National University Hospital

Resources for People with Type 1 Diabetes

PUTTING ICR, CARBOHYDRATE COUNTING AND ISF TOGETHER

With knowledge of your **Insulin:carbohydrate ratio (ICR)**, **carbohydrate counting skills**, I**nsulin sensitivity factor (ISF)**, and **pre-meal blood glucose level**, you will be able to decide what is the correct pre-meal insulin dose to give yourself.

Here's an example of putting it altogether.

Before starting the meal:

1. Perform a pre-meal blood glucose check
2. Estimate the amount of carbohydrates you are planning to eat in the meal

Example

A person with an **ICR of 1:10** and **ISF of 1:3** intends to eat a meal containing **60g of carbohydrates**. His pre-meal blood glucose is **12 mmol/L**.

Step 1: Calculate the amount of quick-acting insulin required for 60g of carbohydrates

$60 \div 10 =$ **6 units**

Step 2: Calculate the amount of quick-acting insulin needed to reduce blood glucose to 6 mmol/L

$$\frac{12-6}{3} = \textbf{2 units}$$

Step 3: Add up the quick-acting insulin for the carbohydrates + correction

$6 + 2 =$ **8 units of quick-acting insulin**

This may seem daunting at first, but you will become better with practice. It helps to start on a smaller scale (For example, designating one meal/day to practice your counting). Speak to your healthcare team on how tools like smartphone apps you can use to help with your calculation

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