Blood Sugar Instability & Gestational Diabetes

Normalizing Blood Sugar

- What are the benefits of maintaining stable blood sugar levels?
- Feel better and have more energy
- Minimize nausea
- Minimize strain on internal organs and body chemistry
- Minimize chances of hypertension
- Maintain stable internal body chemistry and prevent candida/yeast growth
- Maintain mineral stores. Sugar is associated with depleting minerals like calcium.
- Grow a smaller baby, have an easier labor, increase your chance of spontaneous vaginal delivery without the need for intervention
- Minimize weight gain without "dieting"
- Return to your pre-pregnancy/ healthy weight easier and more naturally
- How can I promote normal blood sugars?
- Focus on a variety of healthy foods

As always, eat a variety of wholesome foods: fresh vegetables, fruits, grains, beans, quality dairy and meat (unless you are vegan/vegetarian), as well and unrefined oils and fat.

Balance your meals

Foods should be partnered together for taste, enjoyment but also to reduce a glycemic rise. For example, combining carbohydrates with protein (salad and fish, rice and chicken), and fruit with fat (pear with nuts, banana and yogurt). These combinations allow sugars to be released slowly, instead of all at once.

Eat small frequent meals

Eat smaller portions more frequently. Take the food you might normally eat in three meals and divide it into six, evenly spaced throughout the day. This can reduce digestive stress, and allow your meal to digest more easily, as well as keeping your blood sugar from having wide fluctuations throughout the day.

Be active every day

Developing a daily exercise program is as important as eating well. Being active helps in two ways. First, every time you exercise, you use up blood sugar and keep levels lower for several hours. Exercising for a few minutes after every meal (even just a ten minute walk around the block), when your blood sugar levels are elevated, is an excellent practice. Secondly, exercise that builds muscle will create more cells that use up blood sugar, even while you are sleeping.

Eat less processed, closer to whole and raw

Eat foods in their natural unprocessed form. For example, whole fruit causes a lower blood sugar rise than fruit juice. Grains cooked until they are mushy cause a greater blood sugar rise than when they are al dente. Processed foods are in a way pre-digested and breakdown much faster than their whole

counterparts, thus quickly creating a sugar rise. For example, white rice will digest quicker than brown rice.

Reduce stress

Reduce stress, which causes blood sugar to rise. Meditate, breathe, do yoga, get a massage, take a bath with lavender & Epsom salts, ask for support, or whatever it takes.

Take a good quality prenatal supplement

Taking a good quality prenatal supplement helps your body cope with the physiological stress of pregnancy. To help specifically with blood sugar control, choose a prenatal supplement that has about 20mg of zinc and 200 mg of chromium. Both can be toxic in large dosages, so more is not better. B-vitamins and vitamins C and E are also important.

At the same time, it is always better to get your nutrients from whole food, so do not count on your supplement to cover gaps if you are skipping meals or eating fast food.

Eat some Omega-3s every day

Make sure you get a source of Omega-3 fatty acids every day. These help the insulin in your body work to lower high blood sugar and minimize weight gain. Omega-3 fatty acids are also essential for healthy fetal and infant brain development and for preventing pre-eclampsia and premature births.

Good sources of Omega-3s include:

- a serving of cold water fatty fish such as salmon, halibut, mackerel, or sardines
- 3T of ground flax seeds
- 1T of flax oil
- fish oil supplements (DHA plus EPA)
- Grass fed meat & dairy

Choose healthy fats

Choose cold pressed olive oil, coconut oil, ghee or butter over refined vegetable oils. Reduce the amount of harmful fats you eat, such as “vegetable oils” and fried foods. Also avoid trans-fatty acids and partially hydrogenated fatty acids, which are found in most margarines and commercial crackers, cookies, cereals, and many other processed foods.

Choose lower Glycemic Index carbs

Choose foods with a lower glycemic index [see below]. Only carbohydrate foods raise blood sugar. Protein and fats don’t. But please remember that a diet of all proteins and fats is not healthy; you need the fiber and nutrients of carbohydrate foods.

Avoid food binges

Be aware that binging – eating a lot of carbs at once, especially high GI foods like fruit, bread, and pasta – can cause sharp rises in blood sugar. Whenever you have a sugar craving or an urge to binge, think about whether you have eaten enough protein in the last day – maybe you are just hungry for more nutrients. Also consider whether you might be dehydrated, as sugar cravings can be disguising thirst.

What about low Glycemic Index foods?

Some carbohydrate foods cause a significantly higher rise in blood sugar than others do. Predicting which ones will do this is not easy, so you will need to look them up on tables of what is called glycemic index (GI).

High GI foods

Foods that cause an especially large rise in blood sugar include;

- Any bread, cracker, cookie or pastry made from wheat flour, whether that flour is white or whole wheat. Bread with rye flour as the first ingredient is better, as is bread with a significant proportion of unground grains (such as whole wheat berries or rye berries or cracked wheat), oatmeal, seeds, nuts or barley
- Most commercial breakfast cereals.
- Potatoes, especially the large baking kind. Small new potatoes, slightly undercooked, are much better
- Watermelon and tropical fruits, especially overripe ones such as bananas with brown spots on the skin. Many other fruits, including cherries, grapefruit, and dried apricots, especially if not overripe are much better. Greenish bananas are okay.

This doesn't mean that you can never eat these foods again. It would probably be okay to eat small servings of them occasionally (like one slice of bread or one pancake, several times a week), especially when eaten with protein foods or with carbohydrates with a lower glycemic index.

Intermediate GI foods

- Rice is an intermediate glycemic index food. Eating it slightly undercooked, rather than mushy, is better. Parboiled and basmati varieties are better than others. Sticky rice, puffed rice cereal, and rice cakes, however, raise blood sugar a lot. You might try substituting barley sometimes, which takes a long time to cook, but tastes great (even for breakfast), and has a very low GI. You can make enough for several days and then heat up portions in the microwave.

Low GI foods

- All watery vegetables (as opposed to starchy ones like potatoes and parsnips) can be eaten in unlimited quantities. Beans are a carbohydrate food (also containing good protein) with a very low GI, and so a great food.
- Adding fat or protein to your meal will lower the GI index of a higher rated food. For example, a baked potato is a high GI food. When eaten with butter, a salad as a side and a chicken breast, the meal becomes well balanced and wholesome.

What is Gestational Diabetes?

Gestational diabetes has many names: pregnancy diabetes, gestational diabetes mellitus, GDM, glucose intolerance of pregnancy. It is related to the normal change in sugar metabolism during pregnancy that promotes growth of your baby. Sometimes the mechanism that allows this gets out of balance, and blood sugar levels get excessively high.

How might GDM affect me?

The primary risk of GDM is growing a large baby. (On a population level "large" is defined as more than nine pounds, or four kilograms.) If you grow a baby that is larger than you might have without GDM, then you are at increased risk of having a difficult labour or birth. The possibilities include induction, forceps delivery, shoulder dystocia, postpartum hemorrhage and/or cesarean section. Of course there are healthy reasons for having a large baby, such as genetics and good diet, and these are not reasons for concern. By far the majority of large babies are born to women who do not have GDM.

Unlike overt diabetes, which may cause symptoms such as intense thirst, unusual hunger, and passing large amounts of urine, mothers with GDM feel perfectly healthy. After birth, blood sugar levels return to normal right away.

Being diagnosed with gestational diabetes does indicate that you have a high chance of developing adult-onset diabetes within 10-15 years if you are already overweight. Knowing this gives you the chance to implement lifestyle changes that may prevent this from happening, (Some people think this fact alone is a good reason to be tested for GDM.)

How can GDM affect my baby?

Besides the effects of a difficult labour or birth, babies of moms with GDM are at higher risk of hypoglycemia after birth. Feeding immediately after the birth can prevent this.

It is believed that complications for both mom and baby are proportional to the degree of glucose intolerance – the higher your blood sugar measurements, the more at risk you and your baby are.

What are risk factors for GDM?

- Previous gestational diabetes
- Previous baby >4kg
- Obesity (BMI >25)
- Age >25
- Sugar in the urine
- Mother/father/sibling with Type II diabetes
- Unexplained pregnancy losses
- Native, Black, Asian or Hispanic ethnicity
- Pregnancy induced hypertension

How is GDM diagnosed?

1. SCREENING

In the clinic: At every prenatal appointment, your caregiver will palpate your growing belly, as well as measure your uterine size (symphysis-fundal height) after you reach 20 weeks. This alone can give feedback on whether your baby feels or measures larger than average. After 20 weeks gestational age, you will be asked to do a urine dipstick for glucose. If you frequently spill glucose, then further testing would be warranted.

At the lab: There is a blood test specifically for GDM that is offered between 24 and 28 weeks gestation, although it can be done at any time in pregnancy. Two to three hours after your last meal you drink 50g of glucose – much like a very sweet, flat, orange soda – and then have your blood drawn 60 minutes later. If the lab values come back higher than 7.8mmol/l, then the next step is the diagnostic test.

2. DIAGNOSTIC TEST (ORAL GLUCOSE TOLERANCE TEST)

This is similar to the screening test in that it consists of drinking glucose and having your blood drawn. The difference is that this test involves drinking twice as much sugar, 100 grams, after an overnight fast. Your blood is drawn just before, and then one, two and three hours after drinking the glucose. Diagnosis of GDM is made if two or more of the four results are higher than normal:

Are there drawbacks to testing?

Some women find consuming the sugar causes them to be nauseous or even vomit. There may also be concerns about the effect on the baby of fasting and then sugar loading. It may help to make your last meal one of high quality protein such as eggs, beans or lentils to aid in stabilizing the blood sugars.

GDM is said to occur in 2-3% of women, but testing is not considered very reliable. Of the mothers who test positive, 70% will have babies weighing less than 9 pounds even with no treatment. Also, the majority of babies weighing more than 9 pounds are born to mothers with normal blood sugars. Research has shown that women with diagnosed GDM – whether or not they receive treatment – have an increased risk of cesarean section without any demonstrated improvement in outcome for mom or baby.

Of note: if you pass the test, this does not mean that you are free to eat lots of sugar and forget about good nutrition! Even if you are not diabetic, you can still grow an overly large baby by eating a diet full of refined sugars and highly processed food.

What are my options for treatment?

If you are diagnosed with GDM, treatment centres on making lifestyle changes – modifying your diet and changing/increasing your exercise habits. To help you with this, your midwife will refer you to the Diabetic Clinic.

Counseling at the Diabetic Clinic will include information about how to maintain a Low Glycemic Index diet, and use exercise to keep your blood sugars low. You will be asked to record daily blood sugars for a number of days. Follow-up will depend on the results of these blood sugars – if they are within normal limits, then you likely won't need further follow-up; or you may need a few adjustments to your regime; in rare instances, you made need insulin to control your blood sugars.

Unless you become insulin-dependent, you will still be eligible for midwifery care.

What about follow-up after the birth?

Your baby will have its blood sugar tested soon after the birth, to make sure that it is not experiencing hypoglycemia. (Breastfeeding immediately after birth is the best way to prevent this.)

At six weeks postpartum, you will be tested again with the OGTT to make sure you haven't developed Type II Diabetes.