



## **GESTATIONAL DIABETES – HEALTHY EATING**

### **WHAT IS GESTATIONAL DIABETES?**

Gestational diabetes is a type of diabetes that occurs during pregnancy. It is the inability to maintain blood sugars within the normal range. Gestational diabetes is caused by the increase in hormones in the system which affects how well insulin removes sugar from the blood to be used as fuel for the body. Once baby is born, blood sugars should return to normal but the risk of developing Type 2 diabetes increases.

### **WHAT CAN I DO TO CONTROL MY SUGARS?**

Like other types of diabetes, diet plays a very important role. Balanced meals and snacks with adequate portion sizes can help stabilize blood sugars and keep them within the specified range.

Understanding how foods affect the blood sugars is helpful. Foods are divided into either **CARBOHYDRATES, PROTEIN** or **FAT**. Each component affects the blood sugars differently:

#### **CARBOHYDRATES:**

- Sources of carbohydrates include – sugar (sweets, candies, honey), fruit and fruit juices, starchy vegetables, milk and yogurt, breads, cereals and other grains.
- Carbohydrates are the **BEST** source of fuel for the body (especially the brain) BUT **too much** at any one meal or snack will cause blood sugars to spike.
- Try to spread out carbohydrate intake throughout the day into 3 meals and 3 snacks
- **Over restricting** carbohydrates can lead to complications during pregnancy.
- Choose **Low Glycemic Index** carbohydrates (refer to Glycemic Index), including those higher in fibre. This helps decrease the spike of blood sugar levels.
- Avoid products high in added sugar or honey, and refined white flour

#### **PROTEINS:**

- Sources of protein include eggs, meat, fish (including canned light tuna/salmon), tofu, legumes, cheese, nuts and nut butters and Greek yogurt.
- Protein provides fuel for the body while having a minimal effect on blood sugar levels
- Protein foods help you feel satisfied after a meal
- Proteins slow down digestion and absorption and prevent the spike of blood sugar levels
- Proteins should be paired with carbohydrates at all meals and snacks.
- Choose leaner sources to help maintain a healthy weight gain

#### **FATS:**

- Sources of fat include avocado, mayonnaise, butter or margarine, oils and salad dressings.
- Fats have no direct effect on blood sugars



- Fats slow down digestion and absorption and can help with controlling blood sugar spikes
- High fat intake will cause other health issues and unnecessary weight gain which can lead to insulin resistance and uncontrolled blood sugar levels.

### **WHAT IF I AM STILL HUNGRY AFTER MY BALANCED MEAL/SNACK?**

“Free” vegetables have minimal carbohydrate and no portion control is needed. These include lettuce, leafy greens, broccoli, cauliflower, spinach, kale, zucchini, eggplant, cabbage, asparagus, celery, tomato (all types), cucumber, onions, bell peppers, and mushrooms (must be cooked). Consider the cooking method and amount of added fats used.

If you are still hungry after a meal consider increasing your portion of protein, as protein has minimal effect on blood sugar levels but remember to choose lean, low fat protein choices.

### **SOME QUESTIONS TO KEEP IN MIND WHEN PLANNING MEALS/SNACKS**

- Do I have some carbohydrates? Are my carbohydrate choices high in fibre?
- Do I have some protein?
- Are my vegetable choices “free” or “starchy”?
- Are my portions not balanced?
- Did I replace my snacks with treats? Am I skipping meals/snacks?

### **IS THERE ANYTHING ELSE THAT MIGHT HELP ME WITH MY BLOOD SUGAR CONTROL?**

- Exercise help to maintain blood sugars. Check with your doctor before starting any new exercise program.
- Incorporating a 20-30 mins walk after each meal will improve blood sugar control

### **WHAT HAPPENS IF MY SUGARS ARE STILL HIGH?**

- There are situations when healthy eating and exercise aren’t enough. It is important to not blame yourself
- You may be referred to an Endocrinologist (diabetes specialist) to discuss starting insulin. Insulin is safe for you and your baby as it doesn’t cross the placenta. The nurse will teach you how to give yourself insulin injections.

### **APPOINTMENT –**

Our booking clerk will call your GP/or you directly to provide a date and time. You will be seeing the dietitian and the nurse at your initial appointment, either as an individual appointment (45 mins each) or in a class (about 1.5 hours). You will be seen again for 1<sup>st</sup> follow up in 2 weeks, unless otherwise assessed by the nurse (15 mins or 30 mins depending on whether you were seen individually or in a class). How often you are seen in follow ups and whether you need to see the endocrinologist will depend on how well your sugars are controlled and your gestation age.

## **SAMPLE MENU FOR GLUCOSE CONTROL IN PREGNANCY**

### **Breakfast**

- 1 slice of high fibre toast  
or 1/2 cup of cereal or 1/2 cup cooked rice  
or 1/2 whole wheat English muffin  
or 1 small high fibre muffin
- Generous portion of protein rich food: Eggs, cheese, peanut butter (sugar free), lean turkey sausages, ham, cottage cheese, nuts & seeds added to cereal
- 1/2 cup milk or yogurt or unflavored soy milk

### **Mid-morning Snack**

- See snack idea sheet

### **Lunch**

- Sandwich (with a protein source) or ½ sandwich plus soup or 1 Roti (1 cup whole wheat flour = 6 servings) plus 1/2 cup dal or see supper ideas
- Green salad or cut up veggies (low fat salad dressing sparingly)
- Small piece of fruit
- 1 cup milk or yogurt or soy milk

### **Mid-afternoon Snack**

- See snack idea sheet

### **Dinner**

- Generous portion of meat, fish, poultry, cheese, eggs or tofu
- Choice of 1 medium potato/ 1 cup mashed  
or 1 cup cooked pasta / noodles, whole wheat preferred (can combine  
or 1 cup cooked rice, brown or basmati preferred 1/2 cup of each)  
or 1 cup baked beans or lentils (dal)
- Generous portion of vegetables
- Small portion of margarine, salad dressing or oil for cooking
- 1 cup milk or yogurt or soy milk  
\* No dessert, No fruit at supper

### **Evening Snack**

- See snack ideas list
- Most important snack if taking insulin
- Have snack close to bedtime

# Carbohydrates and Glycemic Index (GI)

## Carbohydrates

- Carbohydrates are found in a variety of foods and provide the body with fuel (energy).
- Many foods containing carbohydrate also provide fibre, vitamins and minerals.
- Carbohydrates break down into glucose during digestion and are absorbed into the blood stream.
- The type and quantity of carbohydrate foods you eat will affect your blood glucose levels.

## Glycemic Index

- Glycemic index is a measure of how quickly or slowly a carbohydrate food is digested and increases blood glucose levels

**High GI carbohydrates** increase blood glucose levels more quickly. Choose these less often.

**Lower GI Carbohydrates** increase blood glucose levels more slowly. These are the preferred choice.

**Health Benefits of Lower GI Foods:** They result in a slower rise in blood glucose levels after eating. They result in a lower “peak” or rise in blood glucose levels.

## Additional Tips:

- Acidity will lower the GI of a meal. Add a splash of vinegar or lemon juice to meals as a dressing.
- Fibre, particularly soluble fibre can lower the GI. Add psyllium husks to breakfast cereal; add salad vegetables to a sandwich or add lentils to soup.
- Protein as part of a meal can lower the GI. Combine a serving of fish, lean meat, skinless chicken, egg or tofu with a serving of a lower GI carbohydrate food and plenty of low carbohydrate vegetables in meals.
- Enjoy vegetables, fruit and low-fat milk products with your meals. These are carbohydrate-rich foods that, in general have a low glycemic index.

References: Canadian Diabetes Association: The Glycemic Index; Baker IDI Heart & Diabetes Institute: Carbohydrates and Glycaemic Index; EatRight Ontario: Getting to Know the Glycemic Index; Hamilton Health Sciences: The Glycemic Index of Foods

Low GI (Choose most often) (55 or less)	Medium GI (Choose more often) (56-69)	High GI (Choose less often) (70 or more)
100% stone ground whole wheat and sprouted grains bread Heavy mixed grain bread Corn/WheatTortilla Pumpernickel bread	Whole wheat bread Light Rye bread Pita bread	White bread Kaiser rolls Bagels English muffins Baguette
Oatmeal All Bran™ All Bran Buds with Psyllium™ Oat Bran™ Fibre One™ Red River™	Cream of Wheat Muesli Instant Oats Puffed Wheat Grape-Nuts™ Raisin Bran™ Special K™	Bran Flakes Corn Flakes Rice Krispies™ Cream of wheat, instant Grape-Nut Flakes™ Cheerios™
Brown Rice Converted/Parboiled Rice Pearled Barley Pasta/Noodles	Couscous Basmati long grain rice Wild rice Pasta (boiled for 20 min)	Jasmine rice Arborio rice Chinese fried rice Sushi rice Thai rice
Mung bean Soba noodles	Taco shells Vermicelli Fresh rice noodles	Canned spaghetti Corn and rice pasta Instant noodles
Quinoa Bulgur (cracked wheat) Barley Pearl or Israeli Couscous Buckwheat	Polenta Couscous	
All dried and canned legumes/beans -kidney beans, chickpeas, lentils, etc.		
Yam	Sweet Potato Small new/white potato Corn/popcorn	Potato-baking (Russet) French fries
	Ryvita™ Rye crisp crackers Stoned Wheat Thins™ Digestive or Arrowroot	Rice cakes and crackers Water/soda crackers Pretzels Melba Toast™

## Food Guide for Gestational Diabetes

Food Groups	One Choice		
<b>*Starch Foods</b>  <b>1-2 choices breakfast</b> <b>2 choices lunch and dinner</b>	1 (30g) slice bread	1 (6" diameter) tortilla	½ medium potato
	½ cup hot or cold cereal	½ (6" diameter) pita bread	½ cup mashed potato, yam
	½ small bagel	2 rye crisp	½ cup corn or ½ cob
	½ English muffin	3 cups pop corn	½ cup noodles, pasta (cooked)
	1 small (4" diameter) pancake	½ cup legumes/quinoa* (cooked) *also provides protein	½ cup rice (cooked)
	1 small (6" diameter) roti	½ cup barley/bulgur (cooked)	
	<b>◆ Choose whole grains most often for more fibre</b> <b>*Legumes include dried or canned beans, lentils and split peas</b>		
<b>Free Vegetables</b>  <b>Unlimited</b>	lettuce, leafy greens	cabbage	medium tomato
	broccoli, cauliflower	asparagus	radish, cucumber
	spinach, kale	green or yellow beans	mushroom, onion
	zucchini, eggplant	sprouts, celery	peppers
	<b>◆ Fill your plate with lots of these, emphasizing bright colors for more nutrition</b>		
<b>*Fruit and Sweet Vegetables</b>  <b>0-1 choice per meal</b>	1 small orange, peach, apple, pear	1 cup blueberries	½ cup tomato sauce
	1 small banana, grapefruit	2 cups other berries	½ cup canned tomatoes
	2 med. kiwi, plums	½ cup canned fruit (in juice)	½ cup peas, winter squash, rutabaga, beets
	15 grapes, cherries (~¾ cup)	1 cup melon, cut up	
	2 tbsp dried fruit	½ cup fruit juice (Unsweetened)	½ cup carrots, turnip
		*max. ½ cup per day	
	<b>◆ Eat fruit instead of juice for more fibre</b>		
<b>*Milk and Alternates</b>  <b>½ to 1 choice per meal</b>	1 cup milk	1 cup plain soy milk	1 cup plain or artificially sweetened yogurt
	½ cup evaporated milk	½ cup flavoured soy milk	
	4 tbsp powdered milk		
	<b>◆ Choose skim or 1% milk products</b> <b>◆ Choose a soy milk fortified with calcium, Vitamin D, and Vitamin A</b>		
<b>Protein Foods</b>  <b>Choices</b> <b>1...breakfast</b> <b>1-2...lunch</b> <b>1-2...supper</b>	2 oz meat, poultry, fish	2 tbsp peanut butter	½ cup tofu
	½ can of fish (in water)	¼ cup nuts or seeds	½ cup cottage cheese
	2 eggs	1 cup legumes or quinoa* (cooked) *also provides starch-max 1 cup/meal	2 oz hard cheese
			½ cup plain Greek yogurt
	<b>◆ Choose leaner meats and poultry</b> <b>◆ Choose protein foods that contain heart healthy fats such as fish, tofu, or nuts</b> <b>◆ Try 1% cottage cheese or lower fat (~20% M.F.) hard cheese</b>		
<b>Fat Choices</b>  <b>1-2 choices per meal</b>	1 tsp soft margarine, oil	2 tbsp sour cream (14% M.F.)	1 tsp butter
	1/6 avocado	4 tbsp light sour cream (7% M.F.)	1 tbsp cream cheese
	1 tbsp salad dressing	½ tbsp mayonnaise	2 tbsp light cream cheese
	2 tbsp light salad dressing	1 tbsp light mayonnaise	
	<b>◆ Limit animal and hydrogenated fats</b> <b>◆ Choose monounsaturated fats such as olive oil, canola oil, and avocado</b>		

\*Choose a minimum of 2-3 carbohydrate containing choices at each meal. The maximum amount will vary between individuals. See snack sheet for snack portions and ideas.

## FRUIT PORTIONS (Gestational Diabetes)

### General guidelines for fruit intake:

- Enjoy 2-3 choices of fruit per day
- Spread these out throughout the day, do not have more than one choice at one time
- Avoid fruit juices, choose the fresh fruit instead to get the fibre
- Need to watch portion sizes because fruit will affect your blood sugars
- Remember to pair a fruit choice with a protein choice
- Do not have fruit if you are having sweet vegetables in that meal; save it for later snack



### SERVING SIZES:

1 small APPLE like the size of a Gala apple

1 small ORANGE like the size of a small navel orange

1 small grapefruit or ½ large grapefruit

BANANA: 1/3 of large one or ½ of a small one

~3/4 cup grapes or cherries

All melons, cut up about 1 cup

Blueberries – 1 cup

Other berries – 2 cups

Canned fruit (in juice) – ½ cup

1 small pear

1 small peach

2 medium kiwi or plums

