








New Approach to Adjusting Insulin Doses Using Trend Arrows in Adults: Pre-meal and Corrections ≥ 4 Hours Post-meal			
Trend Arrows		Correction Factor* (CF)	Insulin Dose Adjustment (U)
Receiver	App		
↑↑		<25 25-<50 50-<75 ≥ 75	+4.5 +3.5 +2.5 +1.5
↑		<25 25-<50 50-<75 ≥ 75	+3.5 +2.5 +1.5 +1.0
↗		<25 25-<50 50-<75 ≥ 75	+2.5 +1.5 +1.0 +0.5
→		<25 25-<50 50-<75 ≥ 75	No adjustment No adjustment No adjustment No adjustment
↘		<25 25-<50 50-<75 ≥ 75	-2.5 -1.5 -1.0 -0.5
↓		<25 25-<50 50-<75 ≥ 75	-3.5 -2.5 -1.5 -1.0
↓↓		<25 25-<50 50-<75 ≥ 75	-4.5 -3.5 -2.5 -1.5
Insulin adjustments using trend arrows do not replace standard calculations using ICR and CF. Adjustments are increases or decreases of rapid-acting insulin in addition to calculations using ICR and CF. Adjustments using trend arrows are an additional step to standard care.			
Considerations:			
<p>For the 4 hours following a meal, avoid adjusting insulin dose using trend arrows. Refer to REPLACE-BG recommendations, summarized in Figure 4, for an approach to minimize hypo- and hyperglycemia during this timeframe.</p>			
<p>For frail or older adults, start conservatively to reduce hypoglycemia risk:</p> <ul style="list-style-type: none"> ▶ Upward arrows: reduce dose increase by at least 50% (e.g., +1.0 U may become +0.5 U or no insulin increase) ▶ Downward arrows: increase dose reduction by least 50% (e.g., -1.0 U may become -1.5 or -2.0 U) 			
<p>For rapidly rising sensor glucose (2 UP arrows; ↑↑) at pre-meal, consider administering insulin 15–30 minutes before eating.</p>			
<p>For rapidly falling sensor glucose (2 DOWN arrows; ↓↓):</p> <ul style="list-style-type: none"> ▶ Pre-meal: consider administering insulin closer to the meal ▶ Near or lower than 150 mg/dL: consider holding pre-meal insulin dose until glucose trends have stabilized 			
*Correction factor (CF) is in mg/dL and indicates glucose lowering per unit of rapid-acting insulin.			

Figure 3. New approach to adjust insulin doses using trend arrows in adults with diabetes. This figure outlines our approach to adjusting insulin dose using trend arrow data from the Dexcom G5. The approach is based on anticipated glucose change and typical insulin sensitivity ranges in adults. This simplified, practical approach provides adjustments in

Postprandial Monitoring and Treatment: Using trend arrows for up to 4 hours	
Hyperglycemia Prevention Avoid correcting hyperglycemia for the first 2 hours following a mealtime bolus to prevent insulin stacking.	
From 2 to 4 hr Postprandial	Trend Arrow Direction / Recommended Action
150–250 mg/dL	Arrow Direction: ↑ or ↑↑
	Action: ▶ Consider taking a correction bolus using CF. ▶ Monitor for the next 2 hrs. ▶ Avoid additional correction doses for 2 hrs.
>250 mg/dL	Arrow Direction: ↑ or ↑↑
	Action: ▶ Confirm with fingerstick. ▶ Check for ketones if BG is >300 mg/dL. ▶ Take corrective insulin dose by injection (MDI-treated and insulin pump users). ▶ If 2 UP after additional 1 hr: ▷ Confirm with fingerstick. ▷ Take additional corrective insulin. ▷ Change infusion site (if using an insulin pump).
Hypoglycemia Prevention	
From 2 to 4 hr Postprandial	Trend Arrow Direction / Recommended Action
Near 150 mg/dL	Arrow Direction: ↘
	Action: ▶ Re-check CGM in 30 min.
	Arrow Direction: ↓ or ↓↓
Near 100 mg/dL	Action: ▶ Re-check CGM in 15 min.
	Arrow Direction: ↘ or ↓
	Action: ▶ Consider taking 15 g fast-acting carbohydrate. ▶ Re-check CGM in 20 min. If CGM reads <70 mg/dL with arrows still trending down, confirm with fingerstick and take an additional 15 g fast-acting carbohydrate. ▶ If CGM reading continues to drop or CGM level has not begun to rise as expected, confirm with fingerstick and re-check CGM every 15 min.
Near 100 mg/dL	Arrow Direction: ↓↓
	Action: ▶ Follow instructions above but take 30 g of fast-acting carbohydrate.
Considerations: ▶ Insulin pump users should use established CF with the pump bolus calculator, which will account for insulin-on-board. ▶ MDI-treated individuals that are not using a bolus calculator that takes insulin-on-board into consideration are generally recommended to administer 50% of the calculated insulin dose during this timeframe to avoid hypoglycemia.	

Figure 4. Approach to postmeal monitoring and treatment using trend arrows. These suggestions are based on the REPLACE-BG trial [19], which demonstrated that the use of nonadjunctive rtCGM for insulin dose decisions was a safe and effective alternative to conventional adjunctive CGM use. In that setting, instructions were given to participants to