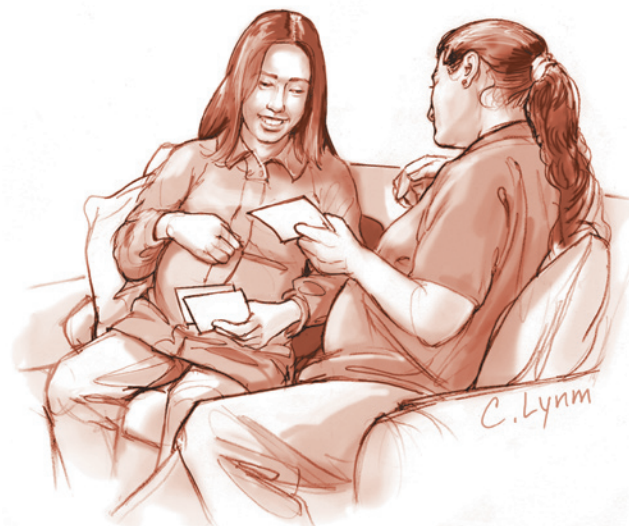


# Pregnancy and Diabetes

**D** **diabetes**, a disorder that changes how the body deals with **glucose** (sugar), is divided into two main types: type 1 and type 2. In type 1 diabetes, which usually occurs in young persons, the pancreas does not produce enough insulin. Type 2 diabetes is much more common and affects adults and children. Insulin resistance, not a shortage of insulin, is the major problem with type 2 diabetes. It is associated with obesity, heart disease, vascular disease, and other health problems. Women who have never had diabetes before but who develop high blood glucose levels during pregnancy are said to have **gestational diabetes**. This requires evaluation and treatment during pregnancy. It usually goes away after pregnancy but may return in subsequent pregnancies and may precede development of type 2 diabetes years later.

The June 4, 2008, issue of JAMA includes an article about a woman with diabetes who is considering pregnancy.



## RISKS OF PREGNANCY FOR WOMEN WITH DIABETES

- Fetal **macrosomia** (birth weight heavier than average)
- Neonatal hypoglycemia (low blood glucose in the newborn)
- Higher chance of **shoulder dystocia** (difficult birth due to the fetal shoulder becoming trapped under the mother's pelvic bone)
- Congenital malformations (birth defects)
- Higher risk of **cesarean delivery** (requiring an operation through the abdomen to deliver the baby) or operative vaginal delivery (forceps or vacuum extraction)
- Higher risk of delivering a stillborn infant

## MANAGING DIABETES WHILE YOU ARE PREGNANT

It is important to control diabetes before planning a pregnancy, so prenatal care for women with diabetes should begin before becoming pregnant. Optimum blood glucose management reduces risk to the mother and to the fetus. Managing other chronic conditions that often accompany diabetes (such as heart disease, high blood pressure, and peripheral vascular disease) is also important to maximize chances of delivering a healthy infant and reduce pregnancy-related complications in the mother. Frequent blood glucose checking is generally required. Some medications that women with diabetes take are not recommended for use while pregnant. Your doctor may adjust your diabetes medications, blood pressure medications, and any blood-thinning medications. Always discuss any medications (including over-the-counter medicines or herbal treatments) with your doctor when planning a pregnancy. Women with type 2 diabetes may require insulin when they become pregnant, even if they did not take insulin before pregnancy. Pregnant women who are already taking insulin (including those who use an insulin pump) may need adjustment of their insulin doses. Women with gestational diabetes may also require insulin during pregnancy.

## FOR MORE INFORMATION

- American Diabetes Association  
[www.diabetes.org](http://www.diabetes.org)
- Women's Health Information Center  
[www.womenshealth.gov](http://www.womenshealth.gov)
- American College of Obstetricians and Gynecologists  
[www.acog.org](http://www.acog.org)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at [www.jama.com](http://www.jama.com). Many are available in English, Spanish, and French. A Patient Page on prenatal care was published in the January 7, 2004, issue; one on women's health was published in the March 22/29, 2006, issue; one on type 1 diabetes was published in the September 26, 2007, issue; and one on childbirth was published in the May 4, 2005, issue.

Sources: National Women's Health Information Center; American Diabetes Association; American College of Obstetricians and Gynecologists

Janet M. Torpy, MD, Writer

Cassio Lynn, MA, Illustrator

Richard M. Glass, MD, Editor

The JAMA Patient Page is a public service of JAMA. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA suggests that you consult your physician. This page may be photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, call 312/464-0776.

**JAMA**  
COPY FOR  
YOUR PATIENTS