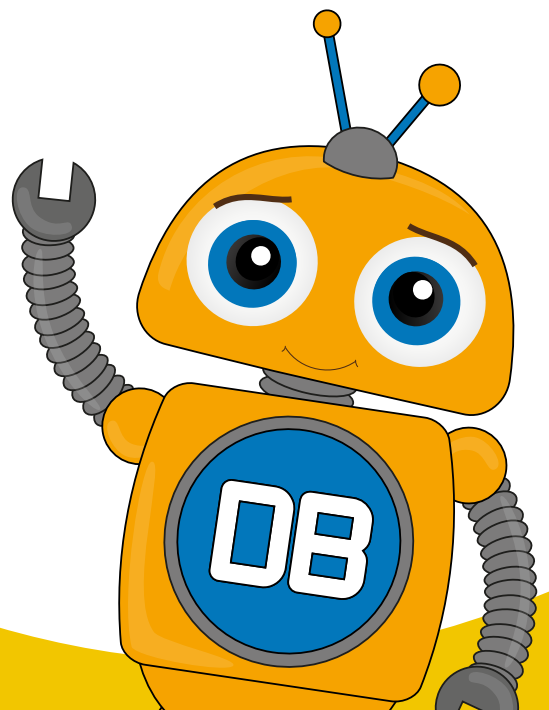


# Goals of Diabetes Education

## Resources relevant for 10-11 year olds

This handout is designed to explain what you need to know about the management of diabetes. It has been tailored to the educational needs of 10-11 year olds.





## DigiBete Structured Education

# Goals for 10-11 year olds

## GUIDE FOR YOUNG PEOPLE AND PARENTS

Your diabetes is a shared responsibility between you and your parents or carers, so please use this document together with them.

### General Diabetes Knowledge

You should be able to handle most practical aspects of your diabetes care, but you will not yet be able to adjust your insulin doses by yourself. You should know how insulin works and that it lowers your glucose level after a meal.

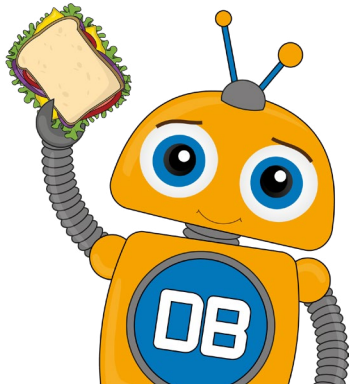
You will still need some background information about diabetes from your parents or carers, and they will continue to oversee your diabetes care.



### Exercise

**Exercise is an important part of diabetes management**

- It is the parents responsibility to encourage active play and exercise, and to create opportunities for children to be active for at least 60 minutes each day.
- Wearing a continuous glucose sensor may help manage glucose levels during activity.
- You should know that glucose levels should be checked before exercise.
- You should know which readings mean you need to check for ketones and which readings mean you need to eat more carbohydrate before exercising.
- Your target glucose pre-exercise is 7-10mmol/L. Do not exercise if ketones are above 0.6mmol/L.
- You should know what precautions to take when exercising or playing sports.
- You should understand how insulin, food and exercise are related.
- You should do some sort of physical activity for at least 60 minutes a day.



### Food

**You should:**

- Know the number of meals you need at school and after school, and when you should eat food.
- Know how many sweets you are advised to eat as part of a healthy balanced diet.
- Be able to give examples of well-balanced meals and know how many portions of fruit and vegetables you should eat a day.
- Be able to give examples of different types of carbohydrate, like glucose, fructose, sucrose, lactose and starch.
- Start to learn how to count carbohydrates in different foods with help from your parents or carers.

## Diabetes Technology

You may be offered technology to help manage your diabetes. This may include glucose sensors, insulin pumps, smart insulin pens or automated insulin delivery systems. These devices may be used separately or together to create a safer environment for you and provide more information to the adults caring for you.

Any adult caring for a child with diabetes should have appropriate and ongoing training and support from healthcare staff or a parent, to ensure they feel confident in operating or using the technology.

Operating technology should be a shared responsibility between parents and children. You should be involved in using your technology with the supervision of an adult.

- You should look after your technology to the best of your ability; devices should be added to home insurance in case of accidental damage.
- You should understand the importance of injection or canula rotation and how to look after skin around sites.



## Insulin

### You should know:

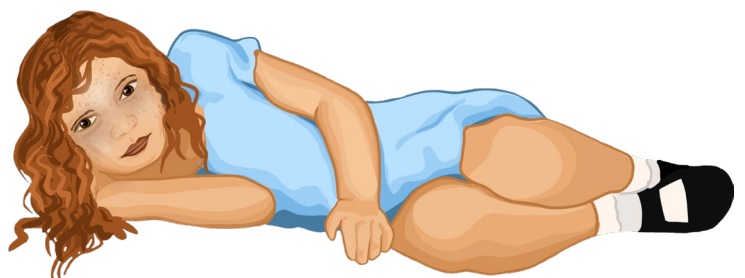
- When to take insulin – and be able to do it yourself with your pen or pump.
- How to care for your injection/infusion sites, including rotating them and not developing any favourite places to inject.
- Your insulin doses, but you should not change them without speaking to your parents or carers, or your diabetes team.
- Whether your insulin is rapid-acting (quick acting) or long-acting (slow acting).
- How to store your insulin.
- If you use an insulin pump you should also know how to administer an insulin injection by pen and how to help perform an infusion set change.
- Changing settings in a pump is an adult's responsibility. You may contribute to this process, but it should be supervised by an adult for accuracy. Anyone caring for a child with diabetes should have appropriate training from parents or healthcare staff to allow safe administration of insulin using technology.

## Illness

Your parents/carers should know how to adjust insulin to accommodate a fever and understand how to handle episodes of nausea and vomiting, or call the diabetes team for help.

### You should know that:

- You must inform an adult when you are feeling ill.
- That special 'sick day rules' advice applies during illness – and what it is.
- Checking for ketones in your blood at this time is important even if your glucose is not out of range.
- You need to eat and drink even if you don't feel like it.
- Parents should adjust insulin doses promptly. During illness you may need significantly more insulin. Occasionally with a diarrhoea or vomiting illness you may need less insulin.
- Never stop insulin.



## Hyperglycaemia or HYPER = High Glucose Level (10mmol/L or more)

### You should:

- Be able to explain the possible reasons for high glucose levels.
- Recognise the signs of high glucose level.
- Know when your glucose level is reading too high.
- Know that you should monitor your glucose levels and check your blood for ketones if it is above 14mmol/L.
- Know that you must tell an adult immediately if your glucose level is too high or if ketones are present in your blood.
- If you use an insulin pump, you may develop high glucose levels and ketones within 4 hours if the pump has failed or cannula dislodged.
- Despite wearing a pump, high glucose levels and ketones may require a pen injection to provide effective treatment.

## Hypoglycaemia or HYPO = Low Glucose Level (3.9mmol/L or less)

### You should:

- Know at what number your glucose level is too low.
- Be able to explain the possible reasons for low glucose levels.
- Know your own signs of low glucose levels.
- Know how to correct low glucose with the right number of glucose tablets or a sugary drink.
- Know you should re-check glucose levels 15 minutes later (20mins if using a continuous glucose monitor) and take more glucose if your glucose is not yet high enough.
- Know you might need a snack if a meal is more than 1–2 hours away or if you are exercising.
- Understand that you cannot always rely on warning signs and symptoms and should check your glucose levels regularly.

Your parents should have an opportunity to revise how to use glucagon injections annually or access video resources. Expiration dates of stored glucagon should be checked regularly; expired glucagon may not work effectively in an emergency.

## Glucose Monitoring

A glucose monitoring system with alarms may be offered as an alternative to traditional blood glucose checking. Regular blood glucose checks throughout a 24h period (including overnight) should be done by both you and adults if there is no access to a glucose sensor. 6-10 checks per day is optimal if there is no glucose sensor.

Parents should respond promptly to alarms at all times of day or night. A blood glucose check is required if symptoms do not match sensor glucose readings. Some glucose sensors do not require blood glucose checks to confirm hyperglycaemia or hypoglycaemia.

### You should be able to:

- Recognise glucose values which are below, in and above target.
- Regularly check your real time glucose sensor or regularly scan your sensor if using a handset.
- Enter glucose values from sensors/monitors into pumps or bolus advisor apps (if required).
- Know that different fingers are used for checking blood glucose values.
- Listen for an alarm and tell an adult if you hear one.
- Recognise some factors which will have an effect on glucose (food, exercise, insulin).
- Participate in conversations about HbA1c, and learn about what your target level is. (Targets are recommended but may be individualised if impaired awareness or fear of hypos).
- Understand that glucose levels are a tool to assist you with your diabetes management, not just for clinic staff.

## Future Health and Routine Care

- You should start to understand why having glucose levels in target is very important for your future health.
- Be aware that active glucose management and taking care of yourself - for example taking care of your feet - protects you from getting other diabetes related illnesses in the future.
- You should start to understand the relationship between your HbA1c levels and long-term complications, and be involved in setting your own HbA1c target with your diabetes team and parents.
- Blood is taken every year at your annual review to check for any early signs of long-term complications or other conditions linked to diabetes.



## Eating or Sleeping Away from Home

- You should be able to handle a few days away from home as long as an adult is present to supervise your diabetes care at all times.
- As you are becoming more independent and going to more activities, parties and other social occasions, you should carry some form of identification, including a contact number, stating that you have been diagnosed with diabetes and require insulin.
- If you wear a sensor parents may be able to see and monitor glucose levels remotely on another device.



## Moving to Secondary School

- You may be living through a time of change as you move from primary to secondary school.
- You should discuss the changes in the timetable of your school day, and how to manage these changes, with your diabetes team.
- Parents should facilitate a meeting with school to determine access to phones/technology as medical devices if required for diabetes management.
- Parents should discuss with the diabetes team what support you may need and how to best provide training and support to new school staff.

Your parents or carers should ask for help to increase your independence by developing skills such as using public transport and coping with going to the school cafeteria.



## Emotional Wellbeing

- Caring for someone with diabetes can bring significant challenges. Lack of sleep can also affect someone's ability to care for diabetes. Clinical psychology support is available for you as a family. Local support groups or other families who may have had similar lived experience, who understand the circumstances may be able to offer practical help and support.
- You and your parents or carers can get 'fed up' of diabetes at times or may have worries about it. This is quite normal.
- If you need emotional support or help with managing the impact of diabetes on your life, you may be offered the chance to talk to a clinical psychologist if there is one attached to your diabetes team.
- At least once a year you will be asked questions about your emotional wellbeing to check whether you need any extra support.
- You should have regular opportunities to discuss your thoughts and feelings, including any worries about your diabetes, experiences of bullying or concerns about body image.
- You should ask for help from your parents/carers, or your diabetes team if you start to feel any aspects of your care are becoming too much for you, or if any aspects of your diabetes care are causing major problems at home or with friends.
- Your siblings may feel jealous of the necessary increased attention given to you.
- Involve siblings in diabetes care and discussion.



[www.digibete.org](http://www.digibete.org)