

Using a Correction Factor When Carb Counting

When advanced carb counting, you will check your blood sugar level before each meal and snack. And in reality, your blood sugar may not always be in your target range.

If it is high before your meal, eating carbs is going to make your blood sugar go even higher. That's when a correction factor is useful.

A correction factor is sometimes called an insulin sensitivity factor. It is a formula that tells you the amount of blood sugar lowered by 1 unit of rapid-acting insulin.

For example, a correction factor of 1:50 means 1 unit of rapid-acting insulin will lower your blood sugar by 50 mg/dL.

When your blood sugar is high, you'll use your correction factor to calculate the amount of insulin you need to bring your blood sugar back into your target range.

Your diabetes care team will help you determine this number. And it may change over time or even throughout the day.

Here's an example of how to use your correction factor. To do this calculation, you will need: A before meal blood sugar target, your insulin-to-carb ratio, and your correction factor number.

Let's say your before meal blood sugar target is 110 mg/dL, your insulin-to-carb ratio is 1:12, and your correction factor is 1:50.

Again, this means 1 unit of insulin will lower your blood sugar 50 mg/dL.

To calculate how much insulin to take before dinner, check your blood sugar.

Your result is 245 mg/dL. This is above your before meal target of 110.

You have ordered a meal at your local restaurant containing 64 grams of carbohydrate.

To find out how much insulin you need to cover the carbs in your meal, divide the total carbs in the meal - 64, by the second number in your insulin-to-carb ratio - 12. 64 divided by 12 is 5.3.

So you'll need 5.3 units of insulin to cover the 64 grams of carb in your meal.

But your blood sugar is high. 245 minus 110 means you are over your blood sugar target by 135 mg/dL.

Use your correction factor to calculate how many additional units of insulin you need to bring your blood sugar into your target range.

Divide 135, the amount you are over your blood sugar target, by your correction factor, in this case 50, to get the number of units of insulin to add. 135 divided by 50 is 2.7.

You will need to take 2.7 more units of insulin to get your blood sugar back into your target range.

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Add your insulin amounts together to get the total number of units of rapid-acting insulin you need. 5.3 plus 2.7 equals 8 units of insulin.

To make sure your correction factor is working, check your blood sugar 2 hours after the start of your meal. Your blood sugar level may be higher than your pre-meal result. But it should be in your target range.

Write down your current correction factor and insulin-to-carb ratio. Keep these formulas in your wallet or on your phone.

They are important tools that give you more flexibility in what and when you eat.

If you find your numbers aren't working as well as you'd like, talk with your diabetes care team. They can help you fine-tune your routine and find the numbers that work best for you.