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All About Diabetes and Pregnancy

What women with diabetes need to know about staying healthy before, during, and after pregnancy

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Just 50 years ago, women with **type 1 diabetes** were generally advised against having a baby. "If you did get pregnant, you'd spend most of the pregnancy in the hospital," says Marina Chaparro, RDN, CDE, a dietitian and certified diabetes educator at Joe DiMaggio Children's Hospital in Florida and founder of the family nutrition

program Nutrichicos. Fortunately for Chaparro, who has type 1, times have changed. While she had to make a few adjustments during her pregnancies—she gave birth to her second child in late 2018—she and her babies were never in any serious danger.

The key, she learned, is to plan far ahead. While diabetes treatment has evolved a lot over the years, the basics of development in the womb haven't.

"The major organs are formed very early in pregnancy, just five to eight weeks after your last menstrual period," says ob-gyn Linda Barbour, MD, MSPH, a professor of medicine, director of the OB Diabetes Clinic at the University of Colorado Anschutz Medical Campus, and past chair of the American Diabetes Association's Pregnancy and Reproductive Health Council. During that brief window, your baby's neural tube, which includes the brain and spinal cord, forms. So does the heart. "Most women don't even know that they're pregnant yet."

Preconception

Because crucial development happens so early, talking to your health care provider at least a few months before you start trying to conceive is one of the most important things you can do to ensure a healthy pregnancy. The reason: If your **A1C** is 10 percent or higher, you have about a 1 in 5 chance of having a baby with a malformation such as a heart, kidney, brain, or spinal cord defect, Barbour says. Get your blood glucose in target range before you conceive, however, and that changes. If your A1C is 6.5 percent or less, you're no more likely to have a baby with a birth defect than a woman without diabetes, according to Barbour.

Worried that your A1C is too high? Ask your doctor, diabetes educator, or a registered dietitian how you can make changes to your diet, exercise, and medication regimen to bring it down. And no matter what your A1C is, start taking prenatal vitamins with folic acid now to further lower your child's risk of birth defects.

If you don't have diabetes but have risk factors for **type 2**, now is the time to be screened. The 2019 Standards of Medical Care in Diabetes from the American Diabetes Association (ADA) recommends testing for undiagnosed diabetes during the first prenatal visit. Not sure if you're at risk? **Take the type 2 risk test.**

Prepregnancy is also a smart time to make sure your weight is within a healthy range. Obesity ups your risk for complications, so if you're overweight, focus on weight loss before you conceive. Your ob-gyn or endocrinologist should also test your thyroid function. "The risk of thyroid disorders is higher in women with diabetes, and proper levels of thyroid hormone are important for the IQ of the fetus," says Jeffrey Faig, MD, clinical professor of obstetrics and gynecology at Stanford University School of Medicine and director of the Endocrine Disorders in Pregnancy Program at Lucile Packard Children's Hospital Stanford.

Next stop: the ophthalmologist. **Retinopathy** can worsen during pregnancy, so it helps to get it in check first. If you have signs of retinopathy, have your eyes rechecked each trimester. Diabetic kidney disease (**nephropathy**) can also worsen, so make sure you've been screened prior to pregnancy.

Chaparro adds that this is also a great time to make sure you have the right pregnancy providers lined up. "I kind of interviewed my ob-gyn and asked, 'How many people have you seen with type 1 diabetes?' " If the doctor doesn't have a lot of expertise in this area, consider looking for one who does and/or a perinatologist (a maternal-fetal medicine specialist) who has treated women with diabetes.

First Trimester

Congratulations—you're pregnant! Whatever you do, don't stop taking your diabetes medication unless a specialist has switched you to a different one. "Diabetes medications [other than insulin] might not be officially approved for use during pregnancy, but none of them have been associated with major malformations," says Barbour. "It's much worse to stop your medication and have your sugars suddenly increase."

That said, insulin is the first-choice drug for blood glucose management during pregnancy—for those with all types of diabetes, according to the ADA's Standards of Medical Care in Diabetes. Because insulin doesn't cross the placenta, it's the safest option for the developing baby. Plus, oral diabetes meds generally aren't enough to overcome insulin resistance in pregnant women with type 2 diabetes. That's why doctors usually switch women with type 2 to insulin even if their preconception blood glucose is well managed on a different drug.

Whether you're new to insulin or have been on it since childhood, you're going to need to keep tweaking your dose. "In the first trimester, if you have type 1, your insulin needs might actually decrease," says Chaparro.

Adjusting your dose is key—you risk hypoglycemia otherwise. That's dangerous to you, of course, but regular bouts of hypoglycemia can also be harmful to your baby's developing brain, says Barbour.

Also making lows more likely: Your ideal blood glucose during pregnancy is lower than what you might be used to because high blood glucose poses such a great risk to the baby. The ADA's Standards of Medical Care in Diabetes suggests aiming for a fasting glucose level below 95 mg/dl, a reading of under 140 mg/dl an hour after eating, and a reading of under 120 mg/dl two hours after eating. If you're having trouble accomplishing that, work with your doctor or diabetes educator to review your personal blood glucose targets and develop a plan for managing your highs and lows.

In order to make sure your blood glucose stays as close to target range as possible, monitor your blood glucose when you wake, before you eat, and one or two hours after meals. Ask your doctor or diabetes educator for specific guidance.

The role of continuous glucose monitors (CGMs) in pregnancy is still being evaluated, so stick with a blood glucose meter when making treatment adjustments, such as dosing insulin. Nonetheless, a real-time CGM will monitor your glucose 24-7, and if it drops while you're sleeping an alarm will wake you. That's important—especially for women with type 1, who are more likely to become hypoglycemic, says Barbour.

A diabetes educator or registered dietitian can help you adjust your diet. For the most part, the same well-balanced eating plan that was recommended prepregnancy still stands, but an expert can help you make some tweaks or start you on a new plan if you were previously off course.

Also important: You're not exactly "eating for two." In fact, during the first trimester, you don't need any extra calories at all, says Chaparro.

While blood glucose and nutrition are probably your main focus, start taking steps to prevent preeclampsia, a late-pregnancy complication that's associated with very high blood pressure and organ damage. All women with diabetes are considered at high risk for preeclampsia, but taking a baby aspirin daily (after the 12-week mark) will lower your risk, according to the American College of Obstetricians and Gynecologists.

Second Trimester

The morning sickness and fatigue you might have had during the first trimester will start to lift, which means you should be able to eat a little more. That's largely a good thing—just don't overdo it. Most women need to eat only 300 extra calories a day during the second and third trimesters. "That's not a lot," says Chaparro. "One slice of whole-grain bread with some almond butter will do it."

Now that you're feeling a bit better, you'll be able to move more, too. "Physical activity will help your stress level, blood sugar, and make labor easier, so stay as active as possible," says Chaparro. Whether you take a short walk 15 minutes after a meal or do more intense exercise is up to you, provided you were previously used to that level of activity. Shoot for at least 150 minutes of moderate activity, such as brisk walking, per week.

A few caveats, which apply to all pregnant women: Now isn't the time to start training for your first marathon. Avoid contact sports, activities that put you at risk for falls (such as riding a bike outside), anything that raises your temperature too high (think hot yoga or running outdoors on a sweltering day), and heavy lifting (switch to lighter weights). When in doubt, consult your doctor.

While it's natural to put on weight, aim to gain no more than 25 to 30 pounds during your pregnancy if you started out with a normal body mass index (BMI, a ratio of weight to height used to estimate how close a person is to a healthy weight). If you're overweight or obese, aim to put on less.

Obesity further raises your risk for pregnancy complications, including preeclampsia, stillbirth, and having a baby that's very large. Studies have also found that children of mothers who were obese during pregnancy are more apt to develop heart disease, asthma, and type 2 diabetes.

As your baby grows, so will your insulin requirements. "Being pregnant creates more insulin resistance because of progesterone and other hormones that are needed for the baby," says Chaparro.

This trimester is also when a number of important screening tests are done: At 18 weeks, you'll have a fetal echocardiogram to make sure the baby's heart is healthy. You'll also get regular ultrasounds, including the anatomy scan (at 18 to 22 weeks), which provides a detailed look at all your baby's parts.

Third Trimester

You may end up needing as much as double your usual insulin dose by late in the third trimester. “I usually require about 30 units of total insulin every day, but by the end of my pregnancies I needed about 80 units,” says Chaparro. Keep working closely with your doctor to adjust your medication as needed.

Starting at 28 weeks, your doctor will probably recommend a growth scan every four weeks. Your baby’s size is a major concern because women with diabetes are more likely to have a baby that’s larger than normal (fetal macrosomia). This can complicate a vaginal delivery. The baby’s shoulders can get stuck in Mom’s pelvis, making a C-section necessary. Babies that are very large at birth are also more likely to become obese during childhood and develop risk factors for heart disease, stroke, and type 2 diabetes.

In addition to monitoring your baby’s size, growth scans look at amniotic fluid, which surrounds the growing fetus in the uterus. It increases when a mother’s glucose is not well-managed, because the fetus is trying to flush out all that glucose. Too much amniotic fluid can trigger preterm labor, so if your level is high, you may need additional testing.

At 30 to 32 weeks, you’ll also start getting nonstress tests, possibly twice a week, says Barbour. During one such test, you’ll wear a monitor and count your baby’s movements. You might also have what’s known as a biophysical profile, which is a combination of a nonstress test and an ultrasound.

Women with diabetes are often induced earlier, at 37 to 38 weeks. Inducing labor slightly early (full term now officially starts at 39 weeks) reduces the risks to mother and baby, including the chance of stillbirth—especially if the baby is showing signs of distress or the mother isn’t reaching her blood glucose targets or has preeclampsia. “We strongly encourage [women with diabetes] not to go beyond 39 weeks,” says Barbour.

Postpartum

Right after you give birth—ideally at a hospital with a good neonatal intensive care unit in case your baby requires any special monitoring—a pediatrician will check your baby for low blood glucose. “The baby was getting sugar from Mom [and making extra insulin to compensate] and needs time to readjust,” says Faig. If the baby’s glucose level is too low, a sugar solution is an easy fix.

Meanwhile, your insulin needs are about to decline—drastically—which puts you at risk for hypoglycemia. “The moment the placenta is out, your insulin needs drop,” says Chaparro. “Within a few hours, you might be back to prepregnancy levels.”

You’ll need to see a health care provider within two weeks for a checkup, says Faig. If you have type 2 and weren’t previously using insulin, you might be able to switch back to an oral medication, though some women prefer to stay on insulin longer because it doesn’t get into the breast milk.

Whatever treatment you opt for, “breastfeeding is strongly recommended,” says Faig. “It helps lower Mom’s blood sugar, plus children who are exclusively breastfed have a lower incidence of type 2.” Not only that, but studies have found that mothers with gestational diabetes have a lower risk of developing type 2 in the future if they breastfeed.

The catch, however, is that nursing requires a lot of energy. “It’s like you’re running 5Ks every day,” says Chaparro. To prevent dangerous lows, Faig recommends checking your glucose before you breastfeed and, unless it’s already high, eating a snack.

Also know that postpartum depression is fairly common in women with diabetes. “You’ve had to live with a challenging chronic condition and worry about your own health. Now you also have to worry about a baby,” says Barbour. Combine that with lack of sleep and major hormonal shifts, and you have a recipe for a potentially serious mood disorder. If your “baby blues” don’t improve after two weeks, or if you’re overcome by feelings of sadness or have thoughts of harming yourself or your baby, tell your doctor or a mental health professional right away so you can get treated and start feeling better.

While this might all seem overwhelming, you don’t have to let diabetes interfere with your dreams of having a family. “For women with diabetes, having a baby is a lot more work than it is for women who don’t have diabetes,” says Faig. “But if you do the work, you can expect to have just as good an outcome.”