GUIDELINES FOR GESTATIONAL DIABETES (GDM)

SCREENING AND DIAGNOSIS

First Prenatal Encounter:
Universal Risk Assessment
High-risk if any of the following:
• 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.

High-risk: Screen immediately with 50-g, 1-hour OGCT
• ≥ 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.

Not high-risk: Follow-up with universal screening between 24-28 weeks.

24–28 Weeks:
Universal Screening
Test using 50-g, 1-hour OGCT
• ≥ 135 mg/dl, follow with 100-g, 3-hour OGTT.
• < 135 mg/dl, no further testing required.

See reverse for GDM Screening & Diagnosis Algorithm

OGTT Diagnostic Criteria for Gestational Diabetes*
If 2 or more values meet or exceed thresholds, diagnose GDM.
Note: If only 1 value meets or exceeds thresholds, re-test in 3-4 wks. using OGTT.

<table>
<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>

MEDICAL NUTRITION THERAPY (MNT) AND PHYSICAL ACTIVITY**

Meal Planning
• 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.

Food Record
• Record food and beverage intake including what, amount (cups, etc.), and meal and snack times.

Physical Activity
• Recommend regular physical activity 30 min/day, 5 days/week.
• Consult with MD re: any contraindications.

BLOOD GLUCOSE MONITORING

Self-Monitoring Blood Glucose Goals

<table>
<thead>
<tr>
<th>Time</th>
<th>mg/dl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting</td>
<td>&lt; 95</td>
</tr>
<tr>
<td>1-hour pp</td>
<td>&lt; 130–140</td>
</tr>
<tr>
<td>2-hour pp</td>
<td>&lt; 120</td>
</tr>
</tbody>
</table>

• 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.

MEDICATION MANAGEMENT

Oral
• 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.

Insulin
• 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

Surveillance
• A fetal based strategy (AC > 75th%ile 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.

Diet Controlled**
• Euglycemic: initiate surveillance at 40 weeks.
• Not euglycemic: initiate surveillance at 36 weeks.

Medication Controlled
• If pregnancy is not otherwise complicated, initiate surveillance at 32–34 weeks.

Delivery
• 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.

www.coloradoguidelines.org

* American Diabetes Association, Carpenter and Coustan criteria.
** For more specific GDM nutrition information, visit the Gestational Diabetes Nutrition Guidelines at http://www.cdebe.state.co.us/pa/diabetes/tools.html.

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.
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.

### Gestational Diabetes Postpartum Follow-up

**6-12 Weeks Postpartum**

- **Normoglycemia**
  - Fasting: < 100 mg/dl
  - 2-hour: < 140 mg/dl

- **Pre-diabetes**
  - Fasting: ≥ 100 mg/dl and < 126 mg/dl
  - Impaired Fasting Glucose (IFG) or Impaired Glucose Tolerance (IGT)

- **Type 2 Diabetes Mellitus**
  - ≥ 126 mg/dl

### 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
  - ≥ 126 mg/dl

- **2-hour**
  - < 140 mg/dl
  - ≥ 140 mg/dl and < 200 mg/dl
  - ≥ 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.

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1. See Screening section in Gestational Diabetes Guidelines.