



Correction Doses and Insulin Sensitivity Factor (ISF)



This document has been created for people on insulin therapy, using a Basal-Bolus regime (i.e. once or twice daily long-acting insulin and quick-acting insulin with meals).

Insulin Sensitivity Factor (ISF)

Your insulin sensitivity factor is how much 1 unit of insulin will reduce your blood glucose level by.

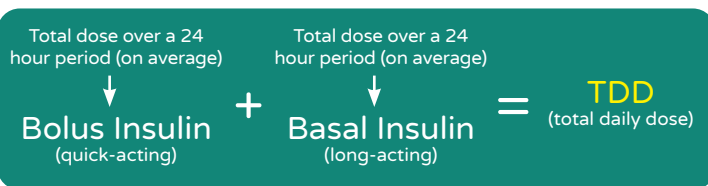
Examples:

- If 1 unit of insulin drops your blood glucose by **3 mmol/L** then your insulin sensitivity factor is **1:3**
- If 1 unit of insulin drops your blood glucose by **5 mmol/L** then your insulin sensitivity factor is **1:5**

Calculating your starting correction dose/ ISF

For most people, a good starting point is an ISF of 1:3. But if you want to calculate a starting ISF more accurately, then follow the steps below:

1. Calculate your total units of injected insulin over 24 hours. You do this by adding together your total bolus insulin injection doses (units) and all of your basal insulin injections doses (units) over a 24-hour period to get your total daily dose (TDD). (If these doses vary day to day, take an average over 3 - 4 days).



2. Divide 100 by your total daily dose i.e. $100 \div \text{TDD}$. This means that 1 unit of insulin will reduce your blood glucose by approximately **X mmol/L**.

$$\frac{100}{\text{TDD}} = \text{'X' mmol/L of blood glucose will be reduced per single unit of insulin}$$

Example:

If the total daily insulin dose (TDD) is 30 units.

$$\frac{100}{30} = 3.3 \text{ mmol/L}$$

This means that 1 unit of insulin will reduce your blood glucose by approximately **3 mmol/L** (you can round up or down to the nearest unit) and your **ISF is 1:3**.

Always check your ISF calculations with a health care professional before using them and be aware that your ISF may change over time. By regular glucose monitoring you can work out if your ISF is correct and make small adjustments to it if needed.

Insulin Pumps

If you use an insulin pump then you should consult your healthcare team and/or review advice on the insulin pump e-learning course as the ISF calculations may be slightly different e.g. $130 \div \text{TDD}$ is often used to calculate a starting ISF.

