

International  
Diabetes  
Federation



Educational guide on  
nutrition and diabetes in schools

TEACHERS

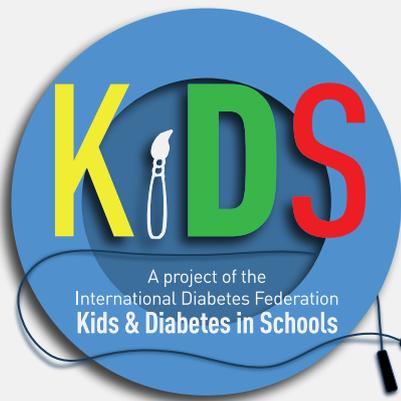
KIDS

PARENTS

DIABETES PARENTS

This *Nutrition and Diabetes in Schools* educational guide has been developed for different groups of people. You will easily find your way using these tabs.





Nutrition guide  
for TEACHERS



Educational guide on  
nutrition and diabetes in schools

## Acknowledgements:

This material has been developed in collaboration with the members of the **KiDS Advisory Committee:**

Monika Arora, Angie Middlehurst, Denise Reis Franco, Nikhil Tandon, Maeva Germe, Belma Malanda, Els Sung.

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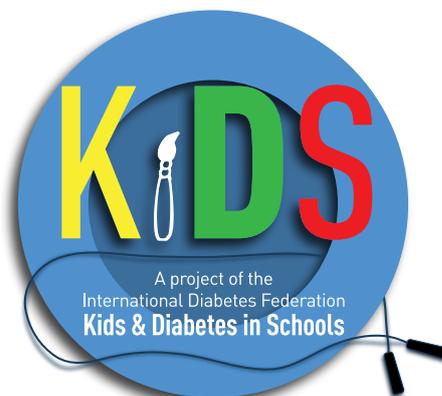
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Diabetes  
Federation**

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- How to read food labels

# INTRODUCTION

This **Nutrition and Diabetes in Schools** educational guide has been developed as a complimentary resource to the Kids and Diabetes in Schools Information Pack, published by the International Diabetes Federation in 2015. This guide is an awareness and information tool created to inform teachers, parents and children of the important role of nutrition in the management and prevention of diabetes.

Nutrition plays a vital role in supporting a healthy lifestyle for children. The nutritional needs of school-age children are important as they grow significantly during this period. For children living with diabetes, choosing the right food plays an important role in maintaining healthy blood glucose levels and promoting normal growth.

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THE AIM OF THIS PACK IS TO:

Educate on the importance of nutrition.

Educate on healthy and balanced lifestyles.

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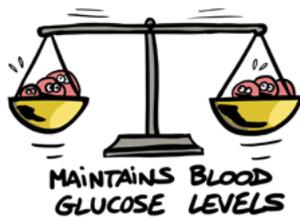
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# WHAT IS THE IMPORTANCE OF EATING A HEALTHY AND BALANCED DIET?

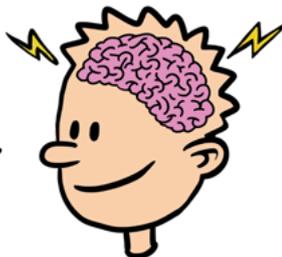
## The importance of nutrition?

**DID YOU KNOW THAT** children with diabetes have the same nutritional needs as other young people of the same age!

Childhood is an important period of growth and development. Nutrition and physical activity is vital in supporting a healthy lifestyle in children. Children and adolescents have specific nutritional needs. Helping to choose the right foods at an early age helps them to develop life-long healthy habits.



IS VITAL FOR MENTAL HEALTH



INCREASES HAPPINESS



**DID YOU KNOW THAT** the amount of nutrients depends on your age, weight and activity.

# WHAT IS NUTRITION?

Our food is made up of **three main nutrients**: carbohydrates, fats and proteins, as well as other **small nutrients** such as vitamins and minerals.

It is essential that a daily diet provides all of these nutrients in the right quantities especially for children living with diabetes.

## CARBOHYDRATES



When carbs turn into glucose they are the main source of energy for the brain and the body

## FATS



Provide energy for growth and physical activity

## PROTEINS



Helps growth and repair of body tissues

## VITAMINS & MINERALS



Regulate many body functions and keep the body healthy

Calcium keeps bones and teeth healthy

## FIBRE



Helps to manage blood glucose levels  
Keeps the gut healthy

## WATER

Drinking lots of water helps the body stay hydrated

Together with a diabetes team children with diabetes can learn to count their carbohydrates in their meals, which will help them to calculate the number of units of insulin they need.

Insulin is necessary for your body's cells to use glucose for energy

# THE IMPORTANCE OF A GOOD NIGHT'S REST

## DID YOU KNOW THAT

- Children and adolescents need 8 to 10 hours of sleep and rest.
- Lack of sleep can affect your appetite and food choices, This can increase weight and make insulin work less well so blood glucose levels can be higher.



# HOW TO PREPARE HEALTHY MEALS?

It is important that the right foods is chosen at all meals, both at home and in school.

## Include

- Lean meats, fish and eggs
- Food high in fibres (whole grains, legumes)
- Wide variety of colourful fruits and vegetables
- Low fat dairy products (yoghurts, cheese, milk)
- Variety in child's meals to avoid monotony
- Healthy drinks to stay hydrated

## Avoid

- Food made from refined cereals and flours (white bread and breakfast cereals)
- Food high in added sugars (cakes, pastries, juices, ice creams)
- Drinks containing sugar (unless to treat hypoglycaemia)
- Food with added salt (chips, salted biscuits, snacks, sauces)

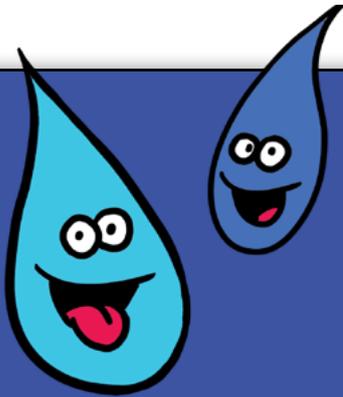
**TIP:** Include children in making healthy food choices!



Carbohydrates, fats and proteins improve memory, attention span, creativity and problem solving abilities

# HOW TO DRINK HEALTHY?

The guide below advises children to drink the following beverages in the indicated proportions to guarantee good hydration.



**WATER**  
PLENTY



**MILK**  
REGULARLY



**FRUIT + VEG JUICES**  
ONCE A DAY



**SUGAR FREE DRINKS**  
IN MODERATION



**TEA or COFFEE**  
OCCASIONALLY



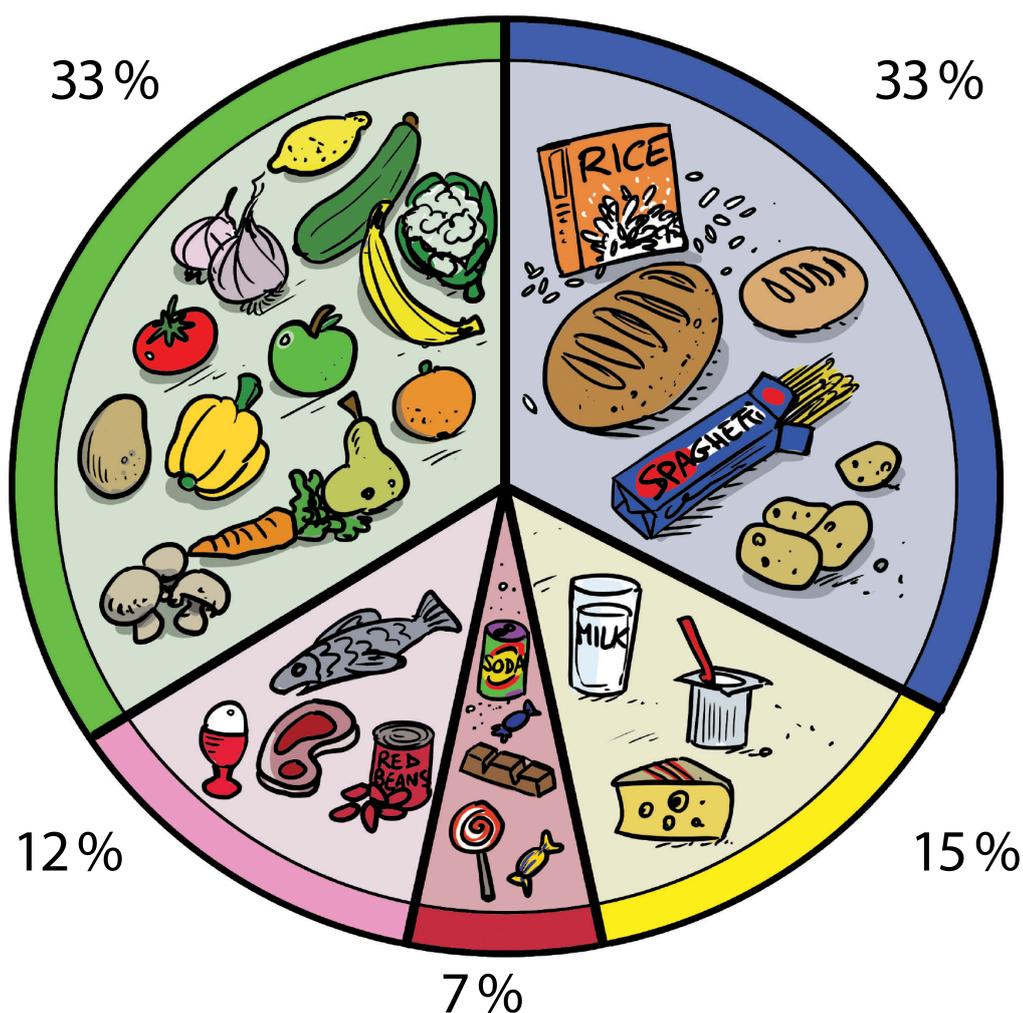
**SUGAR DRINKS**  
IN SMALL AMOUNTS

# HOW TO STAY HEALTHY? EAT WELL PLATE

There is a lot of evidence that lifestyle changes can help prevent the development of type 2 diabetes.

The foods we eat can be divided into five food groups as shown below in the eat well plate. You will have a well-balanced diet if you eat a variety of foods from across the groups.

## THE EATWELL PLATE



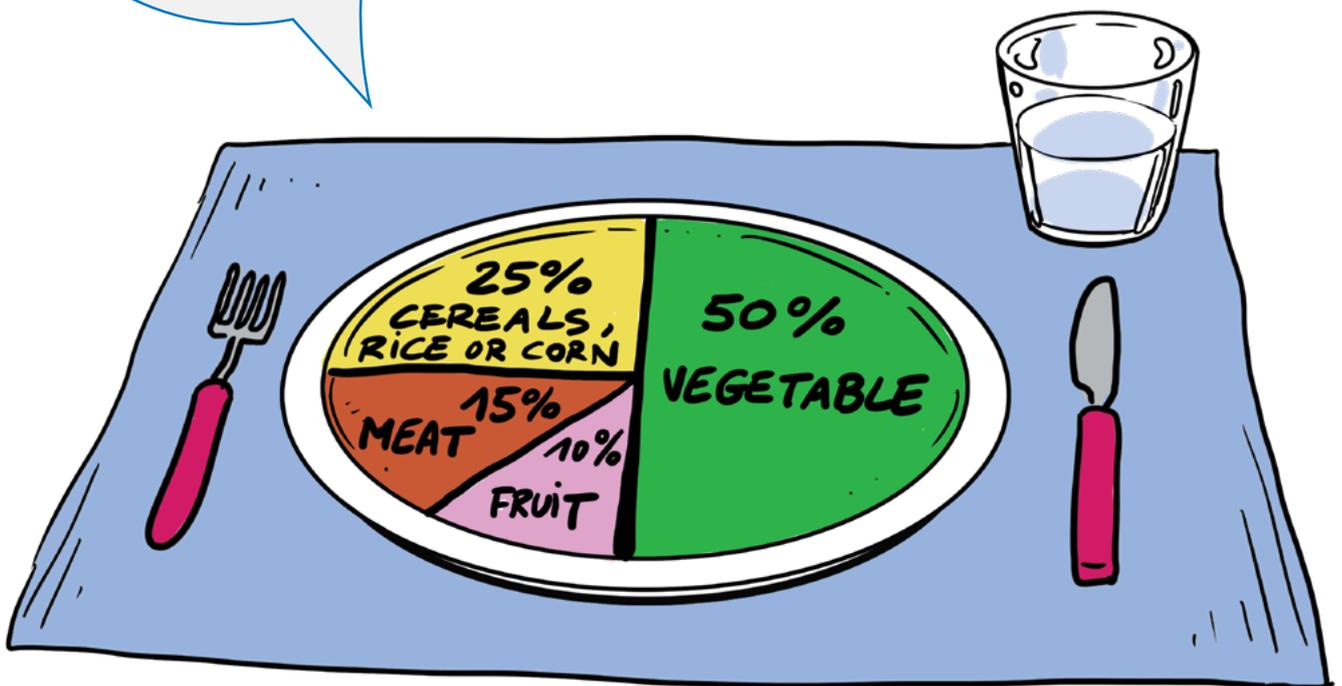
**Try to remember these proportions in your diet.**

# PLATE METHOD

For your main meal, the plate method provides a useful visual guide to judge portion size.

## TIP:

Balance insulin and carbohydrates to keep the blood glucose closer to the target levels of children with diabetes

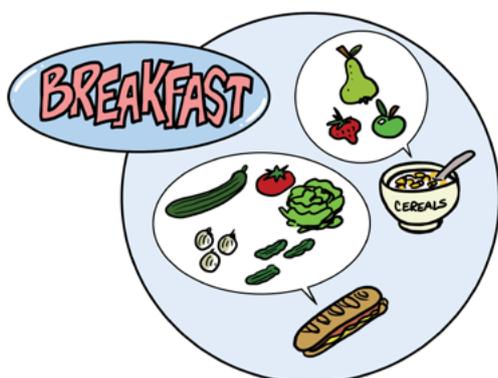


## TIPS:

1. Adapt the plate according to local foods
2. Use unsaturated fats such as olive oil or sunflower oil to cook your food

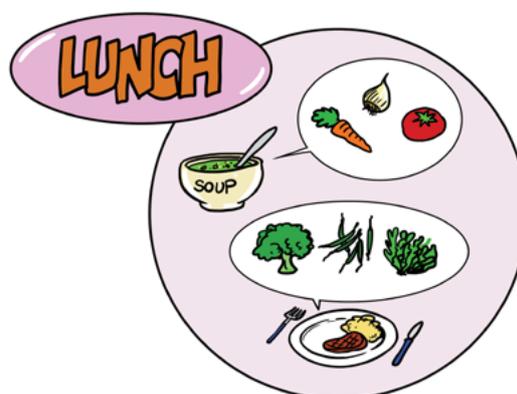
# HOW TO INCORPORATE MORE FRUITS AND VEGETABLES INTO THE DIET

It is recommended to eat at least 2 ½ cups of fruits and vegetables each day!



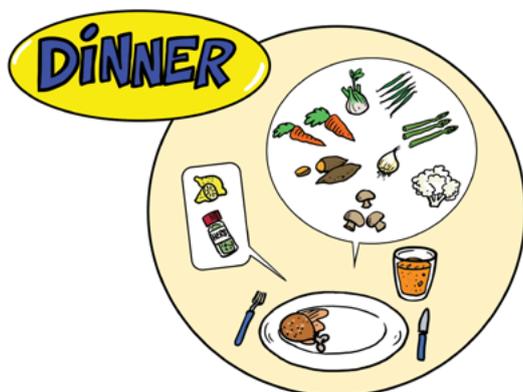
Add fruit on top of your cereal or in your yoghurt

Add vegetables in your sandwich

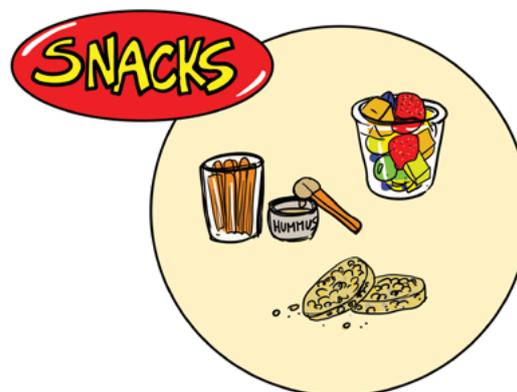


Add vegetables in soup or sandwiches

Add a small side of salad with low fat dressing to your main dish



Fill at least half your plate with vegetables and fruit



Bring a handful of fresh fruits, dates and/or nuts in small pots or cups

# MYTHS ON FOOD AND NUTRITION

## True or False quiz

TRUE OR FALSE:

*When unwell and unable to eat, insulin should be avoided*

**FALSE:** Blood glucose levels may actually rise higher than usual because the body is under stress on sick days. Therefore it is important to check blood glucose levels frequently and not avoid administering insulin despite not being able to eat as usual. Sometimes increased insulin dosage can be required on sick days.

TRUE OR FALSE:

*Fruit juice is as healthy as eating fruit*

**FALSE:** Fruit juice has the fibre removed therefore can raise blood glucose levels quickly. It should therefore be limited. Eating whole fruits is preferable. Sugar amounts in fruit juice can cause a significant spike in blood glucose levels, increasing the risk of hyperglycaemia.

TRUE OR FALSE:

*Foods that do not contain carbohydrates can be eaten freely*

**FALSE:** Food containing fat and protein can raise blood glucose levels. High fat and sugar snacks should be limited. Between meals snacks should be small, low fat and healthy. Seek individual advice for healthy snack ideas in your country.

TRUE OR FALSE:

*When a blood glucose level is high, meals should be avoided*

**FALSE:** The cause of a high blood glucose level must be discovered; whether it was due to the increased carbohydrates in the meal, or lack of insulin or increased stress or illness. Avoiding a meal will not solve the problem.

TRUE OR FALSE:

*A person with diabetes must avoid rice.*

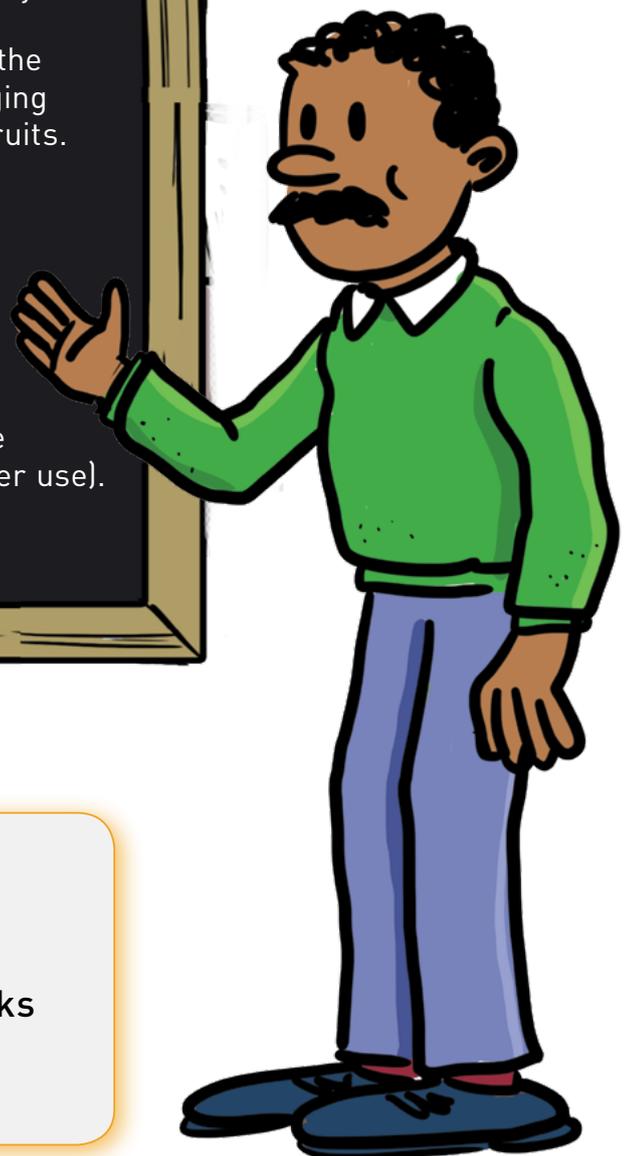
**FALSE:** Rice can be included in the daily meal plan of a child with diabetes just like any other starchy food. Young people with diabetes do not need to avoid any foods.

# HEALTHY MEAL PLANNING AT SCHOOL

The role of the school

Schools can do the following, to support and encourage healthy eating:

- Form a school health advisory council or committee to coordinate and monitor all health promotion efforts within the school
- Adopt a nutrition policy that promotes healthy eating through actions such as, classroom lessons, a healthy canteen menu, limiting the availability of unhealthy food and encouraging consumption of vegetables and seasonal fruits.
- Conduct regular checks of lunch and snack boxes to ensure children bring healthy food
- Encourage regular education sessions in school by government and NGOs to train school teachers, counsellors and medical staff to promote healthy living and manage children with diabetes (including glucometer use).
- Organise cooking classes



**TIP:**

Make healthy snacks attractive!

# TIPS FOR SCHOOL STAFF ABOUT FOOD AND DIABETES

1. Every child, with or without diabetes, needs an adequate amount of calories and nutrients to grow healthy. To ensure a balanced diet, use your national **food guides** (pyramids, wheels, plate model,...) to help you find strategies to encourage **healthy eating habits** – **It's a key part of providing a healthy foundation for future generations!**
2. Remember that **carbohydrates** in foods are transformed into **glucose** after digestion and affect the blood glucose levels (**glycaemia**) – Children with diabetes need this nutrient for proper energy and growth. To maintain good glycaemia control, it is most important to match the insulin with the amount of carbohydrates eaten.
3. **Have access to the child's individual meal plan** (ask the parents/health team).  
  
This will help to ensure that meals are on time and that the proper amount of food is eaten (especially food with carbohydrates). The meal plan works together with insulin doses. Therefore it is important to stick with it – to help manage blood glucose, avoiding “highs” (hyperglycaemia) and “lows” (hypoglycaemia).
4. **Have foods available to treat hypoglycaemia in the classroom at all times** (for example: glucose tablets, juice)
5. **Do not forbid sugar and sugary foods at celebrations and birthday parties in school.** They can be included with moderation in a healthy diet. The child with diabetes will probably need insulin adjustments to prevent hyperglycaemia. Make sure parents are informed so they can help you with what to do. If possible, as in every other change in the child's usual school routines, inform the parents in advance so they can adjust.
6. When a child **exercises** (gym class, sports/games days), he or she may need **extra snacks** with carbohydrates and/or **lower insulin** doses to prevent hypoglycaemia. It is also important to have a glucometer and food nearby and to follow the child's individual management plan for exercise (eg. water, sugar, crackers, fruit juice.)
7. It is very important to have an **open communication** with the child, parents/ caregivers, school nurse, health team and other educators. This will provide safety and confidence for everyone, especially for the child and family.

# HOW TO READ FOOD LABELS

Reading food labels will help you to understand nutritional values to make healthy food choices!

Nutrition facts	
Serving size	1 cookie (24g)
Amount per serving	
<b>Calories</b>	
<b>%Daily Values*</b>	
Total Fat 2.5g	4%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 85mg	6%
Total Carbohydrates 19g	6%
Dietary Fiber 1g	4%
Sugars 11g	
Protein 1g	
<b>Ingredients:</b> Rice Flour, Organic Granulated Cane Juice, Dark Chocolate Chunks (granulate, cane juice, chocolate liquor, cocoa butter, dextrose, soy lecithin, vanilla) Natural Vanilla Flavor, Salt, Baking Soda, Xanthan.	

**Pay attention:**  
The quantity you eat may be bigger than the quantity used here to calculate the nutrition facts.

The number of calories contained in a single serving.  
**Not in the whole package!**

Try to limit the amount of these components in your diet.

Avoid products with more than 8g of sugar per portion.

The list of ingredients provide important information about what you are eating.\*



\* On a food label, the ingredients are listed in order of quantity, with the ingredients used in the greatest amount first, followed in descending order by those in smaller amounts. Therefore limit products that have as first ingredients all forms of sugars: sucrose, corn-syrup, high-fructose corn syrup, invert sugar, maltose, dextrose, cane sugar, beet sugar.

# RESOURCE WEBSITES

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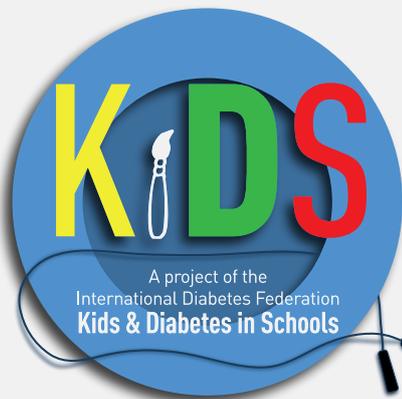
- For more information visit us at <https://Kids.idf.org>

## ADDITIONAL RESOURCES

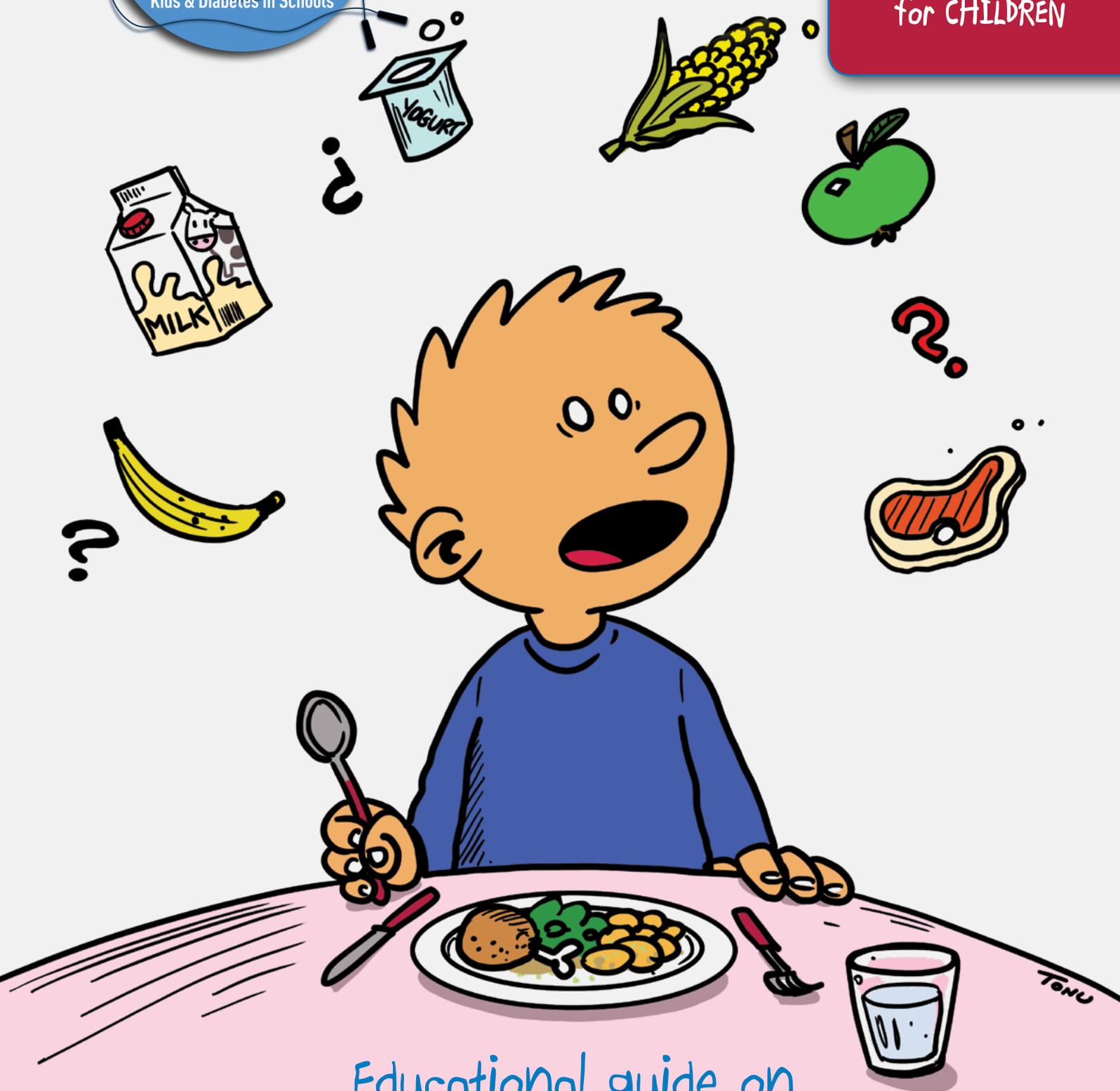
- Diabetes Canada - Healthy Eating for School-age Children <https://www.diabetes.ca/healthykidseat>
- Diabetes Research Institute - Nutrition for children with diabetes <https://www.diabetesresearch.org/document.doc?id=705>
- ISPAD Clinical Practice Consensus Guidelines 2018 - Nutritional management In children and adolescents with diabetes [http://c.ymcdn.com/sites/www.ispad.org/resource/dynamic/forums/20180124\\_110721\\_14532.pdf](http://c.ymcdn.com/sites/www.ispad.org/resource/dynamic/forums/20180124_110721_14532.pdf)
- IDF Life for a Child and ISPAD - Pocketbook for management of diabetes in childhood and adolescence in under-resourced countries, 2nd edition <https://www.idf.org/e-library/guidelines/89-pocketbook-for-management-of-diabetes-in-childhood-and-adolescence-in-under-resourced-countries-2nd-edition.html>
- Carb counting with Lenny <http://www.lenny-diabetes.com/carb-counting-with-lenny.html>



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Nutrition guide  
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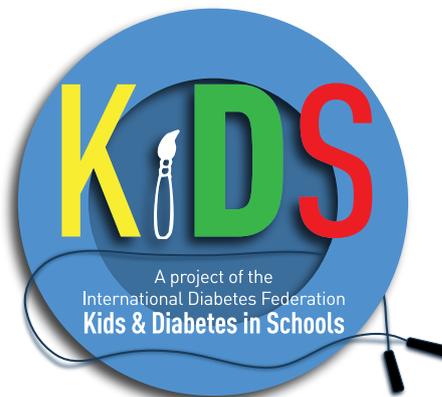
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# WHAT IS THE IMPORTANCE OF EATING A HEALTHY AND BALANCED DIET?

## The importance of nutrition?

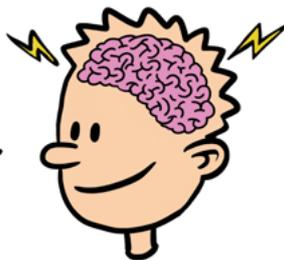
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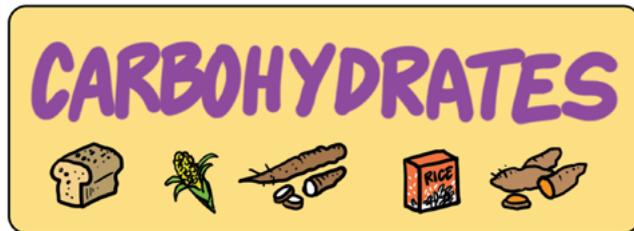
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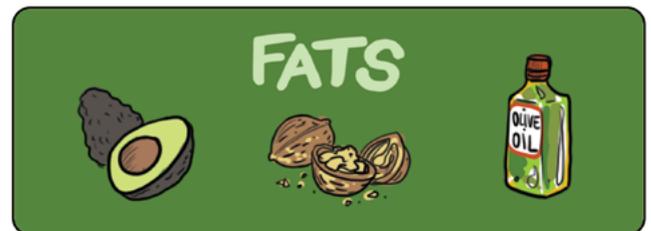
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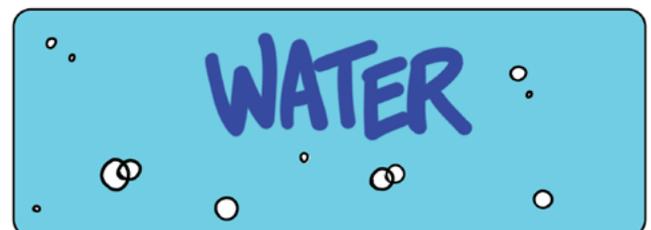


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Keeps the gut healthy



Drinking lots of water helps the body stay hydrated

Insulin is necessary for your body's cells to use glucose for energy

# THE IMPORTANCE OF A GOOD NIGHT'S REST

## DID YOU KNOW THAT

Children and adolescents need 8 to 10 hours of sleep and rest.



### TIP:

Children with diabetes should always check their blood glucose before bed.

A healthy snack may be needed to keep the blood glucose in the target range!

# HOW TO PREPARE HEALTHY MEALS?

It is important that the right foods is chosen at all meals, both at home and in school.

## Include

- Lean meats, fish and eggs
- Food high in fibres (whole grains, legumes)
- Wide variety of colourful fruits and vegetables
- Low fat dairy products (yoghurts, cheese, milk)
- Variety in child's meals to avoid monotony
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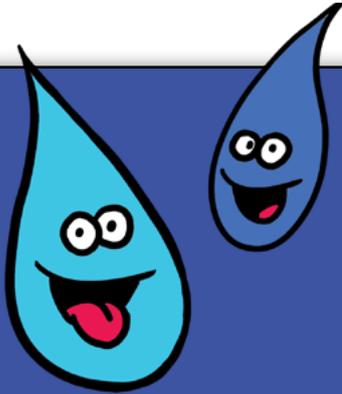
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PLENTY



**MILK**  
REGULARLY



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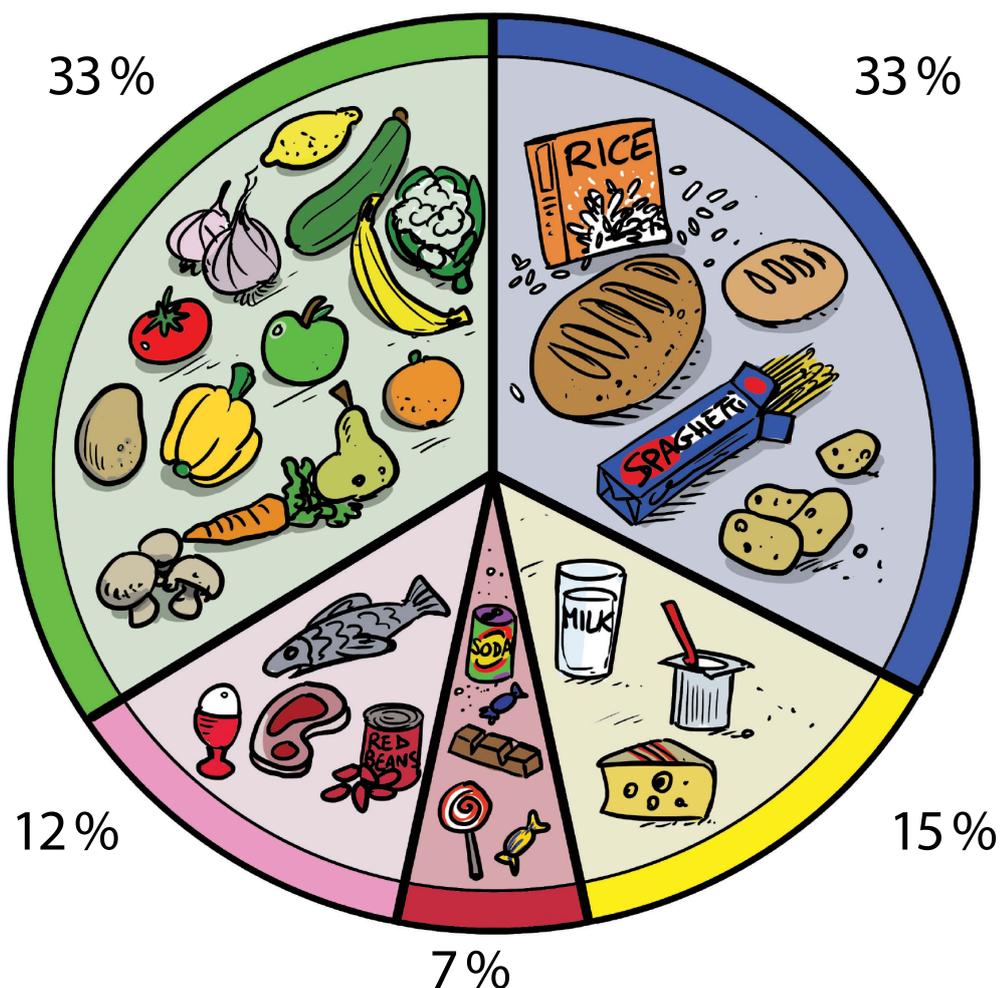
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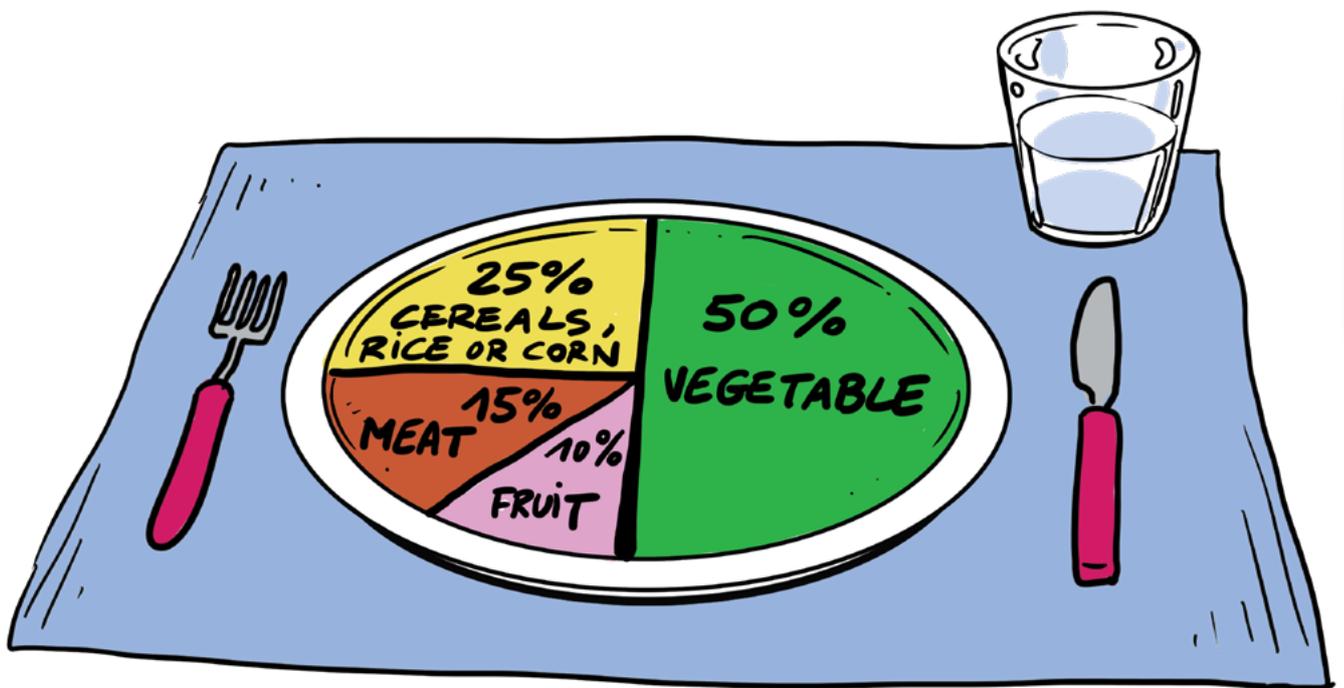
## THE EATWELL PLATE



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# PLATE METHOD

For your main meal, the plate method provides a useful visual guide to judge portion size.

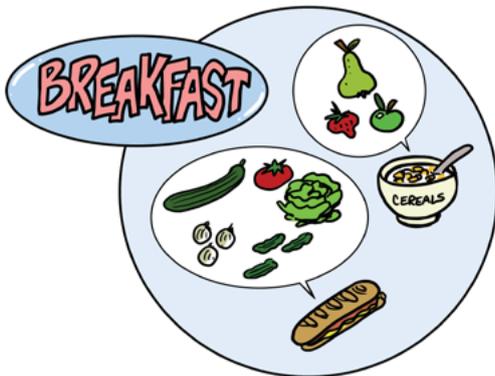


CHILDREN

**TIP:** Adapt the plate according to local foods

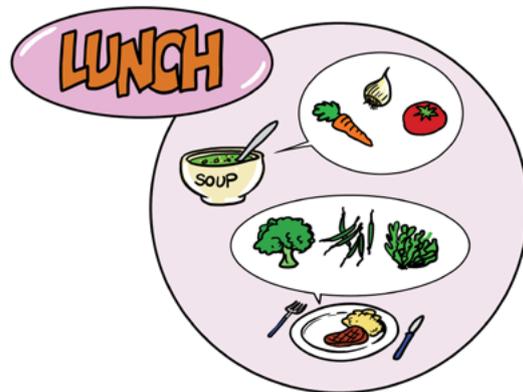
# HOW TO INCORPORATE MORE FRUITS AND VEGETABLES INTO THE DIET

It is recommended to eat at least 2 ½ cups of fruits and vegetables each day!



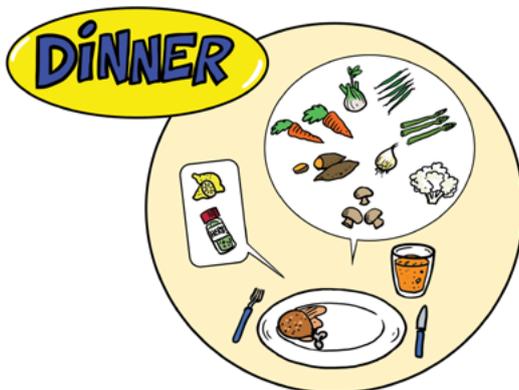
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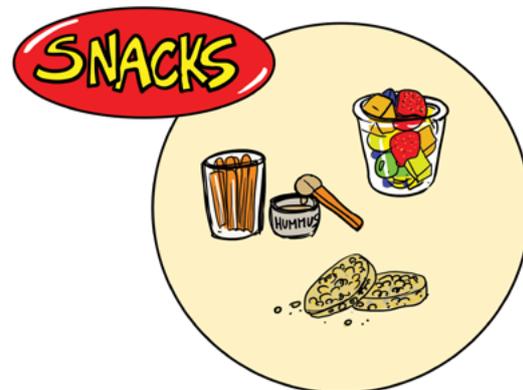


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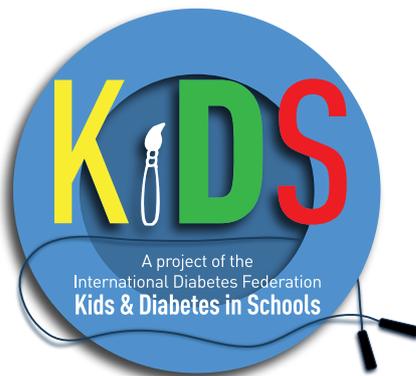
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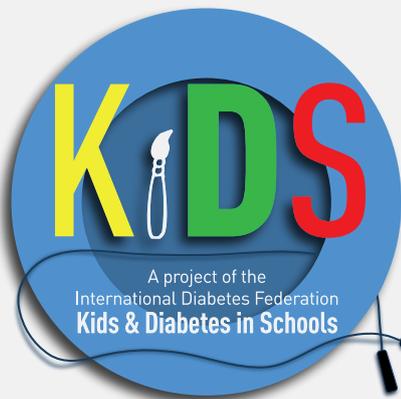
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Bring a handful of fresh fruits, dates and/or nuts in small pots or cups



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Nutrition guide  
for PARENTS



Educational guide on  
nutrition and diabetes in schools

Tonu

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**International  
Diabetes  
Federation**

International Diabetes Federation 166  
Chaussee de La Hulpe  
B-1170 Brussels, Belgium

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## Nutrition and diabetes

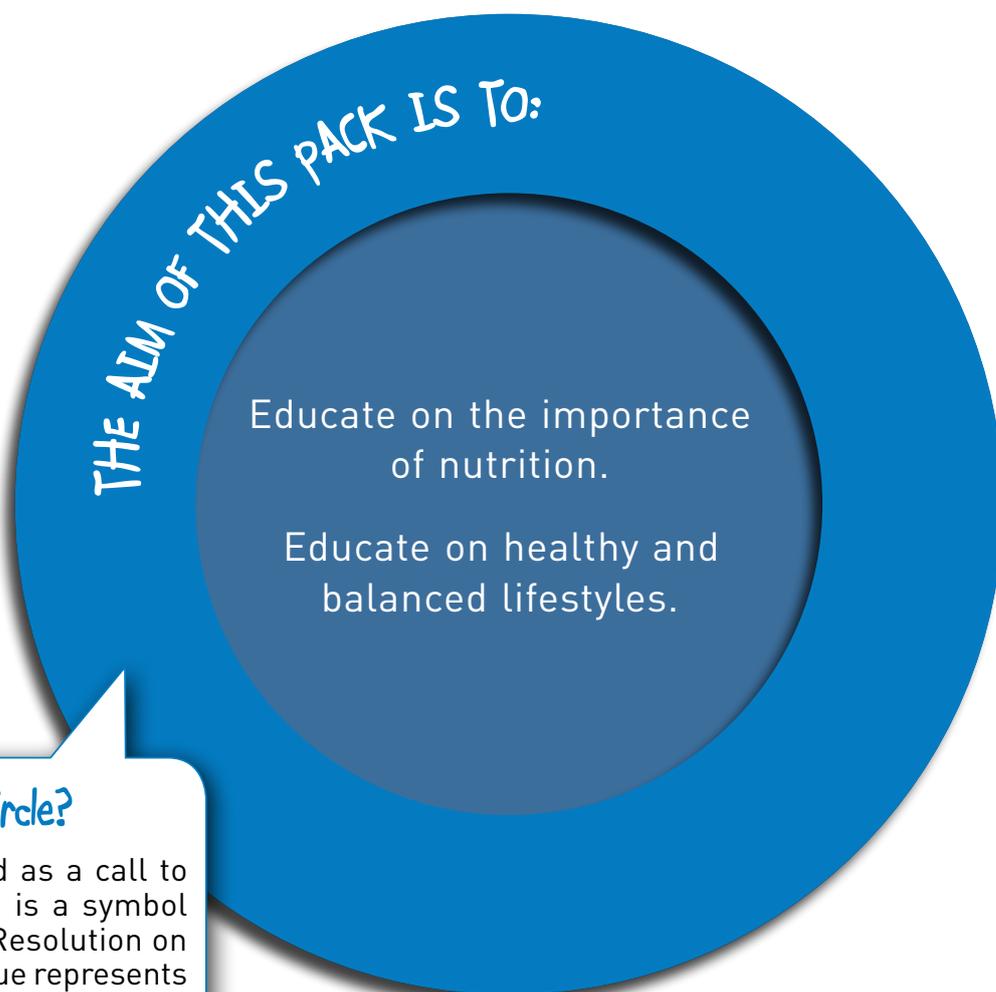
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# INTRODUCTION

This **Nutrition and Diabetes in Schools** educational guide has been developed as a complimentary resource to the Kids and Diabetes in Schools Information Pack, published by the International Diabetes Federation in 2015. This guide is an awareness and information tool created to inform teachers, parents and children of the important role of nutrition in the management and prevention of diabetes.

Nutrition plays a vital role in supporting a healthy lifestyle for children. The nutritional needs of school-age children are important as they grow significantly during this period. For children living with diabetes, choosing the right food plays an important role in maintaining healthy blood glucose levels and promoting normal growth.

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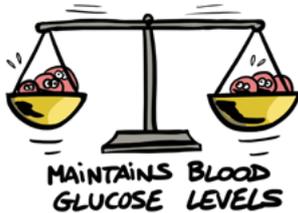
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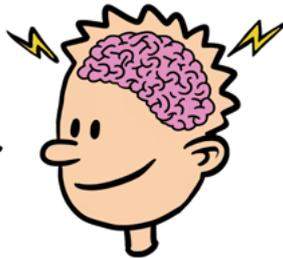
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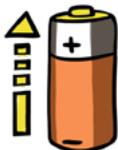
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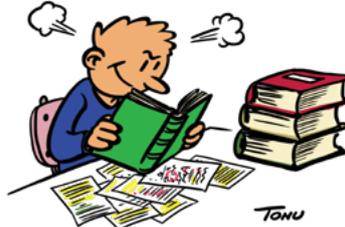


IMPROVES YOUR IMMUNE SYSTEM



PROVIDES ENERGY

SUPPORTS LEARNING



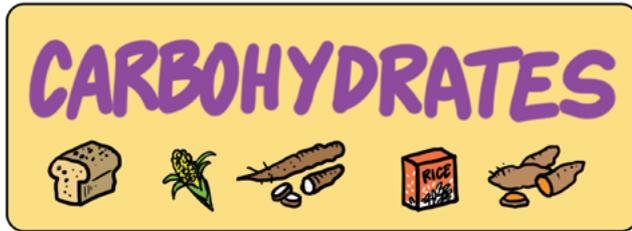
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the amount of nutrients depends on your age, weight and activity.

# WHAT IS NUTRITION?

Our food is made up of **three main nutrients**: carbohydrates, fats and proteins, as well as other **small nutrients** such as vitamins and minerals.

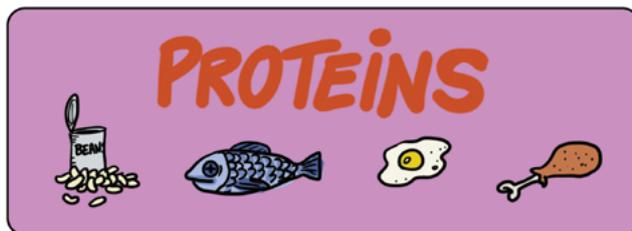
It is essential that a daily diet provides all of these nutrients in the right quantities especially for children living with diabetes.



When carbs turn into glucose they are the main source of energy for the brain and the body



Provide energy for growth and physical activity



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Regulate many body functions and keep the body healthy

Calcium keeps bones and teeth healthy



Helps to manage blood glucose levels  
Keeps the gut healthy



Drinking lots of water helps the body stay hydrated

Insulin is necessary for your body's cells to use glucose for energy

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## DID YOU KNOW THAT

- Children and adolescents need 8 to 10 hours of sleep and rest.
- Lack of sleep can affect your appetite and food choices. This can increase weight and make insulin work less well so blood glucose levels can be higher.



# HOW TO PREPARE HEALTHY MEALS?

It is important that the right foods is chosen at all meals, both at home and in school.

## Include

- Lean meats, fish and eggs
- Food high in fibres (whole grains, legumes)
- Wide variety of colourful fruits and vegetables
- Low fat dairy products (yoghurts, cheese, milk)
- Variety in child's meals to avoid monotony
- Healthy drinks to stay hydrated

## Avoid

- Food made from refined cereals and flours (white bread and breakfast cereals)
- Food high in added sugars (cakes, pastries, juices, ice creams)
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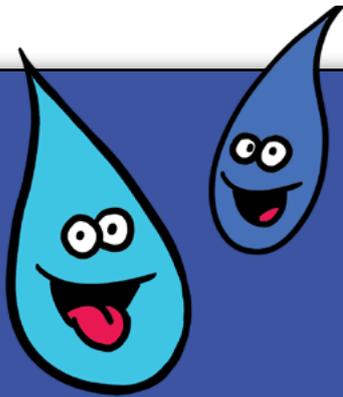
**TIP:** Include your child in making healthy food choices!



Carbohydrates, fats and proteins improve memory, attention span, creativity and problem solving abilities

# HOW TO DRINK HEALTHY?

The guide below advises children to drink the following beverages in the indicated proportions to guarantee good hydration.



**WATER**  
PLENTY



**MILK**  
REGULARLY



**FRUIT + VEG JUICES**  
ONCE A DAY



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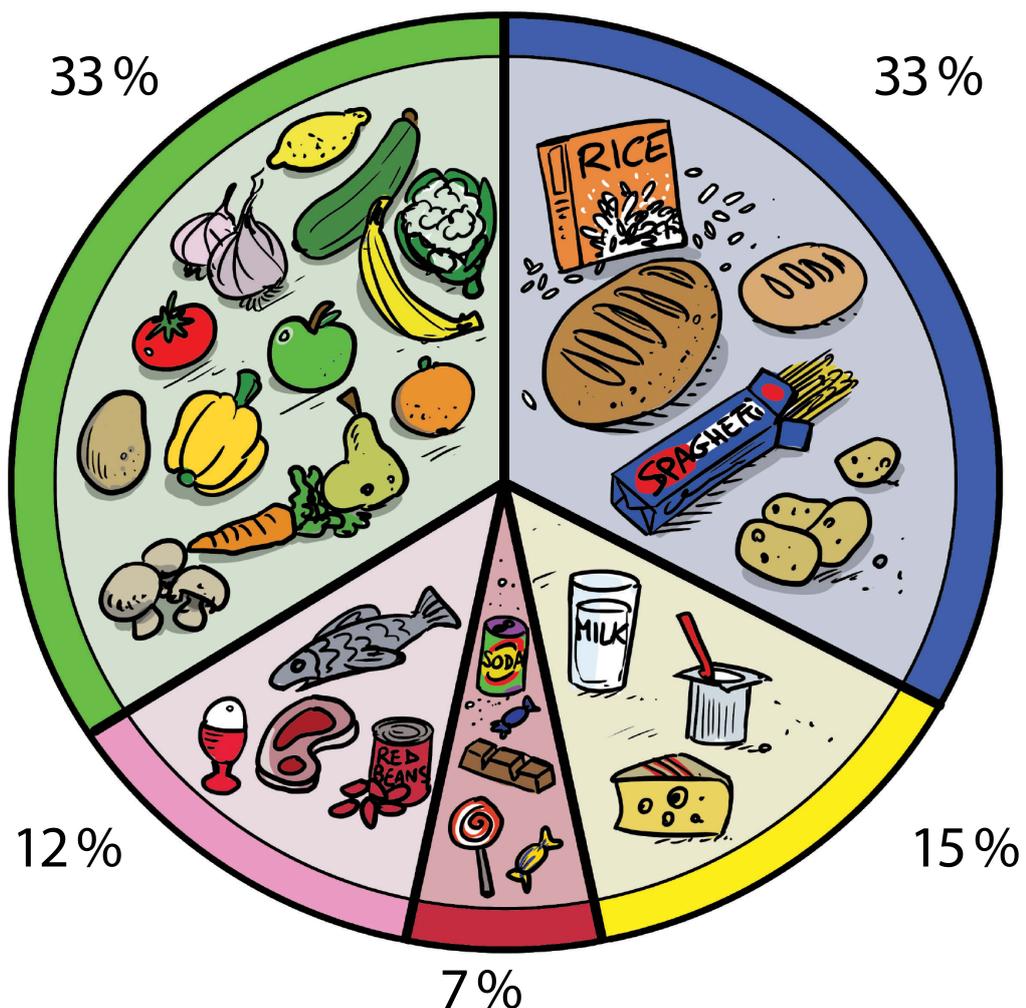
**SUGAR DRINKS**  
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# HOW TO STAY HEALTHY? EAT WELL PLATE

There is a lot of evidence that lifestyle changes can help prevent the development of type 2 diabetes.

The foods we eat can be divided into five food groups as shown below in the eat well plate. You will have a well-balanced diet if you eat a variety of foods from across the groups.

## THE EATWELL PLATE



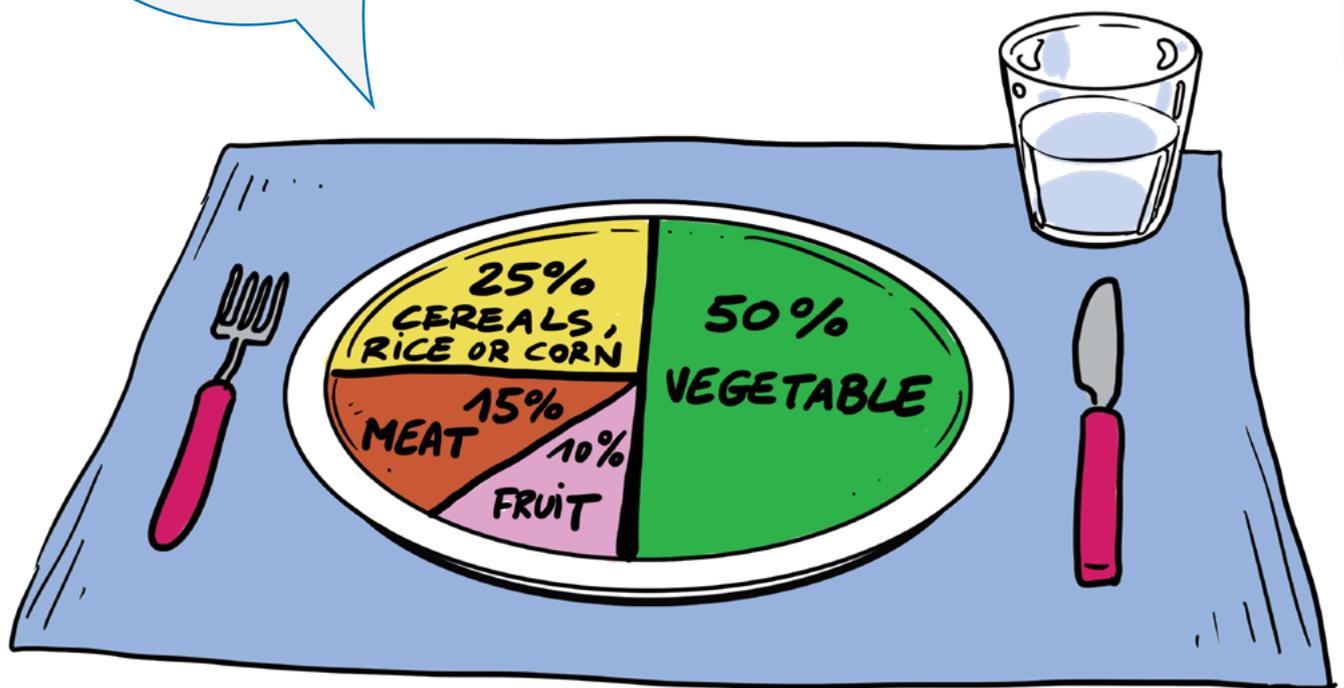
Try to remember these proportions in your diet.

# PLATE METHOD

For your main meal, the plate method provides a useful visual guide to judge portion size.

## TIP:

Balance insulin and carbohydrates to keep the blood glucose closer to the target levels of children with diabetes

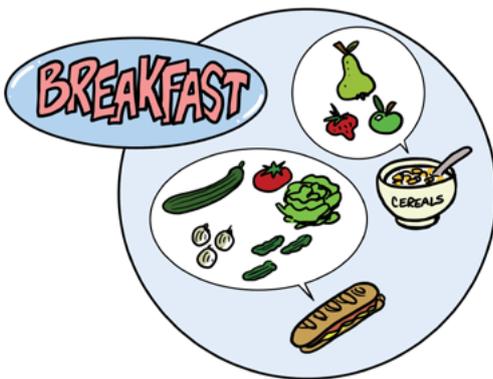


## TIPS:

1. Adapt the plate according to local foods
2. Use unsaturated fats such as olive oil or sunflower oil to cook your food

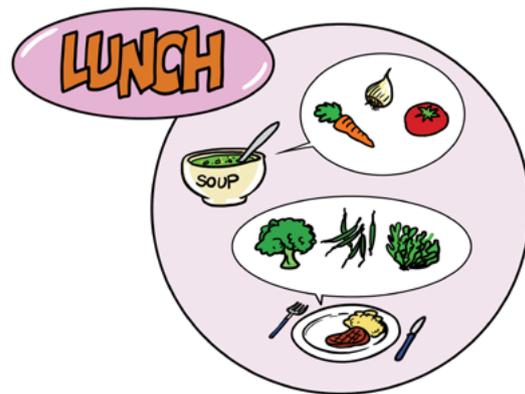
# HOW TO INCORPORATE MORE FRUITS AND VEGETABLES INTO THE DIET

It is recommended to eat at least 2 ½ cups of fruits and vegetables each day!



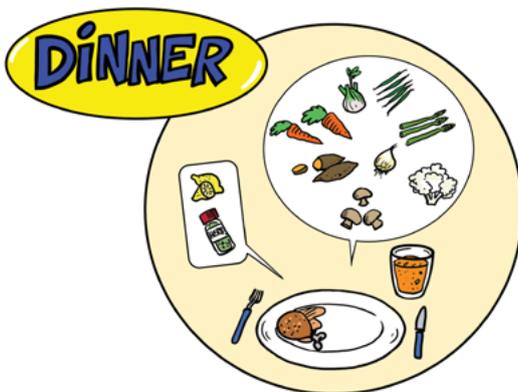
Add fruit on top of your cereal or in your yoghurt

Add vegetables in your sandwich

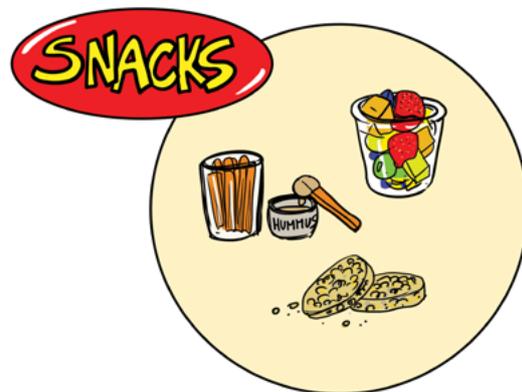


Add vegetables in soup or sandwiches

Add a small side of salad with low fat dressing to your main dish



Fill at least half your plate with vegetables and fruit



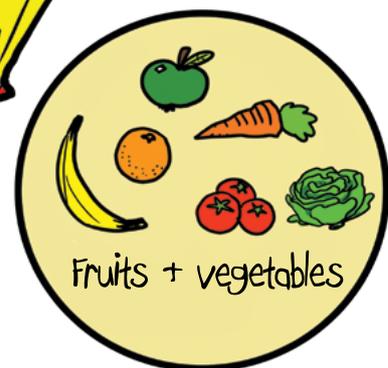
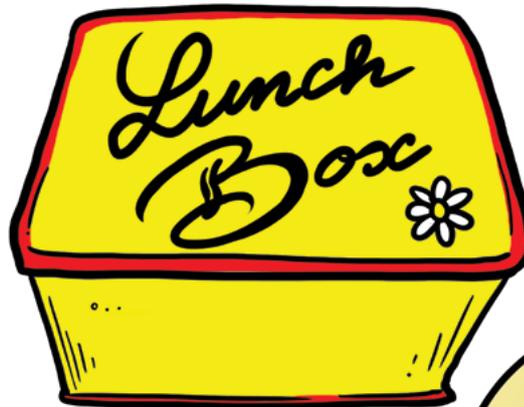
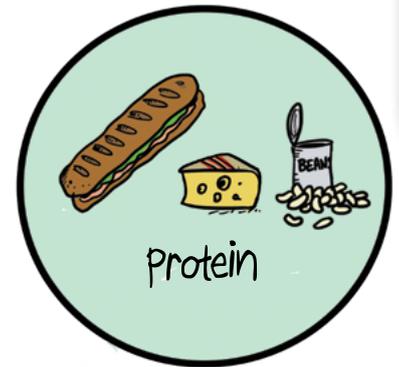
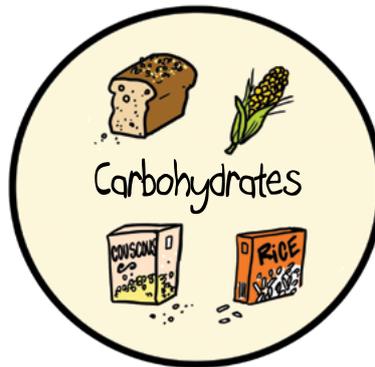
Bring a handful of fresh fruits, dates and/or nuts in small pots or cups

# HEALTHY MEAL PLANNING AT HOME

How parents should prepare food storage containers?

## TIP:

Make your child's lunch fun and attractive by using colourful and varied food



In warm environments, prevent the growth of harmful bacteria by storing packed lunches in a refrigerator until lunchtime.

Alternatively pack in cool bags with ice packs or frozen water bottles.

# TIPS FOR PARENTS ABOUT FOOD AND DIABETES

1. Every child, with or without diabetes, needs an adequate amount of calories and nutrients to grow healthy. To ensure a balanced diet, use your national **food guides** (pyramids, wheels, plate model,...) to help you find strategies to encourage **healthy eating habits** – **It's a key part of providing a healthy foundation for future generations!**
2. Remember that **carbohydrates** in foods are transformed into **glucose** after digestion and affect the blood glucose levels (**glycaemia**) – Children with diabetes need this nutrient for proper energy and growth. To maintain good glycaemia control, it is most important to match the insulin with the amount of carbohydrates eaten.
3. Provide school with your child's individual meal plan

# HOW TO READ FOOD LABELS

Reading food labels will help you to understand nutritional values to make healthy food choices!

<b>Nutrition facts</b>	
Serving size	1 cookie (24g)
Amount per serving	
<b>Calories</b>	
<b>%Daily Values*</b>	
Total Fat 2.5g	4%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 85mg	6%
Total Carbohydrates 19g	6%
Dietary Fiber 1g	4%
Sugars 11g	
Protein 1g	
<b>Ingredients:</b> Rice Flour, Organic Granulated Cane Juice, Dark Chocolate Chunks (granulate, cane juice, chocolate liquor, cocoa butter, dextrose, soy lecithin, vanilla) Natural Vanilla Flavor, Salt, Baking Soda, Xanthan.	

## Pay attention:

The quantity you eat may be bigger than the quantity used here to calculate the nutrition facts.

The number of calories contained in a single serving.  
**Not in the whole package!**

Try to limit the amount of these components in your diet.

Avoid products with more than 8g of sugar per portion.

The list of ingredients provide important information about what you are eating.\*



\* On a food label, the ingredients are listed in order of quantity, with the ingredients used in the greatest amount first, followed in descending order by those in smaller amounts. Therefore limit products that have as first ingredients all forms of sugars: sucrose, corn-syrup, high-fructose corn syrup, invert sugar, maltose, dextrose, cane sugar, beet sugar.

# RESOURCE WEBSITES

## RESOURCE WEBSITES

- For more information visit us at <https://Kids.idf.org>

## ADDITIONAL RESOURCES

- Diabetes Canada - Healthy Eating for School-age Children <https://www.diabetes.ca/healthykidseat>
- Diabetes Research Institute - Nutrition for children with diabetes <https://www.diabetesresearch.org/document.doc?id=705>
- ISPAD Clinical Practice Consensus Guidelines 2018 - Nutritional management In children and adolescents with diabetes [http://c.ymcdn.com/sites/www.ispad.org/resource/dynamic/forums/20180124\\_110721\\_14532.pdf](http://c.ymcdn.com/sites/www.ispad.org/resource/dynamic/forums/20180124_110721_14532.pdf)
- IDF Life for a Child and ISPAD - Pocketbook for management of diabetes in childhood and adolescence in under-resourced countries, 2nd edition <https://www.idf.org/e-library/guidelines/89-pocketbook-for-management-of-diabetes-in-childhood-and-adolescence-in-under-resourced-countries-2nd-edition.html>
- Carb counting with Lenny <http://www.lenny-diabetes.com/carb-counting-with-lenny.html>



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Nutrition guide  
for parents of a  
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Educational guide on  
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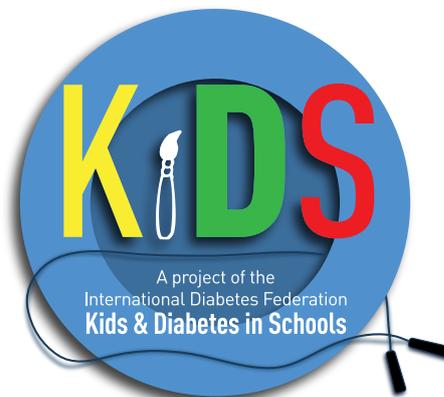
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DIABETES PARENTS

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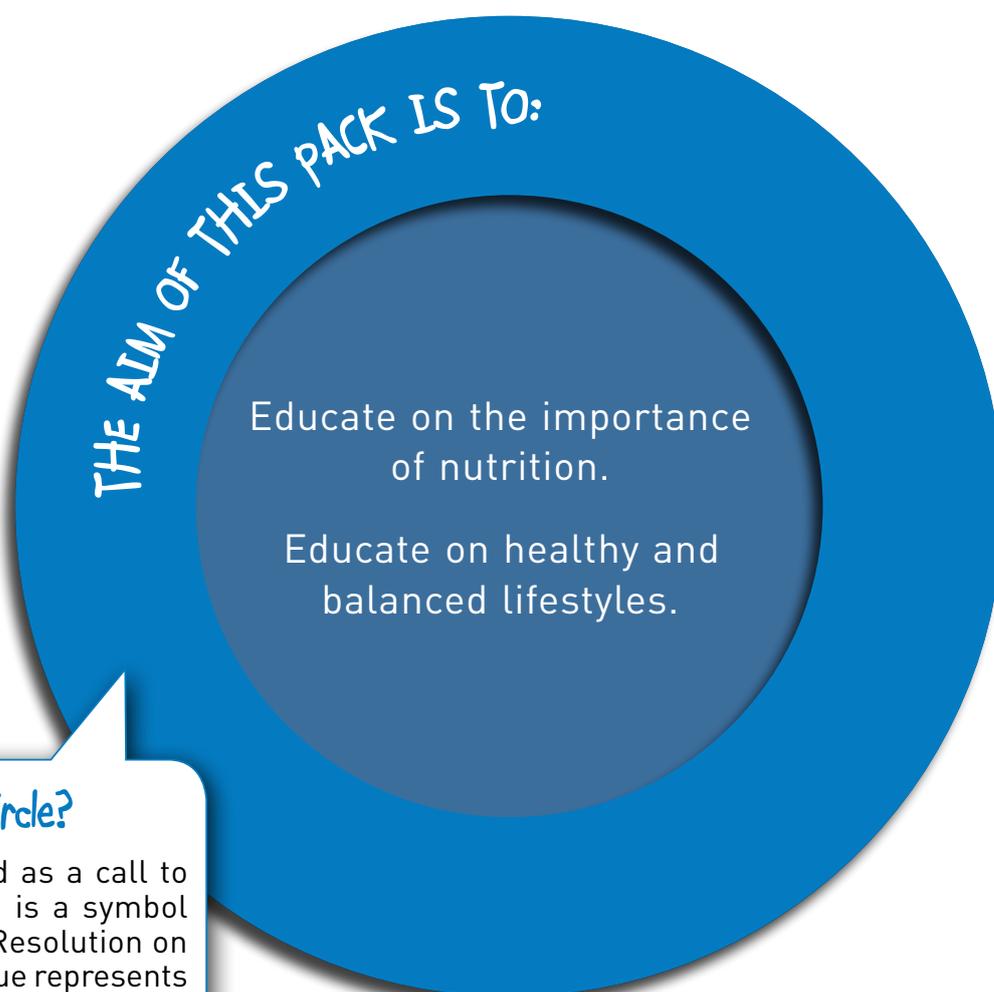
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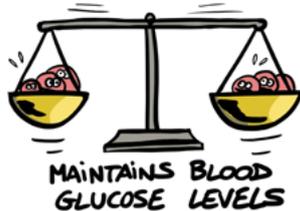
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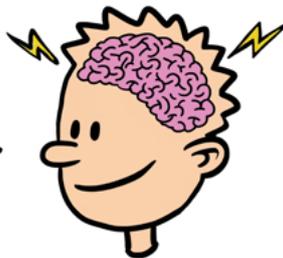
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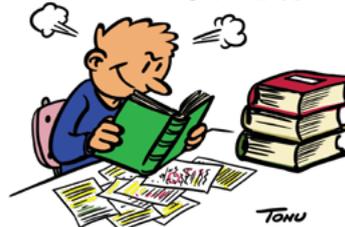
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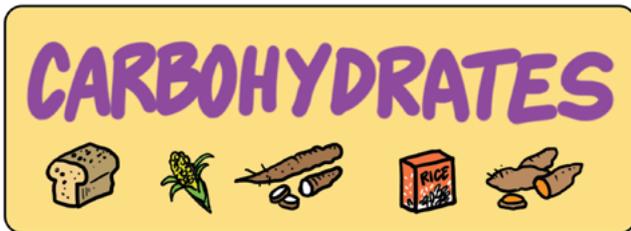
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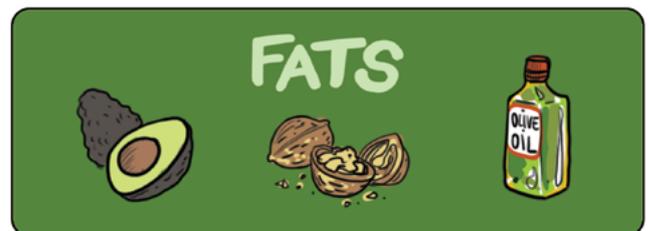
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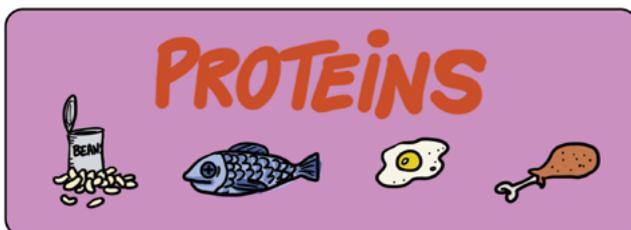
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Helps to manage blood glucose levels  
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Drinking lots of water helps the body stay hydrated

Together with your diabetes team you can learn to count the carbohydrates in meals, which will help children with diabetes to calculate the number of units of insulin they need.

Insulin is necessary for your body's cells to use glucose for energy

# THE IMPORTANCE OF A GOOD NIGHT'S REST

## DID YOU KNOW THAT

- Children and adolescents need 8 to 10 hours of sleep and rest.
- Lack of sleep can affect your appetite and food choices. This can increase weight and make insulin work less well so blood glucose levels can be higher.



### TIP:

Children with diabetes should always check their blood glucose before bed.

A healthy snack may be needed to keep the blood glucose in the target range!

# HOW TO PREPARE HEALTHY MEALS?

It is important that the right foods is chosen at all meals, both at home and in school.

## Include

- Lean meats, fish and eggs
- Food high in fibres (whole grains, legumes)
- Wide variety of colourful fruits and vegetables
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- Variety in child's meals to avoid monotony
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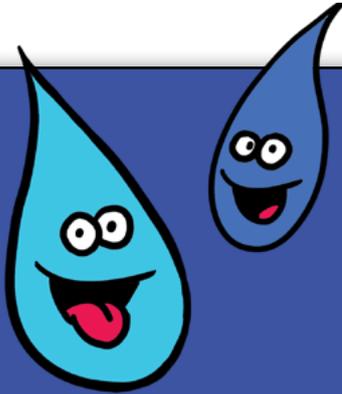
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**MILK**  
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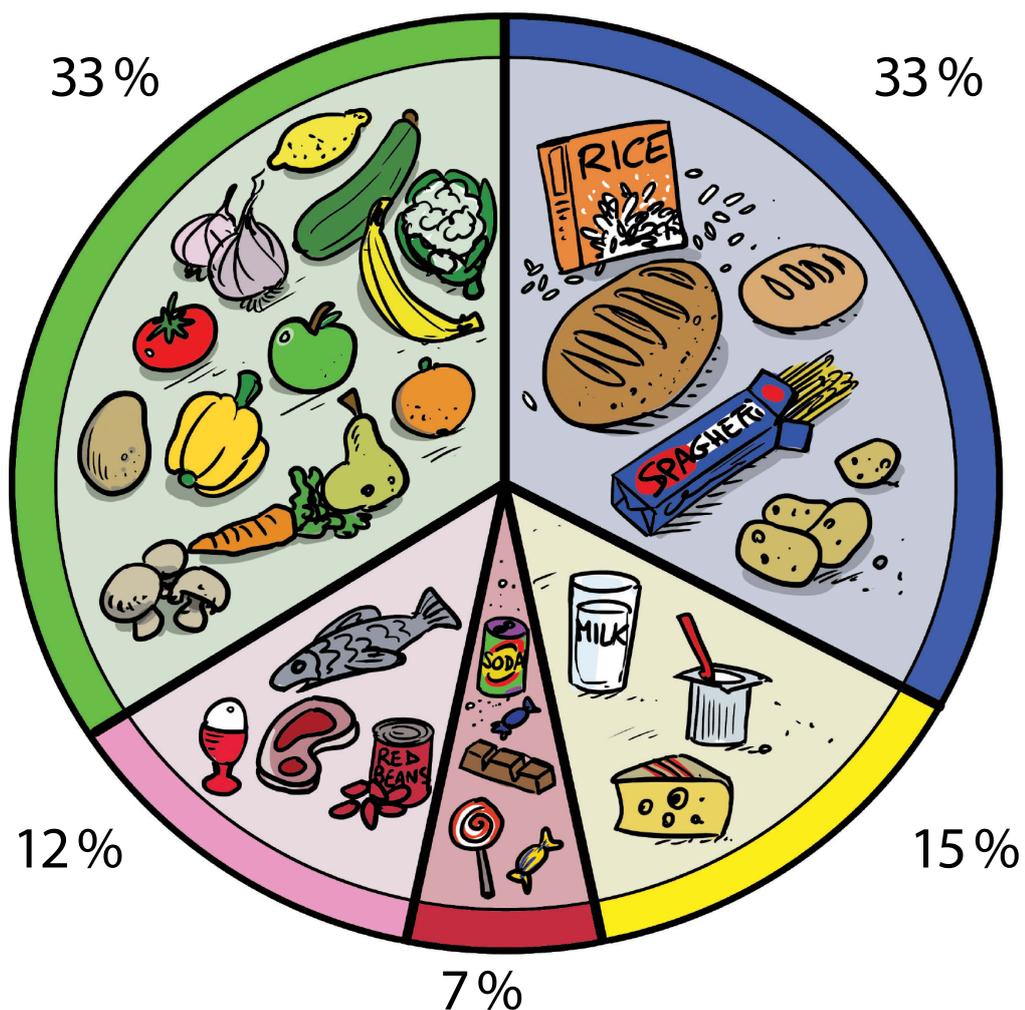
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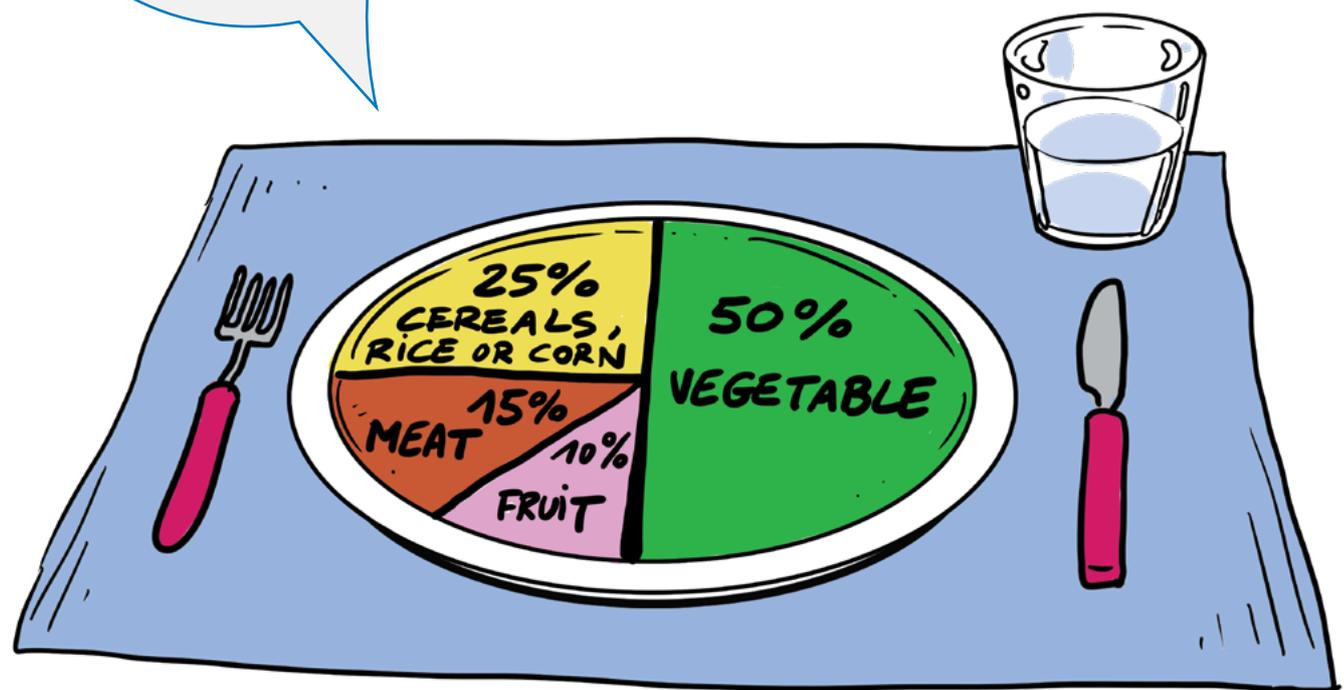
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Balance insulin and carbohydrates to keep the blood glucose closer to the target levels of children with diabetes

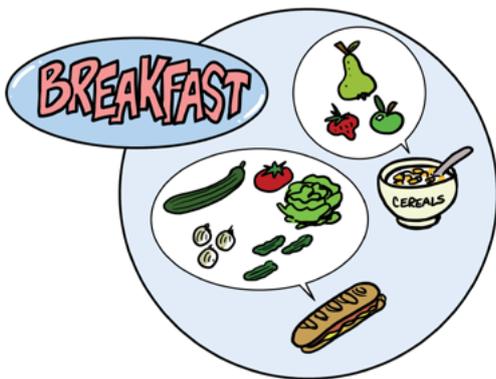


## TIPS:

1. Adapt the plate according to local foods
2. Use unsaturated fats such as olive oil or sunflower oil to cook your food

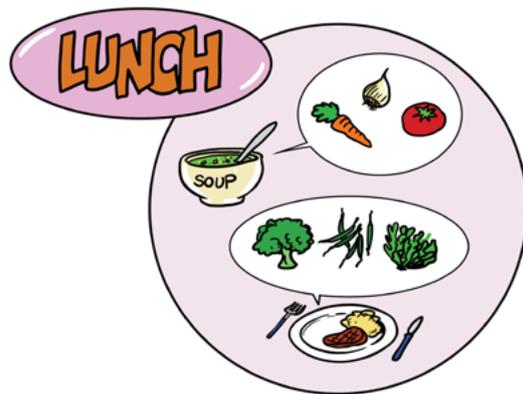
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It is recommended to eat at least 2 1/2 cups of fruits and vegetables each day!



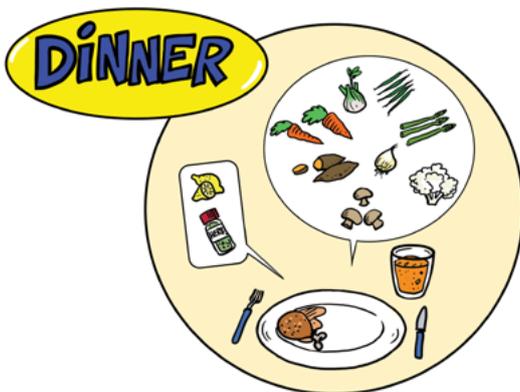
Add fruit on top of your cereal or in your yoghurt

Add vegetables in your sandwich

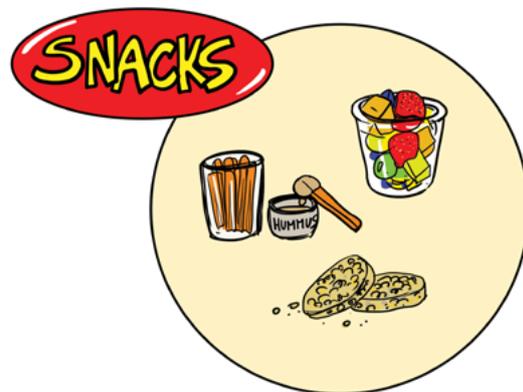


Add vegetables in soup or sandwiches

Add a small side of salad with low fat dressing to your main dish



Fill at least half your plate with vegetables and fruit



Bring a handful of fresh fruits, dates and/or nuts in small pots or cups

# MYTHS ON FOOD AND NUTRITION

## True or False quiz

TRUE OR FALSE:

*When unwell and unable to eat, insulin should be avoided*

**FALSE:** Blood glucose levels may actually rise higher than usual because the body is under stress on sick days. Therefore it is important to check blood glucose levels frequently and not avoid administering insulin despite not being able to eat as usual. Sometimes increased insulin dosage can be required on sick days.

TRUE OR FALSE:

*Fruit juice is as healthy as eating fruit*

**FALSE:** Fruit juice has the fibre removed therefore can raise blood glucose levels quickly. It should therefore be limited. Eating whole fruits is preferable. Sugar amounts in fruit juice can cause a significant spike in blood glucose levels, increasing the risk of hyperglycaemia.

TRUE OR FALSE:

*Foods that do not contain carbohydrates can be eaten freely*

**FALSE:** Food containing fat and protein can raise blood glucose levels. High fat and sugar snacks should be limited. Between meals snacks should be small, low fat and healthy. Seek individual advice for healthy snack ideas in your country.

TRUE OR FALSE:

*When a blood glucose level is high, meals should be avoided*

**FALSE:** The cause of a high blood glucose level must be discovered; whether it was due to the increased carbohydrates in the meal, or lack of insulin or increased stress or illness. Avoiding a meal will not solve the problem.

TRUE OR FALSE:

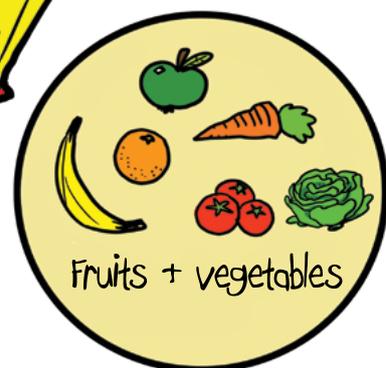
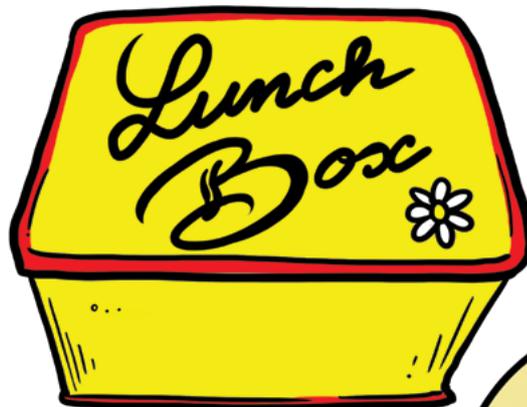
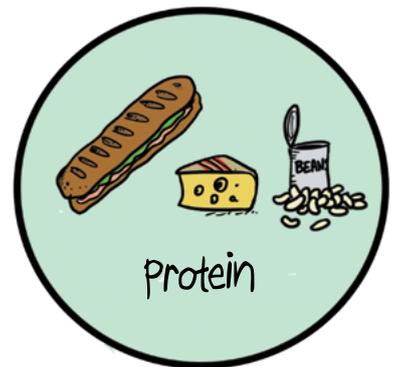
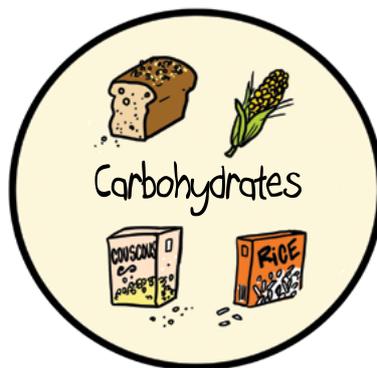
*A person with diabetes must avoid rice.*

**FALSE:** Rice can be included in the daily meal plan of a child with diabetes just like any other starchy food. Young people with diabetes do not need to avoid any foods.

# HEALTHY MEAL PLANNING AT HOME

How parents should prepare food storage containers?

**TIP:**  
Make your child's lunch fun and attractive by using colourful and varied food



In warm environments, prevent the growth of harmful bacteria by storing packed lunches in a refrigerator until lunchtime.

Alternatively pack in cool bags with ice packs or frozen water bottles.

# TIPS FOR PARENTS ABOUT FOOD AND DIABETES

1. Every child, with or without diabetes, needs an adequate amount of calories and nutrients to grow healthy. To ensure a balanced diet, use your national **food guides** (pyramids, wheels, plate model,...) to help you find strategies to encourage **healthy eating habits** – **It's a key part of providing a healthy foundation for future generations!**
2. Remember that **carbohydrates** in foods are transformed into **glucose** after digestion and affect the blood glucose levels (**glycaemia**) – Children with diabetes need this nutrient for proper energy and growth. To maintain good glycaemia control, it is most important to match the insulin with the amount of carbohydrates eaten.
3. Provide school with your child's individual meal plan
4. Ensure schools are provided with foods to treat **hypoglycaemia** in the classroom at every time (for example: glucose, juice) and snacks for exercise, if required. It is very important to have an open communication with the school staff safety and confidence for everyone, especially for the child and family.

# HOW TO READ FOOD LABELS

Reading food labels will help you to understand nutritional values to make healthy food choices!

Nutrition facts	
Serving size	1 cookie (24g)
Amount per serving	
<b>Calories</b>	
%Daily Values*	
Total Fat 2.5g	4%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 85mg	6%
Total Carbohydrates 19g	6%
Dietary Fiber 1g	4%
Sugars 11g	
Protein 1g	
<b>Ingredients:</b> Rice Flour, Organic Granulated Cane Juice, Dark Chocolate Chunks (granulate, cane juice, chocolate liquor, cocoa butter, dextrose, soy lecithin, vanilla) Natural Vanilla Flavor, Salt, Baking Soda, Xanthan.	

## Pay attention:

The quantity you eat may be bigger than the quantity used here to calculate the nutrition facts.

The number of calories contained in a single serving.  
**Not in the whole package!**

Try to limit the amount of these components in your diet.

Avoid products with more than 8g of sugar per portion.

The list of ingredients provide important information about what you are eating.\*



\* On a food label, the ingredients are listed in order of quantity, with the ingredients used in the greatest amount first, followed in descending order by those in smaller amounts. Therefore limit products that have as first ingredients all forms of sugars: sucrose, corn-syrup, high-fructose corn syrup, invert sugar, maltose, dextrose, cane sugar, beet sugar.

# RESOURCE WEBSITES

## RESOURCE WEBSITES

- For more information visit us at <https://Kids.idf.org>

## ADDITIONAL RESOURCES

- Diabetes Canada - Healthy Eating for School-age Children <https://www.diabetes.ca/healthykidseat>
- Diabetes Research Institute - Nutrition for children with diabetes <https://www.diabetesresearch.org/document.doc?id=705>
- ISPAD Clinical Practice Consensus Guidelines 2018 - Nutritional management In children and adolescents with diabetes [http://c.ymcdn.com/sites/www.ispad.org/resource/dynamic/forums/20180124\\_110721\\_14532.pdf](http://c.ymcdn.com/sites/www.ispad.org/resource/dynamic/forums/20180124_110721_14532.pdf)
- IDF Life for a Child and ISPAD - Pocketbook for management of diabetes in childhood and adolescence in under-resourced countries, 2nd edition <https://www.idf.org/e-library/guidelines/89-pocketbook-for-management-of-diabetes-in-childhood-and-adolescence-in-under-resourced-countries-2nd-edition.html>
- Carb counting with Lenny <http://www.lenny-diabetes.com/carb-counting-with-lenny.html>



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