

### Six common questions about eating carbs during pregnancy answered

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Credit: Ivan Samkov from Pexels

During pregnancy women get bombarded with food and nutrition information. Eat this, don't eat that! It gets very confusing. Recent



debates about the role of carbohydrates have cranked the confusion up a notch. In pregnancy, women need nutrient-rich sources of carbohydrate, in the right amounts.

### 1. What are carbohydrates?

<u>Carbohydrate</u> is a macronutrient that your body uses as a source of fuel for muscles and organs like the heart, lungs and brain. Out of the three major <u>macronutrients</u> found in <u>food</u> (protein, fat and carbohydrate), carbohydrates have the biggest impact on short-term <u>blood glucose levels</u>

When foods containing <u>carbohydrates are eaten</u>, they are broken down into smaller units in the small intestine using enzymes found in saliva, the small intestine and the pancreas. Next, the hormone <u>insulin</u> is released into the bloodstream to help move <u>glucose</u> from the <u>blood</u> into our cells, causing blood glucose (or blood sugar) levels to rise.

Foods contain varying amounts of carbohydrate. Rich sources include starchy vegetables (potatoes, sweet potatoes, corn), bread, pasta, rice and fruit. Foods containing carbohydrate in smaller amounts include milk, yoghurt and legumes such as kidney beans. These foods all include nutrients that are important for everyday health, such as <u>dietary fibre</u> and <u>B vitamins</u>.

Foods that are high in refined carbohydrates, particularly added sugars are called energy-dense, nutrient-poor, non-core or <u>discretionary foods</u>. These include soft drink, ice cream, lollies, cakes, biscuits and pastries. Ideally, these should only be eaten occasionally, meaning once a week to once a month or less often.

Alarmingly, in the 2011-2012 Australian Health Survey <u>35% of</u> <u>Australian's total daily energy</u> was found to come from discretionary



foods and beverages.

# 2. Why are carbohydrates important during pregnancy?

During <u>pregnancy</u>, metabolic adaptations occur that allow the mother to meet her own nutritional needs, as well as those of the developing baby. These normal adaptations, as well as weight gain during pregnancy, <u>impact on maternal glucose and insulin metabolism</u>.

These changes mean a pregnant woman is more likely to have <u>high blood</u> <u>glucose</u> levels (hyperglycemia) and more likely to have impaired regulation of blood glucose levels, which could lead to the development of <u>gestational diabetes mellitus</u>.

## **3. What are the consequences of high blood glucose levels during pregnancy?**

High blood glucose levels during pregnancy are associated with an increased risk of the mother developing <u>gestational diabetes during</u> pregnancy and then type 2 diabetes in the future. It also increases the risk of pregnancy and birth complications for both the mother and baby, such as primary caesarean delivery and infant hypoglycaemia (low blood glucose levels) immediately post-birth, as well as premature delivery, <u>shoulder dystocia</u> and <u>pre-eclampsia</u>.

High blood glucose levels in pregnancy are most commonly linked to gestational diabetes. However, blood glucose levels that are slightly elevated, although not high enough to be diagnosed as having gestational diabetes are associated with a <u>higher risk of some, but not all</u> adverse health outcomes.



Blood glucose levels within the diagnostic <u>gestational diabetes</u> range have been found to be independently associated with the <u>offspring's risk</u> <u>of abnormal glucose tolerance</u>, obesity and higher blood pressure at seven years of age. Therefore avoiding excessive high blood glucose levels in pregnancy has the potential to optimise the baby's health in later life.

### 4. Should I avoid carbohydrates during pregnancy?

No! Carbohydrates should definitely not be avoided during pregnancy. Other nutrients important for pregnancy that are limited in the Australian food supply, folate and iodine, are added to bread-making flour. Both of these nutrients are needed more during pregnancy. Folate helps protect again neural tube defects in the developing foetus and iodine is needed for the production of the thyroid hormone, which plays an important role in growth and development.

Following the mandatory fortification of bread with folate and iodine in Australia in 2009, there has been a significant <u>overall decrease (14.4%)</u> in the rate of neural tube defects. Folate is also found in a range of other foods including vegetables (asparagus, spinach, broccoli), chick peas and bran flakes and iodine is found in seafood, eggs, meat and dairy products. The key thing to consider when choosing foods that <u>contain</u> <u>carbohydrates is the quality</u> and the quantity eaten.

### 5. Are all carbs of equal value?

No! Carbohydrates are present in a wide variety of foods and <u>these vary</u> <u>greatly in nutritional quality</u>. High-nutritional quality carbohydrate containing foods are generally nutrient-dense "core" foods that belong to the basic food groups within the <u>Australian Guide to Healthy Eating</u>. This includes grains/cereal, vegetable, fruit and dairy food groups.



Examples of high-nutritional quality <u>carbohydrate foods</u> include wholegrain breads, sweet potato, kidney beans, fresh fruit and yoghurt. Low-quality carbohydrate foods are generally in the discretionary foods list. Examples of low-quality carbohydrate containing foods include cakes, biscuits and lollies.

If you're eating mainly high-quality carbohydrates and limiting your intake of low-quality carbohydrates, then you have taken the first step to managing your blood sugar levels and boosting your fibre and nutrient intakes, as well as your overall health.

### 6. If I eat the 'right' type of carbohydrate, can I eat as much as I like?

No! Carbohydrates have a direct impact on blood glucose levels and the portion size, which is the amount eaten in one meal or snack, has a big impact on your blood glucose. Spreading your intake of carbohydrate foods throughout the day and consuming appropriate portion sizes is important in managing blood glucose levels.

The Australian Guide to Healthy Eating can help you to identify <u>what</u> <u>one standard serve size of various carbohydrate containing foods looks</u> like in order to better manage your portion sizes.

Carbohydrate foods are also digested at different rates; some slower and some faster than others. The <u>Glycaemic Index (GI)</u> is a relative ranking of carbohydrate foods according to how quickly your blood sugar rises after eating a standard amount. Lower GI foods (a GI value of 55 or less) are digested more slowly and therefore result in a slower rise in blood glucose levels compared to foods with a higher GI value. Low GI foods include grain and seed breads, legumes and reduced fat milk. High GI foods include white bread and short-grain white rice.



Carbohydrates are not something to be feared during pregnancy. Include a <u>range of healthy core foods</u>, including nutrient rich sources of carbohydrate, but be mindful of the types of <u>carbohydrate</u> foods and the portions size eaten.

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