

Diabetes Risk after Gestational Diabetes

What is the link between Gestational Diabetes Mellitus and Diabetes?

Gestational diabetes mellitus (GDM) is a form of diabetes that is diagnosed during pregnancy and increases risk of complications during pregnancy and birth for both mother and fetus. While GDM may go away after pregnancy, women who have had GDM are seven times more likely to develop type 2 diabetes than women who have not had GDM in pregnancy. The children of pregnancies affected by GDM may also have a greater risk for obesity and type 2 diabetes.

What is the prevalence of GDM?

GDM affects at least 7 percent[1] and possibly as many as 18 percent of pregnancies in the United States. Using new diagnostic criteria, an international, multicenter study of gestational diabetes found that 18 percent of the pregnancies were affected by gestational diabetes.[2]

Who is at risk for developing diabetes after GDM?

- Immediately after pregnancy, 5 to 10 percent of women with GDM are found to have diabetes, usually type 2.[1]
- Women with a history of GDM have a 35 to 60 percent chance of developing diabetes in the next 10 to 20 years.[1]
- Non-Caucasian and Hispanic women with a history of GDM appear to be at particularly high risk for developing diabetes.[3]
- Children born from pregnancies affected by GDM may be at increased risk for obesity and type 2 diabetes compared to other children.[4, 5]

Can women with a history of GDM lower their future risk for diabetes?

Yes, women with a history of GDM can lower their risk for type 2 diabetes later in life.

The Diabetes Prevention Program (DPP) showed that people at risk for type 2 diabetes were able to lower their risk for developing diabetes by weight loss through lifestyle changes – by being more active and eating healthy foods. Among DPP participants with a history of GDM, both lifestyle changes and metformin (a blood glucose lowering medication) lowered their risk for type 2 diabetes by 50 percent or more.[6] A follow-up study showed that the people in the DPP who lost weight by being active and eating healthy foods or who took metformin, still had a reduced risk for type 2 diabetes 10 years later.[7]

What can women with a history of GDM do to delay or prevent type 2 diabetes?

Women who have had GDM need to:

- Get tested for diabetes 6 to 12 weeks after their baby is born, then at least every 3 years.
- Talk to their doctor about blood glucose screening before future pregnancies.
- Discuss their history of GDM with all health care professionals and their child's pediatrician.
- Breastfeed their baby, if possible. It may lower their child's risk of being overweight or obese, which is a risk factor for type 2 diabetes.
- Reach their pre-pregnancy weight six to 12 months after the baby is born. Then, if still overweight, work to lose at least 5 to 7 percent (10 to 14 pounds for a person who weighs 200 pounds) of body weight slowly, over time, and keep it off.
- Make healthy food choices such as fruits and vegetables, fish, lean meats, dry beans and peas, lentils, whole grains, and low-fat or skim milk and cheese. Choose water to drink.
- Choose smaller portions of foods to help reach and stay at a healthy weight.
- Be active at least 30 minutes, five days per week to help burn calories and lose weight.
- Help their children lower their risk for type 2 diabetes by making healthy food choices, being physically active at least 60 minutes a day, and staying a healthy weight.
- Encourage their family to follow a healthy lifestyle and stay at a healthy weight by eating small portions of healthy foods and moving more.

How can the National Diabetes Education Program help?

The National Diabetes Education Program's (NDEP) **Small Steps. Big Rewards. Prevent Type 2 Diabetes.** campaign offers materials that can help women with a history of GDM take steps to prevent or delay type 2 diabetes and help their children lower their risk for the disease:

- It's Never Too Early To Prevent Diabetes. A Lifetime of Small Steps for a Healthy Family. a tip sheet for women who have had GDM (available in English and Spanish).
- Your GAME PLAN to Prevent Type 2 Diabetes. Information for Patients. a
 booklet to help women and their families make healthy food choices and be
 more physically active to prevent or delay type 2 diabetes (available in English
 and Spanish).
- Tips for Kids: How to Lower Your Risk for Type 2 Diabetes a tip sheet for children at risk for type 2 diabetes.
- Tips for Teens: Lower Your Risk for Type 2 Diabetes a tip sheet for teens at risk for type 2 diabetes (available in English and Spanish).
- Consejos para jóvenes: Disminuye tu riesgo de desarrollar la diabetes tipo 2/Tips for Teens: Lower Your Risk for Type 2 Diabetes) – a bilingual tip sheet for teens at risk for diabetes.

Contact the NDEP to get copies of these materials and to learn more about diabetes prevention by visiting www.YourDiabetesInfo.org or calling 1-888-693-NDEP (1-888-693-6337).

References:

- **1.** Centers for Disease Control and Prevention: National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.
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- **3.** England LJ, Dietz PM, Njoroge T, et al.: Preventing type 2 diabetes: public health implications for women with a history of gestational diabetes mellitus. Am J Obstet Gynecol 2009; 200(4): 365 e1-8.
- **4.** Hillier TA, Pedula KL, Schmidt MM, Mullen JA, Charles MA, Pettitt DJ: Childhood obesity and metabolic imprinting: the ongoing effects of maternal hyperglycemia. Diabetes Care 2007; 30(9): 2287-92.
- **5.** Silverman BL, Metzger BE, Cho NH, Loeb CA: Impaired glucose tolerance in adolescent offspring of diabetic mothers. Relationship to fetal hyperinsulinism. Diabetes Care 1995; 18(5): 611-7.
- **6.** Diabetes Prevention Program Research Group: Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med 2002; 346(6): 393-403.
- **7.** Knowler WC, Fowler SE, Hamman RF, et al.: 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. Lancet 2009; 374(9702): 1677-86.

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