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NHS
West Hertfordshire Teaching Hospitals
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Patient information

Bolus Advisors for Children and Young People with Diabetes

Excellent patient care, together

What is a bolus advisor?

A bolus advisor is an app that you can use to help calculate your required insulin dose, taking both your current blood glucose level and carbohydrates you want to eat into account. It uses specific ratios which your diabetes team will provide to you, namely your insulin sensitivity factor (ISF or correction factor) and your insulin to carbohydrate ratio (ICR) to help calculate this insulin dose.

Using a bolus advisor can be a more accurate way of calculating insulin doses compared to manual calculation and can also help reduce the burden of the multiple decisions you make daily by doing the calculations for you.

Some bolus advisors are able to help calculate percentage increase or reductions in the insulin dose for various reasons like exercise or illness. Bolus advisors are only used when you are using insulin pens. If you are using an insulin pump, your pump is your bolus advisor.

Bolus advisors

The West Herts Children and Young People's Diabetes Team has looked at the different bolus advisors available and which one will provide the necessary functions while still being user-friendly.

Recommendation for all patients on insulin pens:

1. **Diabetes M app**

   This bolus advisor has all the necessary functions as well as percentage insulin adjustment when exercising and during illness. It is also able to take your continuous glucose monitor reading and arrows into account to adjust the insulin dose.

   https://diabetes-m.com/

If you prefer an 'easier to use' user interface or would like to try another bolus advisor, our second recommendation is:

2. **mySugr app**

   This bolus advisor has all the necessary functions, although it does not have the functionality of percentage insulin adjustment. If this app is used and you would like to adjust your insulin dose by increasing or decreasing the dose by 10-20%, please use the recommended bolus with the tables below (Table 1 & 2) and find the adjusted dose recommended to use.

   https://www.mysugr.com/en/diabetes-app

Table 1:

Units of bolus insulin after adjusting for exercise to decrease ↓ insulin given

Recommended amount	-10% of dose	-20% of dose	-30% of dose
1 unit	0.5 unit	0.5 unit	0.5 unit
1.5 units	1 unit	1 unit	1 unit
2 units	1.5 units	1.5 units	1 unit
2.5 units	2 units	2 units	1.5 units
3 units	2.5 units	2 units	2 units
3.5 units	3 units	2.5 units	2 units
4 units	3.5 units	3 units	2.5 units
4.5 units	4 units	3.5 units	3 units
5 units	4.5 units	4 units	3.5 units
5.5 units	5 units	4 units	3.5 units
6 units	5.5 units	4.5 units	4 units
6.5 units	5.5 units	5 units	4.5 units
7 units	6.0 units	5.5 units	4.5 units
7.5 units	6.5 units	6 units	5 units
8 units	7.0 units	6 units	5.5 units
8.5 units	7.5 units	6.5 units	5.5 units
9 units	8 units	7 units	6 units
9.5 units	8.5 units	7.5 units	6.5 units
10 units	9 units	8 units	7 units
10.5 units	9.5 units	8 units	7 units
11 units	9.5 units	8.5 units	7.5 units
11.5 units	10 units	9 units	8 units
12 units	10.5 units	9.5 units	8 units
12.5 units	11 units	10 units	8.5 units
13 units	11.5 units	10 units	9 units
13.5 units	12 units	10.5 units	9 units
14 units	12.5 units	11 units	9.5 units
14.5 units	13 units	11.5 units	10 units
15 units	13.5 units	12 units	10.5 units

Table 2:
Units of bolus insulin after adjusting for illness to increase ↑ insulin given

Recommended amount	+10% of dose	+20% of dose
1 unit	1 unit	1 unit
1.5 units	1.5 units	1.5 units
2 units	2 units	2 units
2.5 units	2.5 units	3 units
3 units	3 units	3.5 units
3.5 units	3.5 units	4 units
4 units	4 units	4.5 units
4.5 units	5 units	5 units
5 units	5.5 units	6 units
5.5 units	6 units	6.5 units
6 units	6.5 units	7 units
6.5 units	7 units	7.5 units
7 units	7.5 units	8 units
7.5 units	8 units	9 units
8 units	8.5 units	9.5 units
8.5 units	9 units	10 units
9 units	9.5 units	10.5 units
9.5 units	10.5 units	11 units
10 units	11 units	12 units
10.5 units	11.5 units	12.5 units
11 units	12 units	13 units
11.5 units	12.5 units	13.5 units
12 units	13 units	14 units
12.5 units	13.5 units	15 units
13 units	14 units	15.5 units
13.5 units	14.5 units	16 units
14 units	15 units	16.5 units
14.5 units	16 units	17 units
15 units	16.5 units	18 units

Adjusting for exercise if using mySugr app

Worked Example

The bolus advisor recommends you use 6.5 units for lunch (taking both glucose levels and carb content into account). You know you are doing PE in one hour and you need to reduce the amount of insulin you use by 20% as your glucose usually drops during sport. You look at Table 1 and see with a reduction of 20% of 6.5 units, you will need to inject 5 units of insulin now before you eat your lunch.

If you notice that you require a larger percentage reduction (ie - 40/-50%) or increase, please contact the team and a specific table can be made for you.

Adjusting for illness if using mySugr app:

During periods of illness your blood glucose levels can be affected, either having higher than average glucose levels or lower than average glucose levels. You may therefore need to adjust your insulin to help your glucose levels to stay within the recommended range. If your blood glucose levels are running higher than usual during a period of illness and you are using the mySugr app, you can use Table 2 to increase your bolus dose by 10-20% as needed.

If you have any questions with regard to setting up a bolus advisor which is suitable for you, please contact the Paediatric Diabetes Team to arrange this.

How to contact us

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PALS

If you need this leaflet in another **language, large print, Braille or audio version**, please call **01923 217198** or email westherts.pals@nhs.net.









Concerns, complaints or suggestions

If you are unhappy with your experience or would like to give feedback, please contact our Patient Advice and Liaison Service (PALS). PALS is available to patients, relatives, carers and friends to raise concerns.

For more information, please scan the QR code or visit our website.

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