12.1 Math for a Correction Bolus

To get your correction bolus, subtract your target glucose from your current glucose, then divide this number by your CorrF to get the units you need:

$$\frac{\textbf{Current BG - Target BG}}{\textbf{CorrF}} = \textbf{Correction Bolus}$$

If a glucose is 230 mg/dL with a target of 110 mg/dL and CorrF of 40 mg/dL:

$$\frac{\textbf{230 mg/dL – 110 mg/dL}}{\textbf{40 mg/dL per unit}} = \frac{\textbf{120 mg/dL}}{\textbf{40}} = \textbf{a 3.0 u correction bolus}$$

12.2 Calculate Your Own Correction Factor (or Use Table 9.7)

For the CorrF with an average glucose of 140 mg/dL, divide 1800 by the average betterTDD:

$$\textbf{CorrF} = \frac{\textbf{1800 mg/dl}}{\textbf{betterTDD}} \textbf{ or } \frac{\textbf{00 mmol/L}}{\textbf{betterTDD}}$$

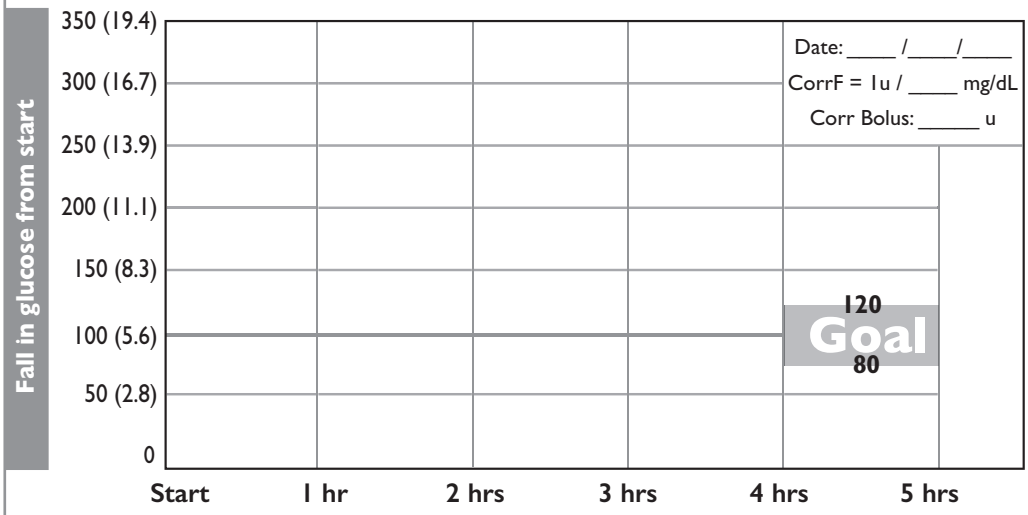
For example, if a person's 14 day average TDD is 50 units a day, their CorrF would be 1800/50 = 36 mg/dL per unit (2.0 mmol/L per unit). Note that on an AID system, a stronger (lower) CorrF often improves the average glucose without increasing hypoglycemia.

12.3 A Smaller CorrF Lowers a Higher Average Glucose

For a Recent A1c of:	Or a 14-day average glucose of:	Use this Corr Factor Scale Number (CorrF-SN) for mg/dL between	for mmol/L between
5.1% to 6.3%	100 to 135 mg/dL	= 2100 to 1900/TDD	=117 to 106/TDD
6.4% to 7.0%	136 to 155 mg/dL	= 1900 to 1800/TDD	= 106 to 100/TDD
7.1% to <8.5%	156 to 198 mg/dL	= 1800 to 1560/TDD	= 100 to 87/TDD
8.6% to 10%	199 to 241 mg/dL	= 1560 to 1325/TDD	= 87 to 74/TDD
10.1% to 12.1%	242 to 300 mg/dL	= 1325 to 1000/TDD	= 74 to 56/TDD
CorrF = CFRN / average TDD			

12.4 Test Your Correction Factor in Manual Mode

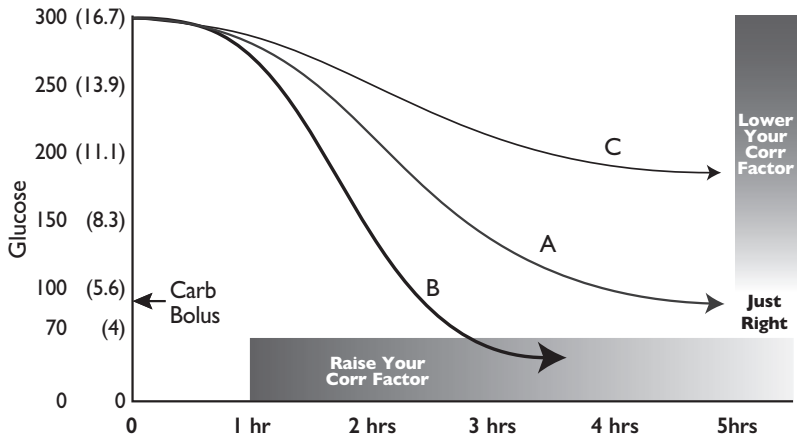
	Start	~ 1 hr later	~ 2hrs later	~ 4 hrs later	~ 5 hrs later
Time:	_____ am/pm	_____ am/pm	_____ am/pm	_____ am/pm	_____ am/pm
BG:	_____ mg(mmol)	_____ mg(mmol)	_____ mg(mmol)	_____ mg(mmol)	_____mg(mmol)
Change in BG:		_____ mg(mmol)	_____ mg(mmol)	_____ mg(mmol)	_____mg(mmol)



Goal: To find a CorrF that lowers higher readings to 80 to 120 mg/dL (4.4 to 6.7 mmol/L) after 5 hours without going low. To clear out prior boluses and carbs, take no bolus in the previous 5 hours and no carbs in the previous 3 hours.

1. Test when your glucose is above target, such as above 250 mg/dL (12.9 mmol/L) and you can wait to eat for another 5 hours. Small amounts of protein (5 grams or less) from nuts, cheese, or boiled egg may be eaten while checking.
2. Take the correction bolus your pump BC recommends.
3. If your CGM glucose goes below 70 mg/dL (4 mmol/L), stop checking and eat carbs.
4. From your 6-hour CGM screen, plot your readings on the graph above.
5. Repeat until an above-target glucose falls within the goal area on 2 consecutive checks. See Change Your CorrF in 12.6 if your glucose goes below 70 mg/dL (4 mmol/L) at any time or stays above 120 mg/dL (6.7 mmol/L) at the end of the check.

12.5 Adjust Your CorrF from Your Glucose Response

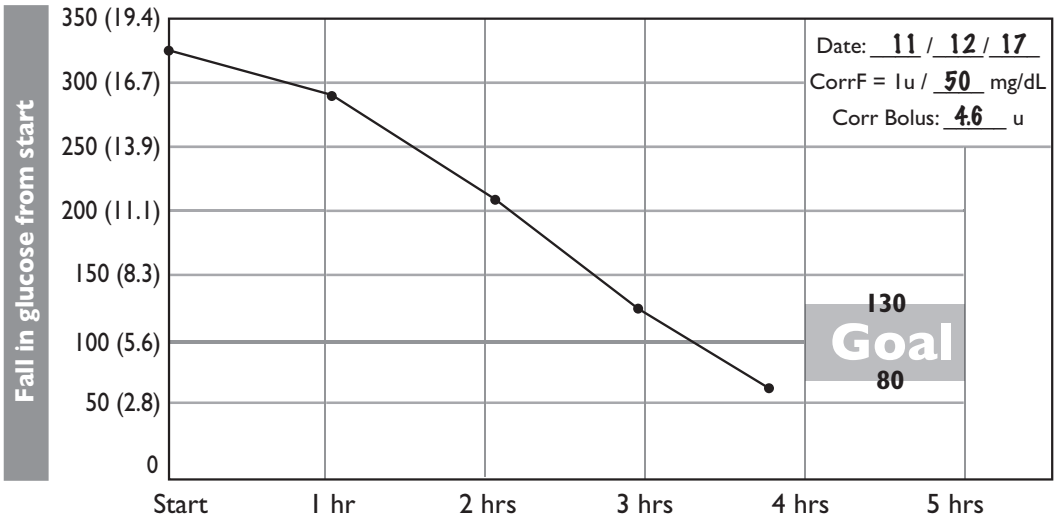


1. If your glucose ends up within 20 mg/dL (1.2 mmol/L) above or below your target glucose (Arrow A), celebrate and check the CorrF once more to verify.
2. If your glucose goes below 70 mg/dL (4 mmol/L), such as in Arrow B, treat the low and raise your CorrF number by 10% using the table below to make correction boluses smaller. For example a CorrF of 1 u:40 mg/dL (1 u:2.2 mmol/L) would be raised to 1 u:44 mg/dL (1 u:2.4 mmol/L). If your glucose goes low after only 2-3 hours, a larger increase may be needed. Then recheck.
3. If your glucose stays above 130 mg/dL (7.2 mmol/L), such as in Arrow C, lower your CorrF by 10% using the table below to 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). A larger decrease may be needed if your glucose stays very high. Then recheck.
4. Change the CorrF until it brings high glucose close to your target glucose 5 hours later.

Current CorrF	CorrF to Make Corr Boluses 10% Larger	CorrF to Make Corr Boluses 10% Smaller	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	30 mg/dL	27 mg/dL	33 mg/dL
100 mg/dL	90 mg/dL	110 mg/dL	25 mg/dL	22 mg/dL	28 mg/dL
80 mg/dL	72 mg/dL	88 mg/dL	20 mg/dL	18 mg/dL	22 mg/dL
60 mg/dL	54 mg/dL	66 mg/dL	15 mg/dL	14 mg/dL	16 mg/dL
50 mg/dL	45 mg/dL	55 mg/dL	10 mg/dL	9 mg/dL	11 mg/dL
40 mg/dL	36 mg/dL	44 mg/dL	5 mg/dL	4.5 mg/dL	5.5 mg/dL

12.6 Example: Elaine Checks and Changes Her Correction Factor

	Start	~ 1 hr later	~ 2hrs later	~ 3 hrs later	~ 4 hrs later	~ 5 hrs later
Time:	5:00 am/pm	6:05 am/pm	7:12 am/pm	8:10 am/pm	8:51 am/pm	-- am/pm
BG:	328 mg/dl	298 mg/dl	209 mg/dl	123 mg/dl	58 mg/dl	-- mg/dl
Change in BG:	-30 mg/dl	-119 mg/dl	-205 mg/dl	-270 mg/dl	-- mg/dl	



Elaine underestimated the carbs in a pasta lunch. Her glucose 5 hours later was 328 mg/dL (18 mmol/L) and she also bolused then with no food since. She decided to skip dinner and check her CorrF. Her basal rate, checked before, kept her glucose flat when she was not eating.

With a CorrF of 1 unit for every 50 mg/dL (2.8 mmol/L) above 100 mg/dL (5.6 mmol/L), Elaine bolused 4.6 units to lower her glucose by 228 mg/dL (12.7 mmol/L). [228/50 = 4.6 units]. Her glucose fell to 58 mg/dL (3.6 mmol/L) less than 4 hours later. After treating the low, she raised her CorrF to 1 unit for each 55 mg/dL (3.1 mmol/L). She planned to check her new CorrF at the earliest opportunity.