



## ROYAL HOSPITAL FOR SICK CHILDREN



## TEACHING GUIDELINES ON DIABETES CARE FOR NURSERY/SCHOOL STAFF AND CARERS

IN ASSOCIATION WITH PRACTICAL TEACHING  
BY A PROFESSIONAL

NAME: \_\_\_\_\_

This teaching guideline is a general guide to be used in conjunction with an explanation from a qualified healthcare professional. It has been produced by the 'Teaching Guideline Group' based at the Royal Hospital for Sick Children, Edinburgh with representatives from NHS Lothian and NHS Forth Valley.

## DIABETES CARE

THIS DOCUMENT MUST NOT BE COPIED

### Purpose of this document:

To provide guidance for nursery/school staff and carers, to ensure a consistent and safe approach when caring for a child/young person with diabetes.

### Who should use this document?

All those involved with the care of children with diabetes.

### To whom this document applies:

Nursery/school staff and carers.

### Contact point for further advice:

Diabetes Nurse Specialists ~ 0131 536 0375

0131 536 0701

### Further reference documents:

Hanas, R. (2010). Insulin Dependent Diabetes in Children, Adolescents & Adults – How to Become an Expert on your Diabetes. 4th Edition. Class Publishing.

RHSC – Diabetes Team (2004). Your Diabetes Handbook.

Scottish Executive (2001). The Administration of Medicine in Schools.

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## **OBJECTIVES OF THE DIABETES TEACHING GUIDELINE**

### **To enable you:**

1. To have a basic understanding of childhood diabetes.
2. To support children in the treatment of hypoglycaemia, including blood glucose testing in the school environment.
3. To support children in the treatment of hyperglycaemia, including blood glucose testing in the school environment.
4. To support children who require insulin injections in the school environment.
5. To access contact numbers for support and advice when necessary, and when a child is going to be using an insulin pump.

## INTRODUCTION

### **What is Diabetes?**

Diabetes (type 1) is a disorder that develops when a person does not produce enough of the hormone insulin. Insulin allows the glucose from the food we have eaten, to move from the bloodstream into the cells, where it can be used for energy.

People who develop diabetes (type 1) in childhood require insulin by injection. A balanced diet of known carbohydrate content is required, some children will be carbohydrate counting. Carbohydrates are divided into 2 groups:

1. Fast acting sugars i.e. sweet biscuits, chocolate.
2. Starchy carbohydrates i.e. bread, cereals, pasta and rice.

Most children with diabetes (type 1) will:

1. Have daily insulin injections before breakfast, lunch & evening meal.
2. Require regular meals and snacks containing starchy carbohydrate food each day. Snacks will be mid morning & mid afternoon for the majority of children.
3. Carry out regular blood tests at home and at school.

A child with diabetes will not:

1. Be in any way different from other children in potential achievement.
2. Need to avoid any school activity provided:
  - a) the diabetes is well controlled.
  - b) extra carbohydrate is given or insulin dose is reduced prior to exercise.

**NB THE BALANCE BETWEEN INSULIN, FOOD & EXERCISE IS DIFFICULT TO ACHIEVE ALL THE TIME.**

**A CHILD WITH DIABETES MAY AT TIMES SHOW SIGNS OF HAVING EITHER A LOW LEVEL OR A HIGH LEVEL OF BLOOD GLUCOSE.**

## HYPOGLYCAEMIA

**HYPOGLYCAEMIA** or '**HYPO**' is a term used to describe a **low** Blood Glucose level measuring less than 4 mmol/litre.

This may result from:

- Not enough food i.e. a missed or delayed meal or snack
- Extra exercise or more activity than usual
- Too much insulin administered

### **What are the symptoms of hypoglycaemia?**

The child may have no symptoms or may feel or 'look' different and present with a combination of the following:

- Hungry
- Pale
- 'Wobbly'/Shaky
- Headache or tummy ache
- Sweaty
- Grumpy/Bad tempered
- Tearful/Weepy
- Feeling 'not right'

***IF THE CHILD HAS ANY OF THE ABOVE SIGNS / SYMPTOMS ~ CHECK THE BLOOD GLUCOSE READING***

### **What is the treatment for hypoglycaemia? (unless using an insulin pump)**

#### **Step 1**

- Give fast acting glucose immediately ~ 3 glucose tablets **or** 2 teaspoons glucose powder in 10-20mls water/sugar free juice **or** 50mls original 'Lucozade'.
- Keep child where you can observe them.

#### **Step 2**

- Wait for 10 minutes, ensure child's hands are washed (if possible) and re-check the blood glucose reading.
- If above 4mmol/L go to **Step 3**.
- If not, repeat **Step 1**.

#### **Step 3**

- When the blood glucose measures above 4mmol/litre ~ give a snack or if just before a meal, allow them to eat as soon as possible. Provide slow acting/starchy food i.e. a biscuit or sandwich ~ this will maintain the blood glucose above 4mmol/L once the fast acting sugar has been used up.
- **IF THE CHILD IS UNCO-OPERATIVE OR UNCONSCIOUS AT ANY TIME DURING THE ABOVE STEPS ~ PHONE 999 FOR AMBULANCE AND CONTACT PARENTS.**
- If the child is unconscious ~ place them in the recovery position. **DO NOT ATTEMPT** to give anything by mouth.

**IF YOU HAVE ANY CONCERNS PLEASE CONTACT THE RHSC  
DIABETES EMERGENCY HELPLINE ~ 0131 536 0000  
AND ASK FOR THE DIABETES WARD.**

## **HYPERGLYCAEMIA**

**Hyperglycaemia** or **high blood glucose** is a term used to describe a **high** Blood Glucose level measuring 15 mmol/litre or above.

This may result from:

- Missing an injection
- Poor Previous Control
- An infection
- Over-eating

### **What are symptoms of hyperglycaemia?**

- Thirst (it is important that water or sugar free diet drinks are given at this time)
- Frequency of passing urine

If the blood glucose is persistently raised the child may become flushed and drowsy and they may vomit. This can be a sign that the child is very unwell.

**IF THE CHILD HAS BEEN VOMITING AND IS BECOMING DROWSY,  
PLEASE DO THE FOLLOWING :**

- 1. CONTACT THE RHSC DIABETES EMERGENCY HELPLINE ~ 0131 536 0000  
AND ASK FOR WARD 1, OR DIRECT DIAL 0131 536 0701.**
- 2. INFORM PARENTS.**

## GENERAL ADVICE

1. All nursery/school staff and carers in contact with a child with diabetes should know about his/her condition.
2. All nursery/school staff and carers attending the child should have a ready access to a supply of glucose or sugar. The child with diabetes should always carry some form of glucose with them.
3. It is not expected that absence from school should be more frequent for the child with diabetes than for other children. Please contact the Diabetes Nurse Specialists if there are concerns about absence.
4. If a child with diabetes is unwell, **do not:**
  - a) leave them unattended or resting by themselves.
  - b) allow them to leave school without a responsible adult.
5. A child with diabetes may have all the same inoculations and vaccinations as other children.
6. Dental treatment under local anaesthetic may be carried out as usual, but if general anaesthetic is needed, the child must be admitted to hospital.
7. A child with diabetes should be submitted to the same kind of discipline as any other child, but should not be detained or delayed from having their meals or snacks.
8. Diabetes should not prevent the child from taking part in school trips, sporting activities etc, but a little extra care may be needed and advice is readily available from the Diabetes Nurse Specialists. **Prior to school residential trips it is important to liaise with the Parents/Carers and if necessary Diabetes Nurse Specialists.**
9. If any further advice is needed, or if at any time there are concerns or problems regarding a child with diabetes, please contact the Diabetes Nurse Specialists on 0131-536-0375 (please refer to page 10 for contact details) or contact the Diabetes Ward at the Royal Hospital For Sick Children on 0131-536-0701 (Ward 1)



**INDIVIDUAL PATIENT REQUIREMENTS**

Name ..... DOB.....

Address .....

Parent contact numbers .....

**Blood Glucose Monitoring**

Type of meter used .....

Meter carried by child  Meter kept in school

If meter is kept in school ~ identify person to check supplies & liaise with parents

Identified persons' name .....

School Staff responsibility ~ Facilitate BG Testing  Assist/Supervise child

**Insulin Injections**

Equipment used .....

Insulin used .....

Insulin carried by child  Insulin kept in school

School staff responsibility - Facilitate Injections  Parent/staff doing injections

**Hypo Treatment**

As per flowchart (please refer to page 6)

Special instructions (if necessary) .....

## HOW TO SEEK HELP

	<b>Name</b>	<b>Phone No</b>	<b>Times contactable</b>
<b>Diabetes Ward</b>		0131 536 0701	24 hours
<b>Diabetes Specialist Nurses</b>		0131 536 0375 (voicemail)	9am – 4pm (Monday – Friday)
<b>Ambulance assistance to A &amp; E</b>	<b>RHSC</b> (under 16 years of age)  <b>NRIE</b> New Royal Infirmary Edinburgh (over 16 years of age)  <b>St John's Hospital</b> (all ages)	999	24 hours

## Insulin Injection Procedure

### Items required for procedure

- Insulin device – pen device containing cartridge of insulin **or** disposable pen containing insulin
- Needle for pen device
- Container / Safeclip device for disposal of needles

### Procedure the child should follow

1. Wash hands
2. Attach the needle to the pen device and remove the cover
3. Prime the pen device by dialling up 2 units of insulin, using the dosage selector, and eject until a drop of insulin is visible at the end of the needle
4. Dial up the correct dose of insulin
5. Using the thumb and index / middle finger **gently** pinch up a fold of skin
6. To inject, insert the needle and press the push button as far as it will go
7. After counting to 10 withdraw the needle keeping the push button fully depressed
8. After the injection, put the outer needle cap on and unscrew the needle (manufacturers instructions)
9. Discard the needle carefully
10. Replace the pen cap
11. Keep the pen in a cool place – not a fridge

### Sites for injections

Upper 2/3 of front/outer aspect of thighs

Abdomen – in a semi-circle around the umbilicus

Hip- at top of buttock

TEACHING CHECKLIST

Patient Name:

School:

Guidelines: Received Yes / No Discussed Yes / No

Date:

School / Nursery Staff Signature:

Designation

Print name:

Professional Signature:

Designation

Print name: