

# Gestational Diabetes



*Your life is our life's work.*

Christopher Hall, MD  
Mercy Clinic Obstetrics &  
Gynecology

# Objectives

1. Discuss the risk factors and pathophysiology of gestational diabetes.
2. Discuss the diagnosis, treatment, and complications of gestational diabetes during pregnancy.
3. Discuss future considerations for women with a history of gestational diabetes.

# Disclosures

- I have no financial agreements or personal conflicts of interests to declare.

# Pathophysiology

- Carbohydrate intolerance developing during the pregnancy.
- Related to the insulin receptor antagonism of Human Placental Lactogen, which is produced by the placenta

# Risk Factors

- Overweight (BMI  $>25$  kg/m<sup>2</sup>) and Obesity (BMI  $>30$  kg/m<sup>2</sup>)
- Ethnicity: African American, Latino, Native American, Asian American, and Pacific Islander
- Increasing maternal age
- History of gestational diabetes mellitus (GDM) in previous pregnancy
- History of fetal macrosomia (newborn weight  $>4,000$ g or 9 lbs)
- Family history of Type 2 Diabetes in 1<sup>st</sup>-degree relative
- Metabolic syndrome

# Diagnosis of GDM

- Screening for GDM is generally performed at 24 to 28 weeks gestation.
  - Consider earlier screening depending on risk-factors.
- Most obstetricians use the 2-step screening process
  - The American Diabetes Assoc. also notes that a hemoglobin A1c level can be used but shouldn't be used alone.
- First step is a 50g, 1-hour glucose tolerance test.
  - Threshold for abnormal 1-hour GTT varies (130-140 mg/dL).
- Second step is a 100g, 3-hour glucose tolerance test.

# Treatment Options

- Dietary modification with glucose monitoring
- Increasing aerobic exercise
- Medications
  - Insulin
  - Insulin
  - Insulin
  - Insulin
  - Insulin
  - Metformin
  - Glyburide

# Pregnancy Complications

- Maternal complications include pre-eclampsia and cesarean section.
- Fetal / newborn complications include macrosomia, neonatal hypoglycemia, hyperbilirubinemia, shoulder dystocia, and birth trauma.
- Increased risk of stillbirth / IUFD with poor glycemic control.



# Future Considerations

- Long-term risk factor for developing Type 2 Diabetes Mellitus, Heart disease, and Metabolic Syndrome
  - Screening with a 2-hour, 75g GTT at 1-3 months postpartum
- Life-style modifications

# References

- Gestational Diabetes Mellitus. Practice Bulletin No. 190. American College of Obstetricians and Gynecologists. Obstet Gynecol 2018;131: e49-64.
- “Endocrine Disorders.” Williams Obstetrics, 24<sup>th</sup> Ed. Robyn Horsager, et al. New York, NY: McGraw-Hill, 2015.

Questions?

Thank you!