



WHAT TO EAT?

A guide to mealtime planning

www.withyoualltheway.info

changing diabetes®

At Novo Nordisk, we are changing diabetes. In our approach to developing treatments, in our commitment to operate profitably and ethically and in our search for a cure.



With you all the way is a paediatric support programme created by Novo Nordisk, providing practical information on diabetes and its management for you and your child.

This material has been reviewed by a panel of experts:

- Lead Diabetes Specialist Nurse – Nicola Lewis, UK
- Paediatric Endocrinologists – Prof Thomas Danne, Germany and Dr Nandu Thalange, UK



This information is not designed to replace the advice of a healthcare professional. Please consult your healthcare professional if you have any questions or concerns about your child's condition.

A woman with brown hair, wearing a bright yellow t-shirt, is smiling slightly and looking towards the camera. She is holding a white bowl filled with fresh strawberries. The background is a kitchen with light-colored cabinets and a framed picture on the wall.

Healthy eating

Just because your child has been diagnosed with diabetes, it doesn't mean that they will have to stop eating the foods they enjoy.¹ But it's important to remember that food choices, just like their insulin treatment, are an important part of diabetes management.²

At the time of diagnosis, your child's care team should provide you with some guidance around their diet and management of mealtimes.² By giving your child a healthy diet at home and encouraging a positive attitude towards food, you can help provide them with all the nutrients they need for growth, as well as help them to manage their diabetes.³

This booklet provides some basic information on meal planning and carbohydrate counting. Your child's diabetes care team will be able to provide you with more specific advice.

ALI BASEM ARQOUB

Jordan

Ali has type 1 diabetes

Mealtimes

When your child is first diagnosed with type 1 diabetes, managing mealtimes may seem complicated. But it will get easier over time and you will soon learn about the effects of specific foods and physical activity on your child's blood glucose levels. You may find it helps to keep a food diary to help track your child's meals and blood glucose levels.

In general, children with type 1 diabetes have the same basic nutritional requirements as children without diabetes.² No single food group provides everything your child needs to stay healthy, so you should try and aim for a balanced diet including protein, carbohydrates and fruit and vegetables.⁴



A balanced diet

It is important to try and maintain a healthy balanced diet, along with regular exercise and taking insulin.

25%

PROTEIN

Meat, chicken, fish, eggs...

Do not increase blood glucose



50%

VEGETABLES

Broccoli, cabbage, cauliflower, lettuce, tomato, carrots, peas...

Do not increase blood glucose

25%

CARBOHYDRATE

Potato, pasta, rice...

Lead to increases in blood glucose



Guide to carbohydrate counting

Getting the balance right between carbohydrate ('carbs') and insulin is key for maintaining good glycaemic control in children with diabetes.⁵

Carbohydrate counting can help you and your child to better understand how food affects their diabetes and help to keep their blood glucose levels in check. It will also give you greater flexibility at mealtimes. Your child's dietitian will work with you to develop a meal plan that fits your child's needs.³

What are carbohydrates?

Carbohydrates can be found in many of the foods we eat and are needed for energy to grow and develop. Proteins and fats also supply energy to the body, but carbohydrates have the biggest effect on blood glucose levels. Within an hour or two of eating, the majority of carbohydrate is converted into blood glucose.¹

There are three main types of carbohydrates:

- Sugar (simple carbohydrates)
- Starch (complex carbohydrates)
- Fibre (complex carbohydrates)

What foods contain carbohydrates?

Common foods that are high in carbohydrates:

Sugar (simple carbohydrates)	Starch (complex carbohydrates)	Fibre (complex carbohydrates)
Fruits and juices	Potatoes	Fruits and vegetables
Milk and yoghurt	Bread	Whole grain bread
Cakes	Pasta	Whole grain/oat cereals
Cookies	Rice	Lentils and beans
Some cereals	Peas	Nuts
	Corn	
	Lentils and beans	

Always read food labels to find out the precise carbohydrate content.



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How do I know how much carbohydrate is in food?

The nutrition labels on foods usually state the total carbohydrate count (including sugar, starch and fibre) and the amount of this that comes from sugars.⁶ Some food labels are colour-coded red, orange or green to indicate the sugar levels. Food labels may vary from country to country.

Reading food labels⁶

Nutrition Facts

Serving Size 8 Crackers (28g)			
Amount per serving			
Calories	120	Fat Calories	30
% Daily Value			
Total Fat	3.5g		5%
Saturated Fat	1g		5%
Trans Fat	0g		
Polyunsaturated Fat	1.5g		
Monounsaturated Fat	0.5g		
Cholesterol	0mg		0%
Sodium	140mg		6%
Total Carbohydrate	22g		7%
Dietary Fiber	less than 1g		3%
Sugars	7g		
Protein	2g		
Vitamin A	0%	Vitamin C	0%
Calcium	10%	Iron	4%

Check the serving size:

8 Crackers

Is that how much your child is going to eat?

This number (28g) is the weight of the crackers, not the amount of carbohydrate in the serving.

Count total carbohydrate.

You do not need to count sugars separately because they are already counted as part of the total carbohydrate.

Weighing food?

Measuring and weighing food can also be used to work out carbohydrate content of foods.⁶

One carbohydrate serving = 15g

Food	Carbohydrate (g)	Carbohydrate (servings)
1 small cup of apple juice	15	1
1 slice of toast	15	1
1 tsp butter/margarine	0	0
1 tbsp jam	15	1
Total	45	3

This table shows an example of a breakfast, showing carbohydrate content and servings (45g).⁶

If the item has more than 5g of fibre, subtract half the amount of fibre from the total carbohydrate.⁶

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Balancing carbohydrate and insulin

There are two main methods of carbohydrate counting:¹

Matching carbohydrate to consistent insulin dose

This method provides a limit on the number of servings of carbohydrate to keep blood glucose levels in target range on a particular insulin dose. Every child has different needs. Your child's dietitian will advise on how many carbohydrate servings your child should have each day.

Changing insulin dose to match carbohydrate intake

This method, sometimes referred to as carbohydrate counting, matches your child's short-acting insulin dose to the amount of carbohydrates in a meal.

This allows more flexibility and choice at mealtimes, and may make things easier if you are eating out (as long as you can estimate the carbohydrate content of restaurant food). Your child's dietitian or healthcare professional can help you to work out how much insulin is needed for the amount of carbohydrate eaten – or the insulin-to-carbohydrate ratio. It is important to know that this ratio varies with age and weight so this will change over time as your child grows up. This ratio also varies throughout the day (more insulin in the morning, less at lunch and intermediate in the evening in most children).

You may find that some types of carbohydrates cause your child's blood glucose to rise more quickly than others. Therefore, you may need to adjust insulin doses for different types of food.





PAROJN CHALERMOROJN
Thailand
Parojn has type 1 diabetes

Timing of meals and snacks

Generally, children with diabetes are advised to eat three main meals each day with two or three snacks in between.³ You may want to consider giving your child a complex long-acting carbohydrate snack at bedtime.²

The type of insulin regimen your child is on will affect the level of flexibility around mealtimes. Keeping to a routine with regular mealtimes, where the child and family sit down together to eat, has been shown to help improve glycaemic control, along with healthy eating and monitoring of food intake.³

Your child's dietitian will help you to plan timing and content of meals to fit in with your child's needs and insulin profiles.^{2,3}

What if my child won't eat?

Sometimes it can be hard to predict how much your child will eat, particularly in younger children. You may find some days they are not hungry or are feeling ill, so can't manage their usual amount of food.⁶

Some rapid-acting insulins can be given after meals so you can work out the dose based on what they have actually eaten.⁶

What about school lunches?

If your child is at school, you may find it easier to provide them with packed lunches and ask them to bring home anything they don't eat. You may also want to write down carbohydrate content for your child or school staff so they know how much carbohydrate your child is eating.⁶

If your child would like a hot lunch at school, you may be able to get a menu in advance so you can work out how much carbohydrate is in each dish. Speak to your child's teacher or nurse about your child's specific needs and who will take responsibility for helping them at mealtimes.⁶

Eating out and special occasions

Eating out

You may feel anxious about eating out as you cannot always be sure of the timing of the meal or carbohydrate content. There is no harm in not being 100% accurate all of the time. Going out for a meal is a special occasion and you should be able to relax and enjoy yourself. Many restaurants will provide nutritional information if you ask them and some restaurants show this information on their website if you want to check. Some rapid-acting insulins provide you with the option to dose when the meal arrives or immediately after eating.^{6,7}

Parties

At birthday parties, children with diabetes can still enjoy cake and other treats. You may however need to adjust the amount of other carbohydrates (such as potatoes, bread or pasta) your child has that day to compensate. Some activities at parties may counteract the treats eaten.⁵

SUDE İĞDAR

Turkey

Sude has type 1 diabetes





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About Novo Nordisk

This information was developed by Novo Nordisk, a global healthcare company specialising in the care of people with diabetes.

Novo Nordisk was started up almost 90 years ago by a Danish couple with a passion for changing diabetes. August Krogh was a professor at the University of Copenhagen and Nobel Prize winner and his wife Marie, a doctor and researcher into metabolic diseases, suffered from type 2 diabetes. They learned of insulin being developed in Canada and were determined to ensure access to insulin for everyone with diabetes, hence in 1923 Novo Nordisk was born.

Since then Novo Nordisk has grown to become a world leader in the provision of diabetes products and support for patients of all ages.⁷

We fully understand the challenges that children with diabetes face and are working together with parents, schools and healthcare professionals to improve the care of children with diabetes, as they grow up and develop.

For more information about Novo Nordisk, please visit: www.novonordisk.com



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