

Gestational diabetes

Nutritional advice



CONTENT

1	What is gestational diabetes?	3
2	Carbohydrates versus fats	3
3	The (average) energy requirement and weight gain	4
4	Dietary guidelines	6
5	Listeriosis and toxoplasmosis	13
6	Physical exercise	14
7	After pregnancy	14
	Overview of dairy products without added sugars	15
	Contact details	19

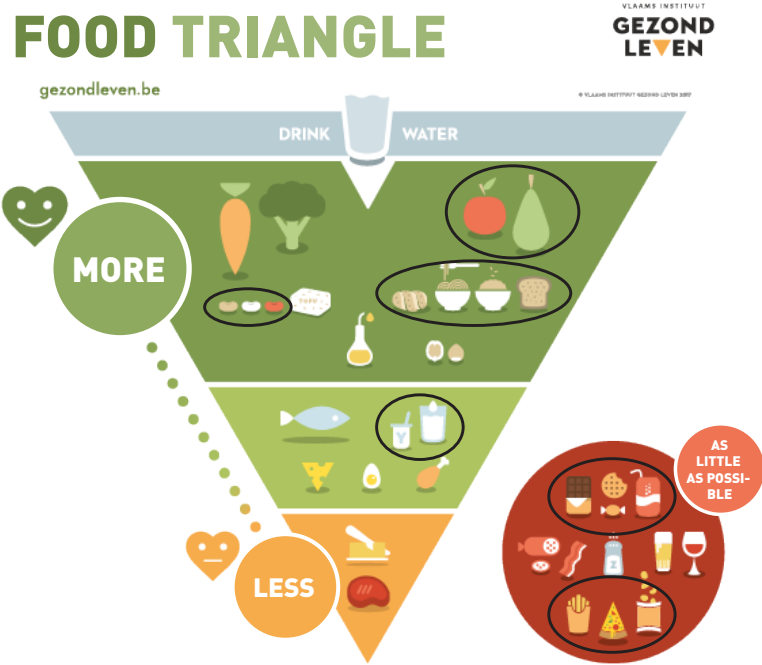
1 What is gestational diabetes?

Hormonal changes can prevent normal functioning of the pancreas during pregnancy. This results in increased sugar levels, compatible with gestational diabetes. This usually occurs during the second half of the pregnancy. Often, dietary changes are sufficient to control gestational diabetes; however, sometimes medication is needed.

2 Carbohydrates versus fats

Carbohydrates are nutritional components which increase blood sugar levels. In the food triangle, the foods containing carbohydrates are circled:

- **starch** in cereal products, potatoes, rice, pasta and legumes
- **fruit sugar or fructose** in fruit
- **milk sugar or lactose** in dairy products
- **added sugars** in sweetened products



You don't have to avoid eating foods containing carbohydrates during pregnancy in case of gestational diabetes. The carbohydrate sources in the food triangle also provide other important nutrients like fibres, vitamins and minerals. A good carbohydrate distribution throughout the day is often enough to keep the blood sugar level under control. This can be done with three main meals and two to three snacks a day. The carbohydrate sources that are in the remaining group (cake, candy, chocolate, chips, etc.) should be avoided as much as possible.

Other nourishment, such as vegetables, fat, cheese, meat, fish and eggs, contain hardly any carbohydrates. Both low-fat and high-fat varieties of these foods do not affect blood sugar.

3 The (average) energy requirement and weight gain during pregnancy

The energy requirement of a pregnant woman varies between 1800 to 2500 kcal/day and depends on her BMI and activity level. The amount of extra energy that a woman needs also varies according to the different phases of the pregnancy. The following table gives an indication of how much extra kcal may be required:

Phases of pregnancy	Extra energy
Trimester 1	None – 70 kcal/day
Trimester 2	260 – 340 kcal/day
Trimester 3	452 – 500 kcal/day



The acceptable weight gain during a pregnancy is dependent on the BMI before pregnancy:

- With a BMI < 18.5 (underweight), a weight gain ranging from 12,5 to 18 kg is acceptable.
- With a BMI between 18,5 and 24.9 (normal) a weight gain of 11 to 16 kg is acceptable.
- With a BMI between 25 and 29,9 (overweight) a weight gain from 7 to 11 kg is acceptable.
- With a BMI > 30 (obesity), a weight gain of max. 5 kg is acceptable.

BMI before pregnancy	Weight gain
Underweight: < 18,5	12.5 – 18 kg
Normal: 18,5 – 24,9	11,5 – 16 kg
Overweight: 25 – 29,9	7 - 11,5 kg
Obese: > 30	Max. 5 kg

4 Dietary guidelines

The guidelines below aim to limit the sugars in the diet to avoid high spikes in your blood sugar levels as much as possible.

AVOID SWEETENED DRINKS

Do not add sugar to coffee and tea. Adding honey or syrups to drinks can also cause blood sugar to rise rapidly and are best avoided. Avoid soft drinks, all types of fruit juice (also freshly squeezed), chocolate milk, sweetened buttermilk, sweetened yogurt drinks, sweetened soy drinks ...

- Choose semi-skimmed or whole milk, unsweetened buttermilk and unsweetened soy drinks.
- You can prepare chocolate milk yourself with pure cocoa powder and sweetener or with Cankao from the brand Canderel.
- Limit the use of light and zero soft drinks to 1 can per day maximum.



RESTRICT THE CONSUMPTION OF BISCUITS, SWEETS AND PASTRIES

Avoid eating sweets, candies, caramels, fruit gums... Choose a biscuit or a small piece of chocolate no more than once a day.

- You don't have to buy special biscuits without sugar. These will still influence your blood sugar level due to the flour (i.e. starch) they contain. The portion you take is far more important. So, opt for a normal dry cake and be sure you limit your portion to a maximum of 20 g.
- Examples of dry biscuits to choose from: 2 Maria biscuits, 2 Petit Beurre biscuits, 3 Boudoirs, 1 slice of gingerbread without pearl sugar, 1 Princekoek, 1 Madeleine biscuit, 1 digestive biscuit, (e.g. Lotus), 2 small speculoos biscuits ...
- When you eat several biscuits in one package (e.g. 2 or 3 pieces), your blood sugar will rise too much. Try to have the discipline to limit your intake to 1 biscuit: 1 Betterfood biscuit, 1 Vitabis biscuit, 1 Grany sponge cake, 1 Sultana cake...
- You can replace a biscuit with a small piece of milk or dark chocolate (25 g), e.g. 2 mignonettes from Cote d'Or.
- You can also opt for chocolate without sugar, e.g. chocolate with tagatesse (Damhert). It will have little effect on your blood sugar level.
- Avoid eating cakes and pastries as much as possible.

USE ALTERNATIVES FOR THE SWEET TOPPING ON YOUR SLICE OF BREAD

Sweet toppings, such as honey, syrup, chocolate and jam, will cause the blood sugar level to rise quickly and are not recommended.

- In the supermarket, you can find jam and chocolate with reduced added sugars or even without added sugars:
 - Choco: Balade
 - Jam: Effi, Enjoy Materne, Tutti frutti (Delhaize), Tamara light (Aldi), Boni light (Colruyt), Stylesse (Carrefour), Damhert jam Pure fruit
- Nut butters, such as peanut butter, almond butter or 100% nut butter (mixed nuts), contain few carbohydrates; therefore, these toppings will barely influence your sugar level. Note: nut butters contain a lot of (good) fats and so provide more energy.
- Speculoos and gingerbread will continue to affect blood sugar levels, including the varieties on the market that state 'less sugar/without sugar'. So keep the portion small: max. 1 slice of gingerbread without pearl sugar or 2 small speculoos biscuits on 1 slice of bread. Our preference would be the slice of gingerbread, since it contains more fibre compared with a speculoos biscuit.
- Tip: always spread a portion of fat (margarine) on your slice of bread (unless you eat nut butter as a topping). The sugars from the sweet toppings will then be absorbed into the blood more slowly.

USE ALTERNATIVES TO SUGGESTED MILK PRODUCTS

Milk products (yogurt, cottage cheese, milk and buttermilk) contain proteins, vitamins and minerals like calcium. Milk products are a part of a healthy diet. Sugars are often added to yogurt, puddings and other milk desserts, which we wish to avoid. At the end of this brochure (p. 15), you'll find a list of possible examples.

FRUIT

Fruit naturally contains sugars (fructose), but it's indispensable for your health due to the many vitamins and fibres. These fibres will be responsible for slower absorption of the sugars in your blood. The recommendation is to eat 2 pieces of fruit every day. No fruit is prohibited. However, for fruits that contain more sugars (e.g. banana, grapes, etc.), the portion size should be smaller.

A serving of fruit corresponds to:

- 200 - 250 g strawberries (i.e. the container), blueberries, blackberries, black currants, raspberries, red currants, watermelon, Galia melon
- 170 g grapefruit (1 piece)
- 125 - 150 g apple (1 medium), 1 large kiwi, pear (1 small), orange (1 piece), cavaillon melon, mandarin (2 small pieces), nectarine (1 piece), peach (1 piece), apricots (3 pieces), passion fruit (4 pieces), plum (2 pieces)
- 100 g pineapple (2 - 3 slices), red and white grapes (10 pieces), cherries (15 pieces), lychees (8 pieces), mango (half), fresh figs
- 70 g banana (i.e. half)
- If you opt for fruit in a tin or a jar, it's best to avoid those in syrup. Choose fruit in its own juice or fruit in a light syrup and certainly don't drink the juice from fruit in a tin or jar.



BREAD

Bread also contains carbohydrates (mainly starch) that affect your sugar level. Yet it also contains fibre and other vitamins and minerals. Therefore, bread is indispensable in your diet.

- By preference, keep the number of slices of bread the same for any (every) bread-based meal; this will result in fewer fluctuations in your blood sugar level.
- Preference is given to wholemeal breads. These will result in lower sugar level peaks compared with white bread.
- If you want to eat a bread roll (pistolet) on the weekend, you need to know that 1 bread roll contains the same amount of carbohydrates as 2 slices of bread. Try to limit pastries and cakes (croissants, chocolate cakes, raisin cakes) to 1 piece and eat a slice of wholemeal bread with savoury toppings.



POTATOES, PASTA AND RICE

Boiled potatoes are preferred because they have the most fibre and cause your blood sugar to rise more slowly. With fries, pasta (e.g. spaghetti) and rice, there's often a tendency to take a larger portion, with a higher rise in your blood sugar level. A portion of pasta and rice also provides twice as many carbohydrates compared to the same amount of potatoes. If you eat pasta and/or rice, it's better to choose wholemeal pasta or brown rice since they contain more fibre.

If you stick to the following approximate portion sizes, it will affect your blood sugar levels by a comparable amount since they contain roughly the same amount of carbohydrates.

- g boiled potatoes
- g mashed potatoes
- g uncooked pasta, rice → g cooked pasta, rice
- g fries

LOW CARBOHYDRATE SNACKS

You can eat the following foods in between meals without raising your sugar level:

- (Well-washed) vegetables: lettuce, cucumbers, tomatoes, radishes, carrots... with dressing, vinaigrette if you like.
- Fresh vegetable soup (without vermicelli, potatoes, croutons)
- Avocado (possibly with vinaigrette)
- Cubes of cheese, meat (watch out if you're overweight)
- Unsalted nuts (without a crispy crust around them)
- Olives



SWEETENERS AND LIGHT PRODUCTS

Light products can be used without problems during the pregnancy. This doesn't include products designated as 'light' due to the replacement of sugar with sweeteners. Examples of light products are light cheeses, light cream ... These are foods with a reduced fat content and therefore are designated as "light." If you weren't accustomed to using these products prior to your pregnancy, you don't need to change this. Please note that the simultaneous intake of fatty and sugary foods can lead to a longer and higher glycaemic peak.

CAFFEINE

Caffeine passes through the placenta and can thus have adverse effects on the foetus. Excessive caffeine intake (more than four cups of coffee a day) increases the risk of lower foetal birth weight. Try to consume no more than two caffeinated drinks a day. Sources of caffeine include: coffee, tea, cocoa, cola (light/zero) and energy drinks.



5 Listeriosis and toxoplasmosis

LISTERIOSIS is an infectious disease caused by the bacteria *listeria monocytogenes*. It can lead to miscarriage, premature birth or the death of the foetus.

The following are dietary points of attention:

- Raw vegetables and fresh herbs should always be washed thoroughly.
- Raw meat is not recommended.
- Fish and shellfish: raw or cold-smoked fish, such as smoked salmon, herring and shellfish like oysters, carry a risk of listeria.
- Do not consume raw milk.
- With pre-packaged cheese, look at the label to be sure that it's made from pasteurised milk instead of raw milk ('*au lait cru*'). Soft cheeses made from raw milk ('*au lait cru*') are to be avoided. Cheeses made from pasteurised milk are allowed. So always look at the packaging!

TOXOPLASMOSIS is an infectious disease that's caused by a parasite: *toxoplasma gondii*. Possible consequences are miscarriage and serious abnormalities in the child. If you came in contact with toxoplasmosis before your pregnancy, you're now immune, which can be confirmed in a blood sample.

If you are not yet immune, there are some dietary points for attention:

- Do not eat raw or semi-cooked meat.
- Raw vegetables and fresh herbs should always be washed thoroughly.
- Make sure that your food is properly heated.



6 Physical activity

It is recommended that, within one hour of each main meal, you exercise for 15 minutes (e.g. walking, cycling and swimming). Exercise helps with better absorption of the carbohydrates from the blood into the cells, and this will prevent high peaks in your sugar levels after meals.

7 After pregnancy

Women with gestational diabetes have an increased risk of developing diabetes after their pregnancy. We therefore recommend maintaining a healthy diet after the pregnancy and continuing sufficient exercise to reduce the risk of evolution to type 2 diabetes over the long term. Three to six months after giving birth, you'll undergo an OGTT/sugar test. Annually thereafter, your sugar level will be checked in a blood sample to detect a possible evolution to type 2 diabetes.

We strongly recommend registering for 'Project Zoet Zwanger' (www.zoetzwanger.diabetes.be). This project is supported by the Diabetes League (Diabetes Liga) and focuses on prevention and early detection of diabetes mellitus. After registration, you'll receive a reminder three months after giving birth to undergo a fasting blood glucose test, and thereafter annually. Your general practitioner will also be informed and will ensure further follow up. You'll receive six newsletters over the two years after giving birth.

OVERVIEW OF MILK PRODUCTS WITHOUT ADDED SUGARS



General guidelines

- 'Low fat' or '0% fat' does not automatically mean 'no added sugars'. Therefore, always look at the nutritional value table on the packaging.
- Choose yogurt with a maximum of 7 g carbohydrates per 100 g.
- Limit the portion to 150 g.
- If you're overweight, it's better to choose low-fat, unsweetened yogurts instead of full-fat unsweetened yogurts.



Examples

On the following pages, you'll find some examples that fall within these guidelines.

FRUIT YOGURT

- Vitalinea (Delhaize, Colruyt and Carrefour)
- Milsani 0% fat without added sugars (Aldi)
- Optimel Greek-style yogurt: coffee, vanilla, raspberry ... (Albert Heijn)
- Light & Free Danone (Colruyt, Delhaize and Carrefour)
- Boni fruit yoghurt 0% fat with sweeteners (Colruyt)



LOW-FAT NATURAL YOGURT

- Milsani natural yogurt (Aldi)
- Milbona stirred yogurt (Lidl)
- Inex low-fat, unsweetened yogurt



LOW-FAT FRESH CHEESE

- Boni fresh cheese, 0% fat with sweeteners (Colruyt)



GREEK LEAN/SEMI-FAT YOGURT

- Optimel Greek-style natural yoghurt (Albert Heijn)
- Boni low-fat Greek yogurt (Colruyt)



LOW-FAT SKYR YOGHURT (high protein)

- Skyr nature/fruit flavor with sweetener (Lidl)
- Skyr Light & Free Danone
- Skyr Carrefour



FULL-FAT YOGURT, GREEK YOGURT, FRESH CHEESE (not recommended if you're overweight)

- Nestlé Yaos Greek yogurt (Colruyt, Delhaize and Carrefour)
- Oikos (Colruyt, Delhaize and Carrefour)
- Pur Natur



ALPRO SOYA

- Natural with almonds, Natural with coconut,
- Natural 'no sugars', Natural
- Alpro Soya more fruit 'no added sugars'

Contact details

If you have any concerns or need assistance,
do not hesitate to contact us.

➤ Dietitians diabetes team

Tel.: 09 246 13 46

diabetes.dietisten@azmmsj.be

➤ Endocrinology secretariat / diabetes team (8 am - 6 pm)

Tel.: 09 246 89 00

secretariaat.endocrinologie@azmmsj.be

Also, visit our website for more information about
gestational diabetes and our diabetes team.





This leaflet is printed on maxioffset paper that comes from sustainably managed forests.

FOLLOW US ON:



Buitenring Sint-Denijs 30, 9000 Gent | 09 246 46 46 | www.mariamiddelares.be | info@azmmsj.be

Maria Middelares General Hospital and your physicians have taken great care in preparing this informational leaflet. Its contents are general, however, and should be considered as a guide. This leaflet does not contain all medical aspects and does not replace a consultation with your physician. Maria Middelares General Hospital, its staff and physicians are not responsible for any errors, omissions or incomplete information that may be found in this leaflet.

SAP 24061 - February 2022