

**Medtronic**

Engineering the extraordinary

Learn with Lenny

Nutritious  
& Delicious



# What are carbohydrates?

Carbohydrates (carbs) are one of the three main food groups, along with fats and proteins, that we need to have a healthy body.

You will probably eat carbs every day and in most meals without even realising it!



## Types of carbs

There are two groups of carbohydrates. The first group contains starch-based carbs. These include foods such as potatoes, bread, cereals, pasta and rice.

The second group is sugar-based carbs. This includes foods with added sugar such as some cereals and biscuits but also foods with natural sugars like fruit and milk.

## Fun Facts

1. Your brain can only get energy from carbohydrates (not fat or protein) which is why you might feel confused, dizzy or unable to concentrate if you are hungry or your glucose levels are low.
2. For the budding scientists you can tell what carbohydrates are made of by breaking down the word into carbo - hydrate = carbon + water (hydrogen and oxygen)

## Why are carbs important?

Carbohydrates are so important because they are our main source of energy and fibre. They help our bodies to grow big and strong, plus they help our brains work well so that we stay happy.

## Snack swap

We should try to reduce the amount of sugar-based carbs we eat and make sure we don't have them too often. So, sometimes swapping out a cake and adding in an apple or a carrot is a great idea!

## Portion size

You can include 4-5 portions of starch-based carbs into your daily diet. A portion would be one slice of bread or 3 tablespoons of cooked rice

## Glucose content

Carbs are wonderful for energy but this means they will increase your glucose levels. It is important to have an adult help you to count the amount of carbs in your foods so that you can take the right amount of insulin.

# Learn about different fats

Fat is naturally found in animal products (meat and dairy), nuts, seeds, grains and some fruits such as olives and avocados, which makes it an important part of a healthy diet.

Did you know  
that Avocado is  
73% water?



## Types of fats

There are lots of different types of fats, but the two main ones are saturated fats and unsaturated fats.

### Saturated fats

Saturated fats are usually solid and are natural sources of fats found in animals and plants. Some examples would be fatty cuts of meat or full-fat dairy products like cheese or butter.

You can also find saturated fats in treat foods, such as cakes, pies, doughnuts and biscuits.

### Unsaturated fats

Unsaturated fats can be good for our bodies in the right portion size. You can find unsaturated fats in salmon, tuna, nuts and foods like avocado or olives.

## Portion size

It's healthy to have some fat in our diets like 1-2 teaspoons of butter or butter-like spread a day is fine, and 2 ounces of meat, fish or cheese (a dice-shaped amount) would be a good daily amount to have in your diet.

## NOTES

### Why are fats important?

Fat is important as it gives us energy, and it helps provide our bodies with vitamins A, D, E, and K. These help our bodies and make sure that we stay healthy.

### Glucose Content

Fat has little or no glucose, so won't affect glucose levels. But some foods such as biscuits and doughnuts will be high in fat and carbs so it is important to check with an adult which high-fat foods you might need insulin for.

Speak with your parents and diabetes healthcare team about how much fat you should have, and which ones are healthier for you.

## Fun Fact

Fats can keep you warm, and help your body cells grow to keep your body working well everyday.

# Why is protein important?

Protein helps to grow and repair all the muscles, bones and tissues in our bodies. It makes us strong, keeps us healthy and gives us our **super powers!**

Protein rich foods tend to make us feel fuller for longer compared with fats or carbs.



## Types of protein

There are two different types of protein we can learn about.

The first type is animal protein which includes red meat, poultry (like chicken), fish and eggs.

The second type is non-animal protein, such as: beans, lentils, tofu, soy, nuts and seeds.

## Portion size

You can use the palm of your hand to measure a portion of food!

A portion of protein is about the size of your palm or a small pack of playing cards. You can have lots of fun measuring your protein with a pack of cards!

Try to have 2-3 portions of protein each day to keep growing big and strong!

## Glucose Content

Did you know that most protein foods contain little or no glucose? This makes them easier to eat for anyone with diabetes as it means you probably won't need to count the carbs and take any insulin.

However, make sure that you check food labels. Some toppings and sauces may have glucose in them so it's always good to find out about the contents.

## Fun Facts

Nuts and seeds are a great low carb snack idea if you are feeling hungry between meals

## Fun Fact

The protein found in eggs is considered to be the best quality in all foods. Perfect for egg lovers

# What are fruits?

Fruits are natural, nutritious foods that add colour and taste to your every meal. Great as an after-lunch dessert, a snack between meals or as part of your breakfast to start the day the right way.

## Fun fact!

Unbelievably, a banana is a berry!

## Fun fact!

Despite its name a strawberry is not actually a berry!

## Start with fruit

Fruits are a great way to ensure you get Vitamin C. Vitamin C is necessary to help us grow.

## Why are fruits important?

Fruit gives you energy because it contains fructose, a natural source of sugar.

Fruit can help our bodies feel good and give us healthy superpowers as it is rich in vitamins, minerals and fibre - something that keeps our digestive systems in tip top shape.

## Fructose Content

It may be that you need to take some insulin when you are eating fruit. This is because fruit contains the natural sugar fructose that can increase your glucose levels.

Speak with your parents and your diabetes healthcare team if you need to take insulin when you eat certain portions of fruit.

## Types of fruits

One of the best things about fruit is that they come in all shapes, flavours and sizes! From crimson apples, all the way to mouth-watering mango, juicy oranges and sensational strawberries. You can eat a rainbow of delicious tastes and textures that give you a healthy boost of energy to help you enjoy your day.

## Portion size

Open the palm of your hand. Look at the space - this is the size of one portion of fruit.

If you want to make sure you have all your superpowers, you should try to eat around 2-3 portions of different fruit every day.

Did you know apples can float on the water because they are 25% air?



# Start with a vegetable

Vegetables (including salads) are an important part of a healthy diet. They contain water and fibre and are rich in minerals and vitamins such as vitamins A and C. Many can be eaten cooked or raw and add lots of nutrition whether with a meal or as a snack when you are on the go!

Did you know that carrots can be different colours like orange, purple, red and black? Carrots are a tasty root vegetable you can eat when either raw or cooked.



## Why are vegetables important?

You won't believe how many vitamins and minerals there are in vegetables! Vegetables often contain lots of fibre which keeps your body working well so they are perfect to eat every day.

## Types of vegetables

There are so many different types of salad and vegetables that you can find at least one to enjoy - think of sweet green peas, crisp fresh lettuce, juicy red tomatoes and full of flavour broccoli.

## Portion size

Look at the palm of your hand! You can use this to measure a portion of vegetables!

A portion is the amount you can fit into your palm. It's a good idea to enjoy at least 2-3 portions of delicious vegetables or salad every day.

## Glucose content

Vegetables and salads usually have low levels of glucose, so you may find that your diabetes healthcare team may say that you do not need to use insulin with these foods.

## Fun Facts!

1. A tomato is a fruit because it contains seeds and grows from a flower on the tomato plant.
2. In some counties around the world, a courgette is called a zucchini.

# Let's learn about dairy!

Dairy foods are any that are made from milk. These include milk, cheese, yoghurt, cream and even ice cream! You might choose non-dairy alternatives for different personal reasons. These are made from plant-based foods like soya, oats and coconut. If you are using non-dairy alternatives, always check that they contain a good level of calcium. Calcium is important to help your bones grow and keep them strong.

Did you know that there are different kinds of milk available such as soy milk and almond milk?



## A type of dairy

There is such a variety of dairy foods. You can choose all different types of milk, cheese and yoghurt to boost your dairy intake every day.

## Portion size

Portion size is important when you have diabetes. Having 2-3 portions of dairy every day is great at keeping your body fit and healthy. You can include dairy portions such as a small glass of milk, a regular pot of yoghurt or a block of cheese about the size of your thumb to make sure you get enough of the right dairy foods.

## Why is dairy important?

Making sure you get enough dairy in your diet is really important.

Dairy foods often contain lots of calcium, protein and vitamins. Calcium helps your bones grow and stay strong. Protein gives your muscles super strength and vitamins make your whole body nice and healthy.

## Glucose Content

Some dairy foods contain a natural sugar called lactose which can cause your glucose levels to rise. Some dairy products have added sugar so it's best to check the labels to make sure you know if you might need to take some insulin.

## Fun Fact!

There are around 1,800 different types of cheese in the world. With that amazing range, everyone will be able to find their favourite cheese.

## Fun Fact!

People all around the world drink milk from all sorts of animals, including goats, camels, donkeys and water buffalo!

## Did you know?

Butter is also a dairy product that is made from the fats found in milk

# 3 Tips for a healthy diet:



## Eat fruit and vegetables

Aim to include one portion of fruit, vegetables or salad with every meal to make sure you are getting essential vitamins and nutrients.



## Experiment with food

Experiment with different foods and flavours - try a different food or drink once a week and tell your friends about it!



## Remember to stay hydrated

Stay hydrated by taking regular sips or slurps of a water based drink during the day.