

***Managing diabetes  
in school***

***Information for school staff***



**Dr Gray's Hospital, Elgin**



## ***About this leaflet***

This leaflet will help you to understand diabetes so you can support pupils with diabetes in school. It also provides guidance on what to do when a child's blood glucose levels are too low and too high. This is a quick guide that complements the pupil's Care Management Plan.

## ***Care Management Planning***

Being diagnosed with diabetes can be very difficult for a child and returning to school or changing class can cause anxiety for the whole family. Meeting with the family to draw up a Care Management Plan and discuss the child's individual needs will help to alleviate some of these concerns.

Some children, especially in lower age groups, will require a lot of help and support to manage their condition. Teenagers however, may just require a supportive environment and know who to speak to if they need help.

The Care Management Plan should be updated yearly or if the parents have informed you of any changes to their child's care. The school nursing team can facilitate this process.

## ***Diabetes guidelines***

Moray Council and NHS Grampian are committed to supporting children with diabetes in school to allow them to make the most of their education and remain healthy.

A set of guidelines has been produced to aid schools to support children with diabetes. This is available from the Education Department.

## ***Type 1 diabetes***

In Type 1 diabetes, the body attacks the cells that produce the hormone insulin. Insulin is an essential hormone that allows the cells in our body to use glucose (a simple sugar) for energy. Glucose is delivered to the cells in the bloodstream. Without insulin the glucose is stuck in the bloodstream causing the blood glucose levels to be high and the individual to feel tired and unwell.

The treatment for Type 1 diabetes is to keep the blood glucose level within the target range of 4 to 10mmol/l (millimols per litre) by giving insulin injections, eating a healthy balanced diet and keeping active.

***Will they need to test  
their blood glucose at school?***

All children with diabetes should check their blood glucose level at lunchtime or if they feel unwell. Some children will choose to do it routinely at other times also.

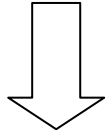
Testing the blood glucose is a simple procedure involving the child washing their hands, pricking a finger and placing the blood on to a monitoring device.

The target range for the blood glucose reading is between 4 and 10mmol/l.

## ***What affects the blood glucose level?***

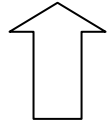
### **Insulin**

The hormone insulin lowers the blood glucose level as it allows the glucose to move out of the bloodstream and into the cells. The only way to give insulin is by injection using insulin pens or an insulin pump. Some children will require an injection at lunchtime and may need help to do so. This should be documented in their Care Management Plan.



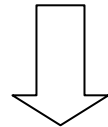
### **Food**

Carbohydrates in meals and snacks are broken down during digestion into the simple sugar glucose. Glucose passes into the bloodstream causing the blood glucose level to rise. Some children will need to have regular carbohydrate snacks throughout the day. This should be documented in their Care Management Plan.



### **Exercise**

During exercise your body uses glucose for energy which means the blood glucose level is **lowered**. Strenuous exercise like PE or swimming may require an extra snack, more testing or less insulin. This should be documented in their Care Management Plan.



## ***What is hypoglycaemia (hypo)?***

The blood glucose level is too low when it is below 4mmol/l. You may find this when testing the blood glucose routinely or because the child feels low.

Every child with diabetes will have hypos and one or two mild hypos a week is considered normal (any more and the parents/guardians should be contacted).

Children having a hypo may feel or look different from normal. However this may not always be the case.

Symptoms may include:

- being hungry
- looking pale/sweaty
- feeling wobbly/shaky
- having a headache or tummy ache
- having difficulty concentrating
- being grumpy
- having a rapid heartbeat (small children often refer to this as a “bumpy tummy”)
- being tearful/weepy
- feeling ‘not right’
- being confused/aggressive.



A hypo may be the result of not eating enough food, such as a missed or delayed meal or snack, extra exercise/being more active than usual or too much insulin.

The child may check their blood glucose level if they have any of these symptoms. If there is any doubt, treat them as if they are having a hypo.

They should never be left alone or sent to the medical room on their own. They may become disorientated or unconscious if their blood glucose level continues to drop.

### ***Hypo Box<sup>®</sup> checklist***

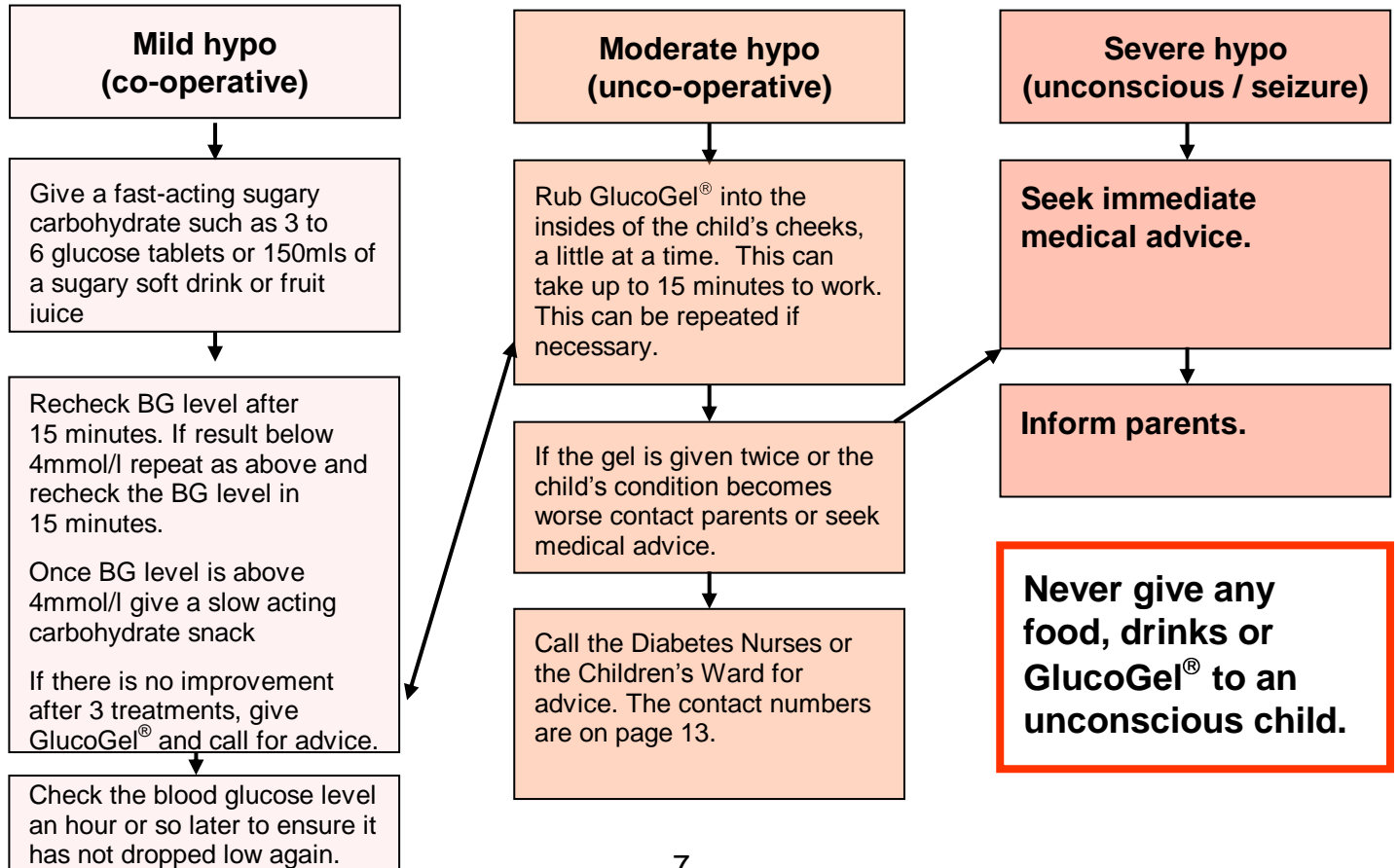
Children in primary school are encouraged to keep a Hypo Box<sup>®</sup> in class. In secondary school these items should be kept in the child's bag. Checklist:

1. Fast acting sugary carbohydrate (Lucozade<sup>®</sup>, glucose tablets, fresh juice, "sugary soft drink")
2. Tubes of GlucoGel<sup>®</sup>
3. Carbohydrate snack (biscuit, cereal bar, crisps)

Please see page 7 for how to treat a mild hypo. This is a blood glucose level of **less than 4 mmol/l**. If your pupil continues to be unwell please contact the parents/guardians or if appropriate, the diabetes team.

Never give any food or drink to an unconscious child.





## ***What is hyperglycaemia?***

At times a child's blood glucose may be too high. This is known as hyperglycaemia and means they have a blood glucose reading of **more than 15 mmol/l**. This may be a short-term problem, for example the child may have eaten something sweet or has recently eaten, or it may reflect long-term problems in controlling their diabetes. A child with high blood glucose readings may have the following symptoms:

- Poor concentration.
- Excessive thirst. Please do not restrict access to sugar-free fluids.
- Increase in the need to go to the toilet. Please allow access to toilets.

No urgent action is needed to treat this unless the child is unwell.

Further symptoms include the child becoming flushed, drowsy, complaining of stomach pain and maybe vomiting. If this is the case contact the parents/guardians or if appropriate, the diabetes team. It is not recommended for the child to do extra activity to reduce the blood glucose level as this will cause disruption to the child's education and can cause swinging blood glucose levels.

Some children may check for blood ketones in schools. This should be documented in the child's Care Management Plan

## ***How to perform blood glucose testing***

- Wash hands and gather equipment.
- Select appropriate finger and site for testing or help child in making the selection for himself/herself. Use gloves if provided/required.
- Put a test strip into your meter.
- Successfully use finger pricker by selecting the correct depth and using a clean lancet every time.
- Apply blood to strip.
- Clean any blood off finger with cotton wool if necessary.
- Ensure that result is documented and any readings outwith range are acted upon promptly. Be aware of any target ranges specific to child. Further information can be found in the school management plan.
- Dispose of test strip and cotton wool according to school policy.
- Dispose of sharps in appropriate clinical waste sharps bin.

## ***How to give an insulin injection***

**Please note that anyone giving insulin injections must first attend a diabetes information session and insulin injection technique session with a paediatric diabetes specialist nurse.**

- Discuss when insulin should be given in relation to child's dietary intake.
- Discuss potential injection sites. Never inject through clothes such as tights, jeans.
- Wash hands and gather all necessary equipment. Wear gloves if provided/required.
- Check you have the correct insulin and that it has not expired. Perform visual check of pen, ensuring no cracks or leakages.
- Remove the dust cap from the top of the pen, take a new needle and remove foil from the bottom. Put needle on to the top of the pen and twist until it stops.
- Remove plastic cover and rubber safety cap from needle.
- Dial pen up to 2 units for air shot. Hold pen upright and press plunger. You should see a drop of insulin at the tip of the needle. If not repeat process until you do.

- Dial up dose as per parental request/management plan. Double check this dose with another member of staff.
- Select appropriate injection site in conjunction with parents/guardian/pupil.
- Some children may have been recommended to inject using a skin fold (pinch) Refer to management plan for their individual technique.
- Otherwise insert needle at a 90 degree angle to the skin.
- Press plunger with thumb and inject slowly without adding excessive pressure to the skin or moving the needle around.
- Keep needle in skin for ten seconds after the last unit of insulin is pushed in.
- After 10 seconds remove needle from skin.
- Then remove needle from the pen with care by placing the plastic dust cap gently back on top of the needle and unscrewing it.
- Dispose of needle in appropriate clinical waste sharps bin.
- Replace dust cap back on to insulin pen.
- Accurately document date, time, site and units given.



## ***Considerations for school trips***

- Perhaps arrange meeting with child/family before trip to discuss additional needs or identify training for staff.
- It is helpful to provide the family/child with an itinerary of events so considerations can be made around the level of activity during the trip.
- Child may need help/supervision with blood glucose testing, insulin injections and day-to-day management of diabetes.
- Consider privacy if required for injections.
- Particular consideration when sharing rooms with friends that are aware of condition and impact on individual.
- Travel letter if required.
- Consider spare blood glucose meter and spare supplies for trip.
- A substantial bedtime snack may be needed particularly if involved in lots of activity/exercise.
- May need extra snacks provided by parents or have particular dietary requirements.
- May need extra blood glucose testing due to extra or prolonged activity. Particularly consider testing before going to bed.
- Contact diabetes team if advice/training required.

## ***Contact telephone numbers***



If the parents/guardians are not available and you need further advice, please contact:

**Paediatric Diabetes Specialist Nurse  
Dr Gray's Hospital, Elgin**

** (01343) 567422 **

If unavailable, please leave a message on the answerphone and we will call you back.

**Children's Ward  
Dr Gray's Hospital, Elgin**

** (01343) 567579 **

**This leaflet is also available in large print.**

**Other formats and languages can be supplied on request. Please call the Paediatric Diabetes Specialist Nurse on (01343) 567422 for a copy.**

Feedback from the public helped us to develop this leaflet. If you have any comments on how we can improve it, please call (01224) 554149 to let us know.