

# planning to conceive?



Women with diabetes can deliver healthy babies.  
Follow the below tips for a safe and healthy pregnancy.

## before conceiving:

### 1 | talk to your doctor and healthcare team

- Your endocrinologist, dietitian, nurse and obstetrician can help you reach your goals safely
- Your doctor may suggest getting your eyes and kidneys checked before conception.
- If you have high blood pressure or high cholesterol, your doctor may discontinue or change some of your medications
- If you were on oral diabetes medication, you will need to switch to insulin
- Continue using reliable birth control until your doctor gives you the green light for pregnancy

### 2 | focus on blood sugar control

- Your baby's brain, spinal cord and heart begin to form soon after conception, even before you know you are pregnant
- Poor blood sugar control during the earliest days of pregnancy increases your baby's risk of birth defects by as much as 2-3 fold

## the good news!

- If you take good care of yourself, you can make the risks for you and your baby almost as low as if you didn't have diabetes
- Commit to ultra-vigilant care several months before conceiving
- Aim to reach an A1C <7% prior to conception to lower the chance of birth defects in your baby

### 3 | remember healthy eating

- Discuss a specialized diet for both preconception and during your pregnancy with your dietitian
- Eat a balanced diet including plenty of vegetables, fruit, dairy, lean meats and whole grains
- At least 3 months preconception and up until 12 weeks post-conception, supplement with a multivitamin containing 5 mg of folic acid
- Continue to supplement with a multivitamin containing 0.4-1.0 mg of folic acid throughout your pregnancy, during the first 6 weeks postpartum and as long as breastfeeding continues
- Prenatal vitamins and iron supplements can interfere with thyroid medications. If you're taking thyroid medications, do not take prenatal vitamins within 2 hours of your thyroid medication.

### 4 | include physical activity

- After your preconception appointment, get your doctor's OK to exercise
- Choose activities you enjoy. Be sure not to overexert yourself.
- Aim for 30 minutes most days for the week
- Check your blood sugar before any activity, especially if you take insulin. You may need a snack before exercising to prevent a low blood sugar

### 5 | know what is off limits

- Skipping doses of insulin
- Drinking alcohol
- Smoking/illegal drug use

## what should I eat?

Choose foods that do not cause major fluctuations in your blood sugars. Eat foods that are packed with vitamins and minerals more often and eat foods that are high in empty calories less often.

### Be sure to include:

- ✓ Plenty of vegetables
- ✓ 3 carbohydrate choices at each meal (e.g. fruit, grains and starch, milk & alternatives)
- ✓ Low GI foods (e.g. whole wheat bread, legumes, barley, high fibre cereals)
- ✓ 2-3 servings of fruit per day
- ✓ 2-3 servings of low-fat milk and alternatives
- ✓ 5oz fish/week
- ✓ Legumes and nuts
- ✓ Healthy oils (canola, olive, sunflower)
- ✓ Plenty of water

### Limit:

- ✓ High GI foods (e.g. French fries, white bread, pretzels)
- ✓ Sugary juice, drinks and pop
- ✓ Snacks with added sugar (e.g. chocolate, cookies, candy)
- ✓ Foods high in saturated fat (e.g. potato chips, baked goods)
- ✓ Shark, swordfish & fresh tuna should be limited to 6oz/month (canned tuna is OK)
- ✓ Avoid soft cheese, patés and organ meats
- ✓ Raw & undercooked meats (sushi, undercooked BBQ)
- ✓ Fruits and vegetables should be washed well
- ✓ Limit caffeine to 400-450 mg/day (around 2 cups of coffee)
- ✓ Avoid alcohol

## uncontrolled blood sugars during pregnancy can cause:

### 1 | complications for mom

High blood pressure, C-section, worsening of diabetes complications (i.e. progression of retinopathy and kidney disease).

### 2 | complications for baby

Premature birth, malformation, low blood sugars at birth

### 3 | miscarriage and stillbirth

Main concern of pregnancy and diabetes.

### 4 | high birth weight

High blood sugars can cause excess weight gain in your baby. This puts them at increased risk for obesity and type 2 diabetes in the future.

## appropriate weight gain for pregnancy

If you have a BMI of 27 or higher, achieving a healthy body weight (i.e. BMI 18.5-24.9) before conceiving will reduce the risk of complications during pregnancy. However, it is not recommended that you try to lose weight after conception because restricting caloric intake may affect your baby's development. See pg 3 for sample meal plans.

Pre-pregnancy BMI	Recommended Total Weight Gain Range
18.5-24.9	11.5-16.0 kg (25.0-35.0 lbs)
25.0-29.9	7.0-11.5 kg (15.0-25.0 lbs)
30.0	5.0-9.0 kg (11.0-20.0 lbs)

## very low/high blood sugars

- During pregnancy, normal hormones that react to very low blood sugars (<4.0mmol/L) are less sensitive
- Pregnant women with type 1 diabetes in their first trimester may be at high risk of hypoglycemia, especially during the middle of the night.
- Later in pregnancy, placental hormones can cause insulin resistance, resulting in high blood sugars
- Unstable glycemic control can lead to increased risk of maternal seizures and delivering a baby that is heavier than usual
- Increased nutritional needs, insulin resistance and very high blood sugars can cause starvation ketosis and diabetic ketoacidosis (DKA) in women with type 1 diabetes.
- Starvation ketosis and DKA occurs when the body cannot use and take in glucose into cells for energy. This causes the body to breakdown fat instead, leading to overproduction of ketones, which makes the blood very acidic.
- When the blood is too acidic, it can cause significant brain damage to the baby and/or stillbirth
- Talk to your doctor or diabetes educator about testing your ketone levels during your pregnancy

## glycemic targets:

It is recommended that you check your blood sugar  $\geq 4$  times per day both before and after meals. During your pregnancy, it is also important to test your blood sugar in the middle of the night occasionally because there is an increased risk of having low blood sugars at this time. Ask your doctor if you need to test more than this.

	A1C	fasting blood sugar before meals	Blood Glucose 1 hour after eating	Blood Glucose 2 hours after eating
Glycemic Targets	$\leq 7.0\%$	less than 5.2 mmol/L	less than 7.8 mmol/L	less than 6.7 mmol/L

## the ups & downs of insulin needs during pregnancy

The range of change in insulin needs will vary from woman to woman. A larger weight gain will be associated with a larger increase in insulin requirements. Discuss *your* needs with your doctor or diabetes educator.

Weeks 3-7	Weeks 7-15	Weeks 20-36	Weeks 36+
Increase	Decrease *monitor for hypoglycemia	Increase *especially weeks 28 to 32	Decrease





## sample meal plan

Meal	Sample #1 (approximately 1600 kcal)	Sample #2 (approximately 1550 kcal)
Breakfast	Fruit smoothie: - 1 cup frozen blueberries - 1 cup 1% milk  - 1 boiled egg	- ½ cup All Bran cereal - ¼ cup mixed nuts - 1 cup 1% milk - 1 cup cantaloupe
Lunch	Tuna wrap: - 1 large whole wheat tortilla - 1 cup canned tuna - 1 cup green pepper slices - 1 cup romaine lettuce  - 1 cup celery sticks - ½ medium banana - water	Chicken sandwich: - 2 slices whole grain bread - 75g chicken breast - 1 tsp non-hydrogenated margarine - 1 cup baby spinach  - 1.5 cup mixed vegetables (carrots, cucumber, celery) - 1 cup of grapes - water
Dinner	- 1 medium potato - 1 cup of carrots - 1 cup of broccoli - 75g grilled chicken - 2 small plums - water	- 75g grilled salmon - ½ cup brown rice - ½ cup carrots - ½ cup peppers - ¾ cup low-fat plain yogurt - water
Snack Ideas	- 4 whole grain crackers + 50 g low-fat cheese (174 Kcal) - 4 whole grain crackers + 1 tbsp peanut butter (173 Kcal) - ¾ cup low-fat yogurt + ¼ cup mixed nuts (326 Kcal) - 1 medium apple + 50g low-fat cheese (158 Kcal)	

Note: You may need more or less food based on your pre-pregnancy weight and how far along you currently are in your pregnancy. Depending on which trimester you currently are in, incorporate some of above snack ideas to healthily increase your caloric intake. Please talk to your dietitian to determine which amounts are right for you and/or for more snack ideas.

### how much should I eat?

Many people think they should be eating for two when they're pregnant but you actually don't have to eat a lot more food than usual to support a pregnancy. What's important is making healthy choices and eating regularly. You should be eating "twice as healthy" not "twice as much"!

### surprise!

- If you accidentally get pregnant, get your blood sugars normalized as soon as possible
- Take all the steps you would have taken had you been able to prepare for the pregnancy

### trouble conceiving?

- If conception doesn't occur within a year, you and your partner's fertility should be assessed
- If you have PCOS, your doctor may suggest using metformin to induce ovulation and increase chance of fertility

Extra Calories Required by Trimester		
First Trimester (weeks 1-12)	Second Trimester (weeks 13-26)	Third Trimester (weeks 27+)
100	200-300	200-300