

# Gestational Diabetes During Pregnancy

2012 - 2014

Missouri Pregnancy Risk Assessment Monitoring System (PRAMS)

**An estimated 7.4% of Missouri women were diagnosed with gestational diabetes during their pregnancies.**

This fact sheet describes gestational diabetes mellitus (GDM) diagnosed during pregnancy from 2012-2014, in Missouri.

### **Gestational Diabetes**

Gestational diabetes is a type of diabetes that occurs in pregnant women who did not have diabetes prior to becoming pregnant but who develop high blood sugar (glucose) levels during pregnancy.<sup>1</sup> It is estimated to affect 9.2 percent of all pregnancies and typically shows up in the middle of pregnancy.<sup>1</sup> Most doctors typically screen for

gestational diabetes between 24 and 28 weeks of pregnancy.<sup>1</sup> While the cause of gestational diabetes is still uncertain, the problem begins with insulin resistance. Insulin resistance is when the body's cells become unresponsive to the hormone insulin. As the baby develops and grows, hormones from the placenta interfere with the mother's insulin and make it harder for the mother to use insulin. Without enough insulin, sugar (glucose) can't make its way from the bloodstream and into the cells to be used as energy and builds up in the

blood at high levels. If untreated, high blood sugar can cause serious problems for both the mother and the baby.<sup>1</sup>

### **Who does Gestational Diabetes affect?**

Any woman can develop gestational diabetes; however, certain risk factors increase the chance. Risk factors for gestational diabetes include:

- Having previously given birth to a baby weighing more than 9 pounds.

- Previous pregnancies with gestational diabetes
- Parent or sibling has type 2 diabetes.
- Hormonal disorder called polycystic ovary syndrome (PCOS).
- Excess weight.
- Belonging to an ethnic group having increased risk for type 2 diabetes (African-American, Hispanic, Native American, South- or East-Asian or Pacific Island descent).
- Age over 25.

In Missouri, the Pregnancy Risk Assessment Monitoring System (PRAMS) provides the best opportunity to study the risk and prevalence of gestational diabetes during pregnancy. The PRAMS survey asks one question that reports if a woman was diagnosed with gestational diabetes during her pregnancy. For this fact sheet, women were counted as being diagnosed with gestational diabetes if they responded “yes” to the following question and did not respond elsewhere that they had diabetes prior to pregnancy:

1. “During your most recent pregnancy, were you told by a doctor, nurse or other health care worker that you had gestational diabetes (diabetes that started during this pregnancy)”?

### Gestational Diabetes During Pregnancy in Missouri

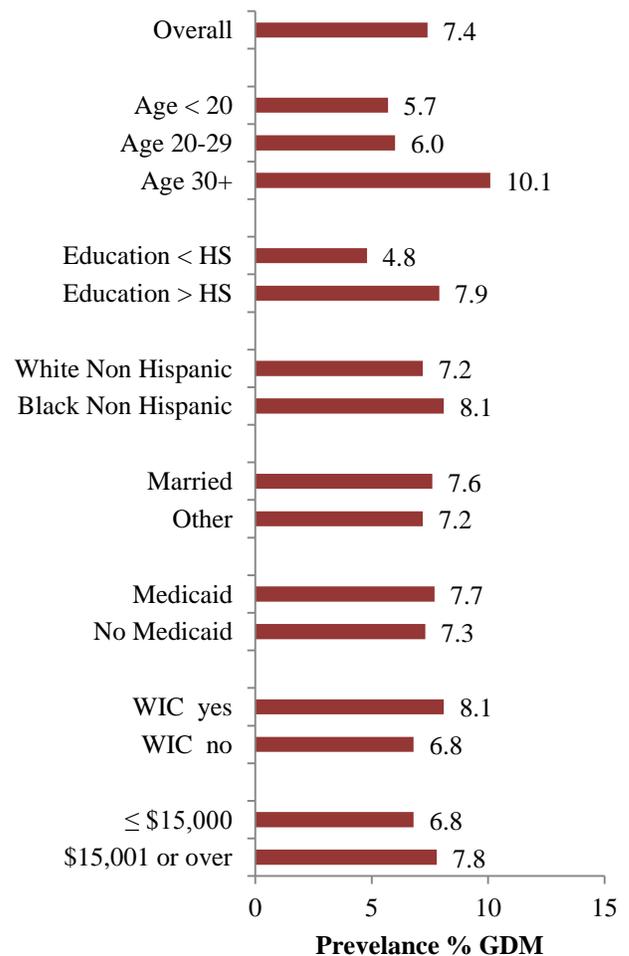
Figure 1 shows that overall, from 2012-2014, an estimated 7.4 percent of Missouri women reported having been diagnosed with gestational diabetes during pregnancy. Of these, 5.7 percent of pregnant women under the age of 20 were diagnosed with gestational diabetes, as were 6.0 percent of women between the ages of 20-29, and 10.1 percent of pregnant women 30 years of age or older.

Figure 1 also shows that the prevalence of gestational diabetes during pregnancy is more common among women who are:

- Over 30 years old.
- High school (HS) graduates.
- Currently enrolled in WIC services.
- Obese (Figure 2).

Women who are diagnosed with gestational diabetes come from all backgrounds. Over 6.0 percent of women in the lowest income bracket ( $\leq$ \$15,000 annual income) reported GDM, as did seven percent of women in the income bracket above (\$15,000 annual income), 7.5 percent of PRAMS respondents with an unintended pregnancy, and 7.7 percent of respondents who reported being enrolled in Medicaid prior to delivery (Figure 1).

**Figure 1. Prevalence of GDM by Maternal Characteristics, Missouri, 2012-2014**



Among the new mothers in Missouri who reported GDM during their pregnancies, 12.0 percent were obese (95% CI: 9.4-14.6), compared to 5.5 percent (95% CI: 4.2-6.8) of women who were in the normal body mass index (BMI) range.

**Figure 2. Prevalence of GDM among Missouri mothers, by BMI, 2012-2014**

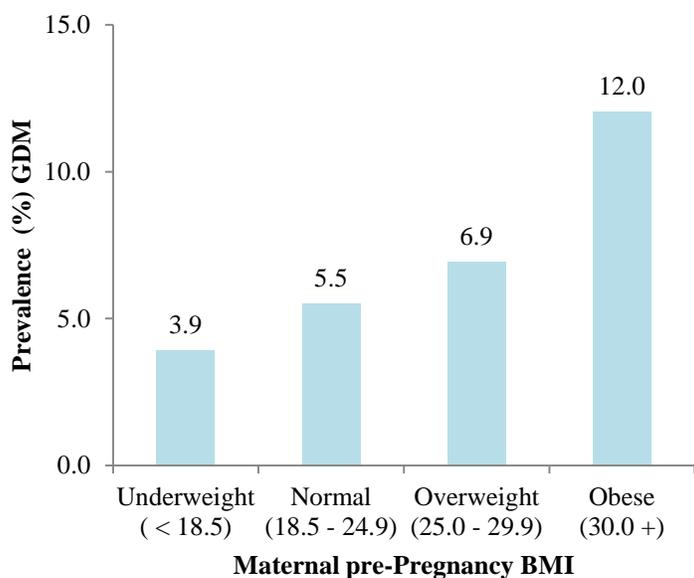


Figure 2 indicates that gestational diabetes is more prevalent among mothers with higher pre-pregnancy BMI (overweight or obese) than mothers with lower pre-pregnancy BMI (underweight or normal). This is consistent with current research literature and the professional consensus of the relationship between BMI and gestational diabetes.

### Treatment and Management

GDM is a significant but manageable public health problem. The U.S. Centers for Disease Control and Prevention (CDC) estimates that as many as 9.2 percent of pregnant women will be diagnosed with gestational diabetes and notes that providers most often test for it during weeks 24-28 of pregnancy.<sup>2</sup>

### Recommendations

The American College of Obstetricians and Gynecologists (ACOG) has issued a practice bulletin on the screening and management of gestational diabetes.

- Maintain a two-step diagnostic approach, involving 2 separate glucose level tests, between weeks 24-28 of pregnancy.
- Propose new performance measures including nutritional counseling by a registered dietitian,

surveillance of blood glucose levels to ensure pregnant women maintain control over their blood sugar and are screened for type 2 diabetes after their babies are born.<sup>2</sup>

The risk for developing type 2 diabetes after a pregnancy can be reduced with proper diet and weight management. Accordingly, the American Diabetes Association recommends that women work together with their health care provider team (doctor, obstetrician, nurse-educator and dietitian) to help manage their blood glucose levels and maintain a healthy pregnancy and healthy start for the baby.

Additionally, in 2014 (reaffirmed in 2015), the U.S. Preventive Services Task Force (USPSTF) recommended screening for GDM in asymptomatic pregnant women after 24 weeks of gestation, and concluded that current evidence is insufficient to assess the balance of benefits and harms of screening for GDM in asymptomatic pregnant women prior to 24 weeks of gestation.<sup>3</sup>

### Tips for Mothers Managing GDM

1. Go to all your prenatal visits.
2. Make healthy food choices.
3. Stay physically active.
4. Follow your health care provider's recommendation for controlling blood sugar.
5. Get tested for diabetes 6-12 weeks after your baby is born; then every 1-3 years.

Source: Centers for Disease Control and Prevention

## Resources

American Diabetes Association: 800-342-2383

National Diabetes Information Clearinghouse: 800-860-8747 OR  
TTY: 866-569-1162

Joslin Diabetes Center, <http://www.joslin.org/info/Gestational-Diabetes.html>

---

### Missouri Resources

Missouri Department of Health and Senior Services, Diabetes Prevention and Control,

<http://health.mo.gov/living/healthcondiseases/chronic/diabetes/index.php>

---

### National Resources

Centers for Disease Control and Prevention, Gestational Diabetes,  
<https://www.cdc.gov/pregnancy/diabetes-gestational.html>

National Diabetes Education Program, <https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes/gestational>

National Association of Chronic Disease Directors,  
<http://www.chronicdisease.org/?page=31GeneralResources>

American College of Obstetricians and Gynecologists,  
<http://www.acog.org>

March of Dimes Foundation,  
[www.marchofdimes.com/pregnancy/gestational-diabetes.aspx](http://www.marchofdimes.com/pregnancy/gestational-diabetes.aspx)

---

### Data Resources

Missouri Pregnancy Risk Assessment Monitoring System,  
<http://www.health.mo.gov/data/prams/index.php>

National Health and Nutrition Examination Survey (NHANES),  
<http://www.cdc.gov/nchs/nhanes.htm>

Behavioral Risk Factor Surveillance System (BRFSS),  
<https://www.cdc.gov/brfss/>

Centers for Disease Control and Prevention,  
Diabetes Data and Trends,  
<https://www.cdc.gov/diabetes/basics/gestational.html>



## References

1. American Diabetes Association. (2013, July 2). What is Gestational Diabetes? Retrieved November 15, 2013, <http://www.diabetes.org/diabetes-basics/gestational/what-is-gestational-diabetes.html>
2. American College of Obstetricians and Gynecologists Committee on Practice Bulletins—Obstetrics. (2013). ACOG practice bulletin. Clinical management guidelines for obstetrician-gynecologists. Number 137, August 2013 (replaces practice bulletin number 30). Gestational Diabetes Mellitus. *Obstetrics & Gynecology*, 122, 406-416.
3. U.S. Preventive Services Task Force (USPSTF). (2014). Screening for Gestational Diabetes Mellitus. Retrieved on July 10, 2014, from <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/gestational-diabetes-mellitus-screening>

This fact sheet was authored by Brittney Kramer, Venkata Garikapaty, PhD, MPH (MO-PRAMS), and David McBride, PhD (MO-PRAMS), and updated by Mary Mosley (MO-PRAMS) and Rebecca Chitima-Matsiga (MO-PRAMS)

For more information, please contact: Dr. Venkata Garikapaty, MO-PRAMS Director, Venkata.Garikapaty@health.mo.gov

Missouri Department of Health and Senior Services Office of Epidemiology  
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER  
Services provided on a nondiscriminatory basis.

