose tolerance or diabetes should be referred for preventive or medical therapy.
- ACOG and ADA recommend that repeat testing should be performed every 1-3 years for women who had a pregnancy affected by GDM even with normal postpartum screening results.

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