

## Dealing with diabetes: day to day

Levels: 1, 2 and 3

**Subject:** Measuring glucose levels

TEACHER

STUDENTS

1/3



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For someone who has diabetes - particularly in the case of children - blood-glucose monitoring becomes essential in keeping regular track of their state of health and in avoiding metabolic imbalances.

As a result, a student who has diabetes will need to have several blood-glucose checks, throughout his or her school day.

In the field of diabetology, technicians refer to the device that's used to measure blood-glucose levels as a 'reflectometer'. However, the device is more commonly known as a 'glucometer' or 'blood sugar meter'.



Though there are many different models, all models involve the same basic mechanical function:

1. The child pierces the skin on his finger with a lancing device with a built-in microneedle, to draw a drop of blood.
2. The drop of blood is smeared onto a chemically active disposable strip which has, previously, been inserted into the device.
3. A few seconds later, the device displays a two or three-digit reading, on a small digital screen.

Children are asked to record the reading in a log, enabling them and their diabetes therapists to determine whether the treatment is working or whether it needs adjusting. Most modern glucometers carry a memory chip that stores readings; what this means is the student can, now, wait until after school, to log the day's readings.

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It is quite likely that most children with diabetes, at primary school level, will be proficient enough with a glucometer to take their own blood-glucose level readings, as this is one of the main objectives established under diabetes education programs, the moment a child is diagnosed as having diabetes.

However, it's never a bad idea for teachers to learn how to use a glucometer. The best way to learn how to use one is for the teacher to test his or her own blood-glucose level. Don't be afraid; it's, really, quite painless! For obvious health reasons, however, don't forget to use a new microneedle and to dispose of it, once you're done. No sharing!

Though most children will have their own glucometers, there are times when parents will provide an additional unit, for the teacher to have, readily available.

### **WHEN, EXACTLY, DOES A CHILD NEED TO DO A CHECK?**

It, really, depends on what the diabetology team treating the child determines. The general rule, however, is that glucose levels need to be checked at the following times:

- before meals, including any mid-morning or mid-afternoon snacks;
- before doing physical education or sports;
- and, at any time the child feels any of the tell-tale symptoms that his blood-glucose levels have dipped a little too far for comfort (hypoglycemia).

Though hypoglycemic episodes are quite unpredictable and not infrequent, they are most likely to occur after a period of unusually intense physical exertion.

And, whereas a child who is engaged in checking blood-glucose levels needs no immediate attention, once they're done, it'll be nothing short of kindness - on the part of the teacher - to ask whether they're feeling all right.

Parents and doctors rely on teachers, both to make it easy for students with diabetes to have their blood-glucose checks - whenever they need them - and to enable this vital procedure to find its place, in amongst all the many other normal classroom routines.

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As you can, probably, imagine, just as some children will use glucose checks to become the center of attention, others will try to hide or skip the procedure, altogether, simply to avoid being stared at. The aim is for both diabetics and non-diabetics to learn to see glucose checks as glucose checks, and nothing more.

## RELATED ACTIVITIES

TITLE	DESCRIPTION	LEVEL	REF.
Things Carol needs	Put together a puzzle that identifies what objects a child with diabetes requires, at all times, to manage his or her condition.	1	<b>09</b>
Working with numbers (2)	Sorting numbers, from smallest to largest. Addition.	1	<b>12</b>
Working with numbers (3)	Switching from numbers to words and from words to numbers.	1	<b>13</b>
Teacher template	A template, designed to create new exercises for students.	1	<b>15</b>