

GUIDELINES FOR GESTATIONAL DIABETES (GDM)

SCREENING AND DIAGNOSIS (OGCT = Oral Glucose Challenge Test, 1-hour OGTT = Oral Glucose Tolerance Test, 3-hour)

<p>First Prenatal Encounter: Universal Risk Assessment</p>	<p>High-risk if any of the following:</p> <ul style="list-style-type: none"> • Advanced maternal age (> 35 y.o.). • Obese (BMI > 29 kg/m² based on ppw). • High-risk ethnic population. • h/o GDM. • Previous macrosomic infant. • h/o GDM related OB complications. • First degree relative w/ diabetes. • PCOS. • Glycosuria. 	<p>High-risk: Screen immediately with 50-g, 1-hour OGCT</p> <ul style="list-style-type: none"> • ≥ 135 mg/dl, follow with 100-g, 3-hour OGTT. • If suspect pre-existing diabetes, order HbA1c. • < 135 mg/dl, rescreen between 24–28 weeks. <p>Not high-risk: Follow-up with universal screening between 24–28 weeks.</p>
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<p>24–28 Weeks: Universal Screening</p>	<p>Test using 50-g, 1-hour OGCT</p> <ul style="list-style-type: none"> • ≥ 135 mg/dl, follow with 100-g, 3-hour OGTT. • < 135 mg/dl, no further testing required. <p>See reverse for GDM Screening & Diagnosis Algorithm</p>	<p>OGTT Diagnostic Criteria for Gestational Diabetes*</p> <p>If 2 or more values meet or exceed thresholds, diagnose GDM.</p> <p>Note: If only 1 value meets or exceeds thresholds, re-test in 3-4 wks. using OGTT.</p>	<table border="1"> <thead> <tr> <th>Time</th> <th>mg/dl</th> </tr> </thead> <tbody> <tr> <td>Fasting</td> <td>≥ 95</td> </tr> <tr> <td>1-hour</td> <td>≥ 180</td> </tr> <tr> <td>2-hour</td> <td>≥ 155</td> </tr> <tr> <td>3-hour</td> <td>≥ 140</td> </tr> </tbody> </table>	Time	mg/dl	Fasting	≥ 95	1-hour	≥ 180	2-hour	≥ 155	3-hour	≥ 140
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MEDICAL NUTRITION THERAPY (MNT) AND PHYSICAL ACTIVITY**

<p>Meal Planning</p>	<ul style="list-style-type: none"> • Educate on healthy food choices and smaller, frequent meals throughout the day. • Teach portion control (plate method or carbohydrate counting) and reading food labels. • Refer to an RD or CDE if available, or an RN or trained community health worker.
<p>Food Record</p>	<ul style="list-style-type: none"> • Record food and beverage intake including what, amount (cups, etc.), and meal and snack times.
<p>Physical Activity</p>	<ul style="list-style-type: none"> • Recommend regular physical activity 30 min/day, 5 days/week. • Consult with MD re: any contraindications.

BLOOD GLUCOSE MONITORING

<p>Self-Monitoring Blood Glucose Goals</p> <table border="1"> <thead> <tr> <th>Time</th> <th>mg/dl</th> </tr> </thead> <tbody> <tr> <td>Fasting</td> <td>< 95</td> </tr> <tr> <td>1-hour pp</td> <td>< 130–140</td> </tr> <tr> <td>2-hour pp</td> <td>< 120</td> </tr> </tbody> </table>	Time	mg/dl	Fasting	< 95	1-hour pp	< 130–140	2-hour pp	< 120	<ul style="list-style-type: none"> • Check and record BG 4x/day; fasting and 1 or 2-hours postprandial (pp) for a minimum of 2 weeks. • Never discontinue SMBG during GDM. Remain vigilant as glucose intolerance increases as pregnancy progresses. If frequency is decreased, rotate SMBG at different meals each day. • If 20% of BG values exceed the target while following prescribed nutrition and physical activity plan, consider medication therapy.
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MEDICATION MANAGEMENT

<p>Oral</p>	<ul style="list-style-type: none"> • Glyburide is the only oral hypoglycemic agent that may be considered as an alternative to insulin. • Metformin should not be initiated in pregnancy. If used to manage PCOS risks, discontinue after 1st trimester.
<p>Insulin</p>	<ul style="list-style-type: none"> • Use SMBG to guide the doses and timing of the insulin regimen. • Aspart and Lispro are the most effective at reducing postprandial glycemic excursions. • Regular and NPH have also been used safely in pregnancy.

PRENATAL SURVEILLANCE AND DELIVERY MANAGEMENT

<p>Surveillance</p>	<ul style="list-style-type: none"> • A fetal based strategy (AC > 75th percentile at 28–33 weeks) may help identify women that may benefit from more intensive medical management. • Prenatal surveillance may include NST, AFI, Biophysical Profile or Contraction Stress Test. Selection of the prenatal test is at the discretion of the practitioner.
<p>Diet Controlled**</p>	<ul style="list-style-type: none"> • Euglycemic: initiate surveillance at 40 weeks. • Not euglycemic: initiate surveillance at 36 weeks.
<p>Medication Controlled</p>	<ul style="list-style-type: none"> • If pregnancy is not otherwise complicated, initiate surveillance at 32–34 weeks.
<p>Delivery</p>	<ul style="list-style-type: none"> • There is no data to support delivery at < 38 wks or cesarean delivery purely on the basis of GDM.

POSTPARTUM FOLLOW-UP

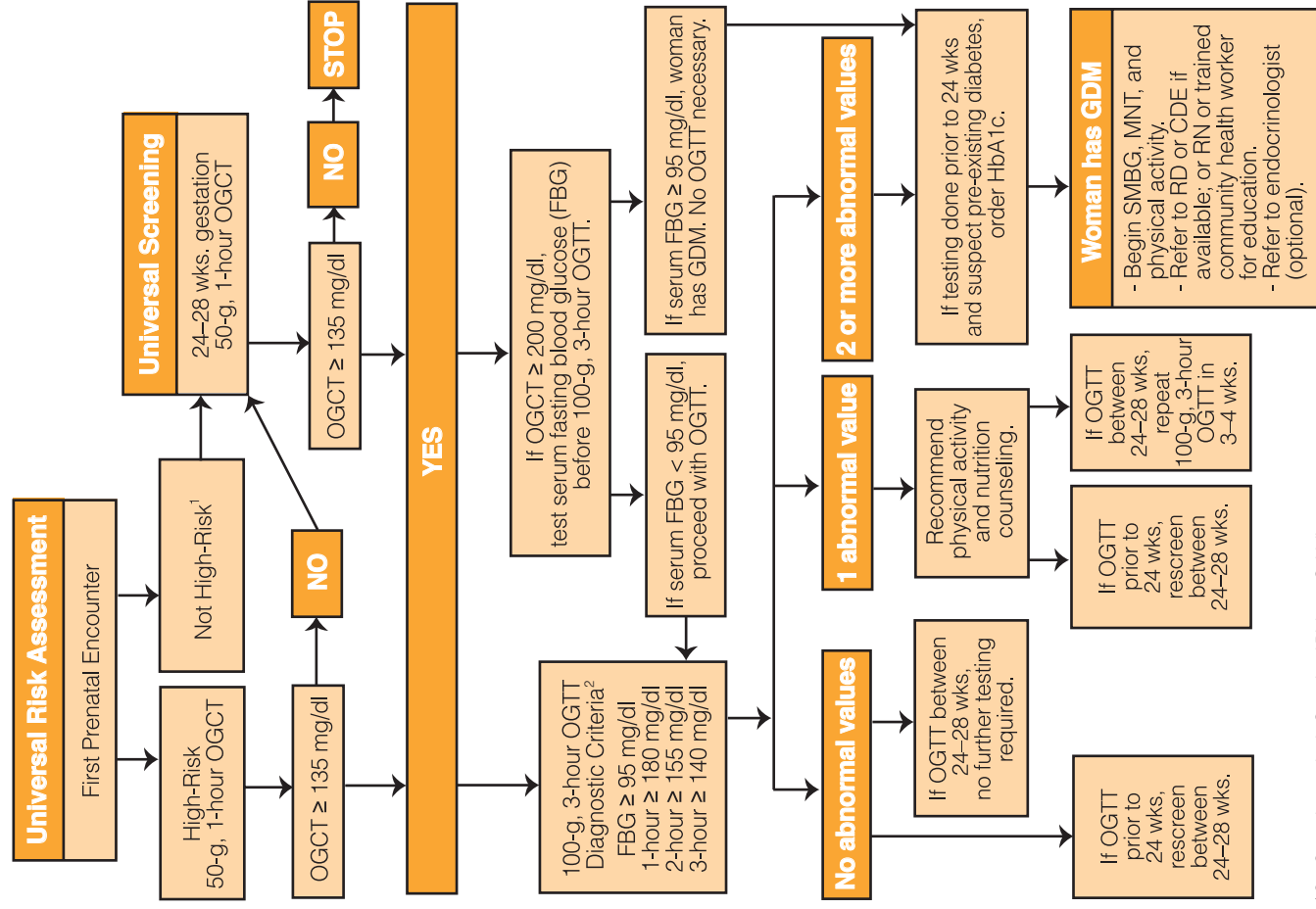
Due to the increased risk of developing type 2 diabetes, it is **crucial** that women return to their provider to receive the appropriate postpartum counseling, testing, and follow-up after a GDM pregnancy. See reverse for GDM Postpartum Algorithm.

These clinical guidelines (approved 9/12/2006) are adapted from the *American Diabetes Association (ADA) Standards of Medical Care in Diabetes—2006*. They are designed to assist clinicians in managing women with gestational diabetes and are not intended to replace a clinician's judgment or establish a protocol for all women with gestational diabetes. For references, important updates, additional copies of guidelines, go to <http://www.coloradoguidelines.org> or call 720-297-1681 or 1-866-401-2092.

* American Diabetes Association, Carpenter and Coustan criteria.

** For more specific GDM nutrition information, visit the Gestational Diabetes Nutrition Guidelines at <http://www.cdph.state.co.us/pp/diabetes/tools.html>.

Gestational Diabetes Screening and Diagnosis



1 See Screening section in Gestational Diabetes Guidelines
2 American Diabetes Association, Carpenter and Coustan

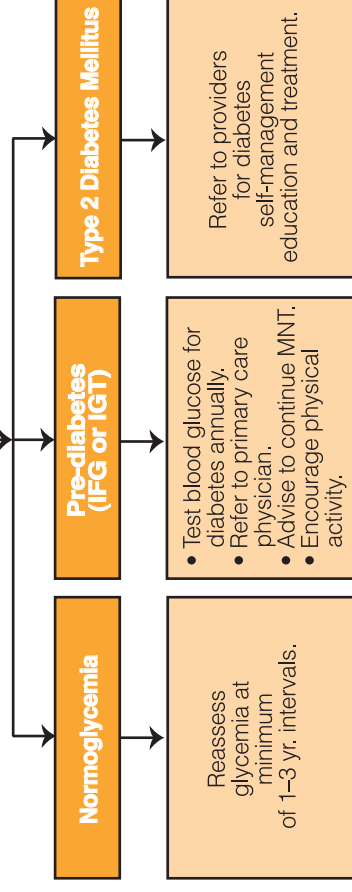
Gestational Diabetes Postpartum Follow-up

Women with GDM have an approximate 50% risk for developing type 2 diabetes within the next 5–10 years and 80% risk if they have impaired fasting glucose or impaired glucose tolerance postpartum. Therefore it is crucial they return to their provider to receive the appropriate postpartum counseling, testing, and follow-up after a GDM pregnancy.

6-12 Weeks Postpartum

75-g, 2-hour OGTT with fasting and 2-hour results

Reclassification Criteria for Postpartum Maternal Glycemic Status			
Time	Normoglycemia	Pre-diabetes	Type 2 Diabetes Mellitus
Fasting	< 100 mg/dl	≥ 100 mg/dl and < 126 mg/dl Impaired Fasting Glucose (IFG)	≥ 126 mg/dl
2-hour	< 140 mg/dl	≥ 140 mg/dl and < 200 mg/dl Impaired Glucose Tolerance (IGT)	≥ 200 mg/dl



Postpartum education for all women with prior GDM:

- Encourage lifestyle modifications to improve insulin resistance, maintain normal body weight, make healthy food choices, increase physical activity.
- Recommend breastfeeding as it may decrease maternal progression to type 2 diabetes following a GDM pregnancy.
- Educate on effective contraception and the need for preconception counseling and evaluation **before** future pregnancies.
- Emphasize importance of a healthy lifestyle in children born to women with GDM.
 - Monitor for development of obesity and/or glucose intolerance.
 - Encourage daily physical activity.
 - Teach and model healthy eating habits.