From the [Insulin Dose Guide for Insulin Pumps, CGMs, and AIDs](#)

Check Your Correction Factor (CorrF or ISF)

Basics

Correction boluses are used to lower high glucose levels to the glucose target. The CorrF or ISF (Insulin Sensitivity Factor) is how many mg/dL (or mmol/L) your glucose drops on each unit of insulin. Once an accurate CorrF is entered into a bolus calculator, it correctly determines the units of insulin needed to consistently bring high glucose values down to your target glucose 4 to 5 hours later without going low.

Check your CorrF last because it relies on having accurate basal rates and CarbFs. The CorrF is inversely related to the accuracy of your TDD and to your average glucose or A1c. This means that when your TDD is low and average glucose high, larger correction boluses are needed for high glucoses to offset the missing basal insulin or carb boluses. So basal rates and CarbFs are adjusted first to improve the accuracy of your CorrF significantly.

Remember: smaller CorrF give larger correction boluses; larger CorrFs give smaller boluses. If correction boluses cause low readings, raise the CorrF number, and vice versa.

Correction Factor Checking Tool

To find a close CorrF to check, select the one in the right "corrected" column of the
[Pump Settings Tool](#).

Start   ~ 1 hr later   ~ 2hrs later   ~ 3 hrs later   ~ 4 hrs later   ~ 5 hrs later

Time: _____ am/pm _____ am/pm _____ am/pm _____ am/pm _____ am/pm _____ am/pm

BG: _____ mg/dl _____ mg/dl _____ mg/dl _____ mg/dl _____ mg/dl _____ mg/dl

Change in BG: _____ mg/dl _____ mg/dl _____ mg/dl _____ mg/dl _____ mg/dl

Fall in glucose from start

350 (19.4)	Date: ____ /____/____
300 (16.7)	CorrF = 1u / _____ mg/dL
250 (13.9)	Corr Bolus: _____ u
200 (11.1)	
150 (8.3)	
100 (5.6)	**130** **Goal** **70**
50 (2.8)	
0	

Start   1 hr   2 hrs   3 hrs   4 hrs   5 hrs

1. Start a correction factor check when your glucose is above 250 mg/dL (13.9 mmol/L), you have not eaten in the last 3 hours, and have not taken a bolus in the last 5 hours. Enter this value on the Starting BG line.

2. Temporarily set your Glucose Target to 100 in your Bolus Calculator, enter your glucose, and give the correction bolus that your BC recommends. After giving the bolus, reset your Glucose Target to its original setting.

3. Check your glucose or look at your CGM screen to record its value every hour. Check also if you feel your glucose is low. Plot how your glucose responds in the graph above.

4. Small amounts of protein like nuts, cheese, or a boiled egg can be eaten during the check but avoid carbohydrates.

5. If your glucose goes below 70 mg/dL (3.9 mmol/L), stop checking, treat the low glucose, and raise your CorrF using Graphic 12.6 and Table 12.7.

6. If your glucose stays above 130 mg/dL (7.2 mmol/L), give a correction bolus, and lower your CorrF using Graphic 12.6 and Table 12.7.

Adjust Your CorrF(s) from Your Results

Make changes to your CorrF using Graphic 12.6 as a guide, and Table 12.7 for a suggested amount.

12.6 Change Your Correction Factor
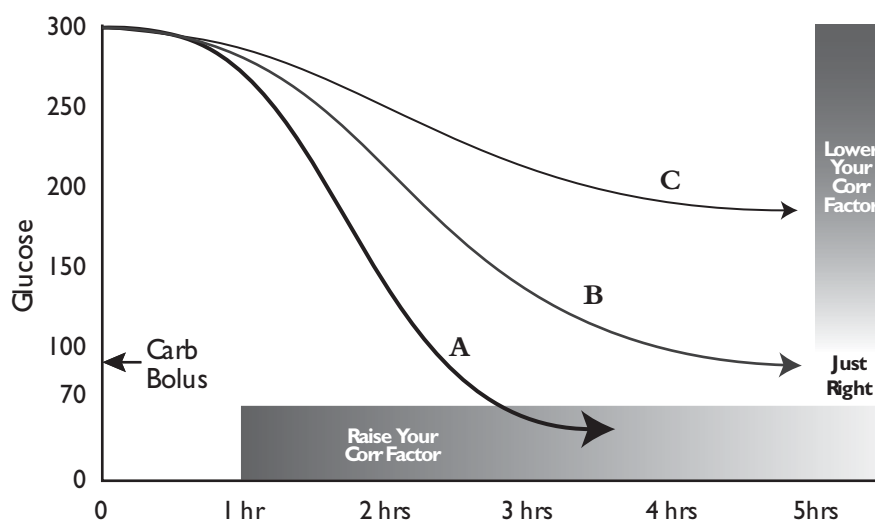
Change your CorrF from your glucose path:

1. If your glucose ends up within 30 mg/dL (1.7 mmol/L) of your starting glucose like Arrow B, celebrate and check the CorrF once more to verify.

2. *If your glucose goes below 70 mg/dL (3.9 mmol/L) like Arrow A, stop checking, treat the low, use Grahic 12.6 and Table 12.7 to raise your CorrF number by about 10% to make correction boluses smaller.* For example a CorrF of 1 u:20 mg/dL (1 u:1.1 mmol/L) would be raised to 1 u:22 mg/dL (1 u:1.2 mmol/L), or a factor of 1 u:80 mg/dL (1 u:4.4 mmol/L) would be raised to 1 u:88 mg/dL (1 u:4.9 mmol/L), etc. If your glucose goes low only 2-3 hours after the bolus, a larger increase may be needed. Recheck the new CorrF on another day.

3. *If your glucose stays above 130 mg/dL (7.2 mmol/L) like Arrow C, use Grahic 12.6 and Table 12.7 to lower your CorrF and make correction boluses larger.* For example, a CorrF of 1 u:80 mg/dL (4.4 mmol/L) would be lowered to 1 u:72 mg/dL (4.0 mmol/L), or a factor of 1 u:20 mg/dL (1 u:1.1 mmol/L) would be lowered to 1 u:18 mg/dL (1 u:1.0 mmol/L). A larger decrease may be needed if your glucose stays very high. Recheck the new CorrF on another day.

4. Check and adjust your CorrF until it brings high glucose readings close to 100 mg/dL 5 hours later on 2 or more consecutive checks.

Derived from **Pumping Insulin** to improve your glucose results. Be sure to check all your bolus calculator settings against those in right column of the Pump Settings Tool.

Repeat this check and adjust your CorrF until it brings your glucose down below 130 and above 70 mg/dL after 5 hours.

You've now programmed your pump with correct settings, customized specifically for you. The next pages on Pattern Management provide advanced tips and guidance in interpreting your CGM graphs and correcting unwanted glucose patterns.

12.7 Sample CorrF Changes		
These CorrF changes increase the size of correction boluses by 10% in the middle column or decrease them by 10% in the right column.		
Current CorrF	**CorrF to Make Corr Boluses 10% Larger**	**CorrF to Make Corr Boluses 10% Smaller**
120 mg/dL	108 mg/dL	132 mg/dL
100 mg/dL	90 mg/dL	110 mg/dL
80 mg/dL	72 mg/dL	88 mg/dL
60 mg/dL	54 mg/dL	66 mg/dL
50 mg/dL	45 mg/dL	55 mg/dL
40 mg/dL	36 mg/dL	44 mg/dL
30 mg/dL	27 mg/dL	33 mg/dL
25 mg/dL	22 mg/dL	28 mg/dL
20 mg/dL	18 mg/dL	22 mg/dL
15 mg/dL	14 mg/dL	16 mg/dL
10 mg/dL	9 mg/dL	11 mg/dL