DynamicGM[1]

DynamicGM: Dynamic Glucose Management is combining glucose and trend arrow information with proactive diabetes management strategies to maximise time in range (3.9-10.0mmol/L)

DynamicGM strategies

Preventing time below range (<3.9mmol/L)

Aiming for less than 4%

Libre	Dexcom	Medtronic	Description	Where the glucose will be in 10 minutes
		↑↑↑	Rapidly rising	more than 2.0mmol/l higher
↑		↑↑	Rising	1.5mmol/l higher
↗		↑	Slowly rising	1mmol/l higher
→			Stable	Same
↘		↓	Slowly falling	1 mmol/l lower
↓		↓↓	Falling	1.5 mmol/l lower
		↓↓↓	Rapidly falling	more than 2.0mmol/l lower

Libre	Dexcom	Medtronic	Description	Sensor level and action
		↓	Slowly falling	5.0 mmol/l or lower have hypo treatment
↘		↓↓	Falling	5.5 mmol/l or lower have hypo treatment
↓		↓↓↓	Rapidly falling	6.5 mmol/l or lower have hypo treatment

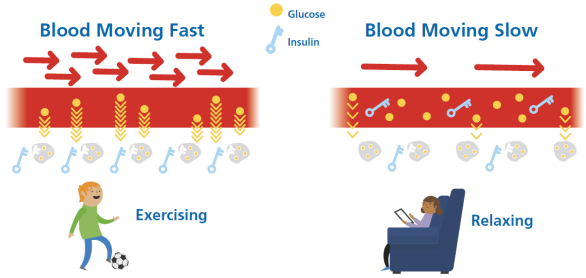
Maximising time in range (3.9-10.0mmol/L)

Aiming for 70%

Sensor glucose Levels	Libre	Dexcom	Medtronic	Minutes to bolus before meal
4.0 - 5.9 mmol/l			↓↓↓	Prevent hypo
	↓		↓↓	Prevent hypo
	↘		↓	Prevent hypo
	→			15
	↗		↑	20
	↑		↑↑	25
			↑↑↑	30
6.0 - 9.9 mmol/l			↓↓↓	0
	↓		↓↓	10
	↘		↓	15
	→			20
	↗		↑	25
	↑		↑↑	30
			↑↑↑	35
10.0 - 14.0 mmol/l			↓↓↓	15
	↓		↓↓	20
	↘		↓	25
	→			30
	↗		↑	35
	↑		↑↑	40
			↑↑↑	45
More than 14.0 mmol/l	↓		↓↓	25
	↘		↓	30
	→			40
	↗		↑	45
	↑		↑↑	50

Preventing time above range (>10.0mmol/L)

Aiming for less than 25%



Sensor glucose Level	Libre	Dexcom	Medtronic	How many minutes of activity
8.0 - 10.0 mmol/l	↗		↑	5
	↑		↑↑	10
			↑↑↑	15
10.0 - 14.0 mmol/l	→			15
	↗		↑	20
	↑		↑↑	25
			↑↑↑	30
More than 14.0 mmol/l	↓		↓↓	15
	↘		↓	20
	→			25
	↗		↑	30
	↑		↑↑	40

DynamicGM[1]

DynamicGM: Dynamic Glucose Management is combining glucose and trend arrow information with proactive diabetes management strategies to maximise time in range (3.9-10.0mmol/L or 70-180mg/dL)

DynamicGM strategies

Preventing time below range (<3.9mmol/L or <70mg/dL)

- Fast acting glucose when trending down
- Before bed hypo prevention algorithm
- Trend Arrow Adjustment Tool at mealtimes[2]
- Responding to low alarms & alarms

Maximising time in range (3.9-10.0mmol/L or 70-180mg/dL)

- Ten minutes of moderate activity after food
- Exercise carbs based on glucose & arrow
- Individualised exercise plans[3]
- Insulin dosing guide based on meal type[4]
- KISS for high fat and/or protein meals[5]
- Lower glycaemic index food choices[6]

Preventing time above range (>10.0mmol/L or >180mg/dL)

- Insulin tactics[7]
- Insulin timing based on glucose & arrow
- Short-burst of exercise drops after meal highs
- Trend Arrow Adjustment Tool at mealtimes
- Super bolus[8]

Reviewing & improving

- What is your DynamicGM Score?
- Ambulatory Glucose Profile Assessment Tool[9]
- Sugar Surfing?[10]

1. Pemberton J, Kershaw M, Dias R, Mohamed Z, Saraff V, Barrett T, et al. DYNAMIC: DYNAmic glucose Management strategies delivered through a structured education program improves time In range in a socioeconomically deprived cohort of Children and young people with type 1 diabetes with a history of hypoglycaemia. Paediatric Diabetes (2020) https://doi.org/10.1111/pedi.13155. 2. Lawson ML, Heffernan E, Richardson CA, Courtney JM, Bradley BJ. Evaluation of a Novel Tool to Adjust Insulin Boluses Based on Continuous Glucose Monitoring Trend Arrows and Insulin Sensitivity in Children and Youth with Type 1 Diabetes. Can J Diabetes. 2016;40(5):S16. 3. Riddell MC, Gallen IW, Smart CE, Taplin CE, Adolfsson P, Lumb AN, et al. Exercise management in type 1 diabetes: a consensus statement. Lancet Diabetes Endocrinol. 2017;5(5):377–90. 4. Bell KJ, Smart CE, Steil GM, Brand-Miller JC, King B, Wolpert HA. Impact of fat, protein, and glycemic index on postprandial glucose control in type 1diabetes: Implications for intensive diabetes management in the continuous glucose monitoring era. Diabetes Care. 2015;38(6):1008–15. 5. Pemberton J, Leal C, McCoubrey H. KISS Advanced Bolus System for managing the post-prandial glycemic effect of fat and protein in young people with T1D. Endocr Abstr. 2018;58:P062. 6. Ryan RL, King BR, Anderson DG, Attia JR, Collins CE, Smart CE. Influence of and optimal insulin therapy for a low-glycemic index meal in children with type 1 diabetes receiving intensive insulin therapy. Diabetes Care. 2008;31(8):1485–90. 7. Gradel AKJ, Porsgaard T, Lykkesfeldt J, Seested T, Gram-Nielsen S, Kristensen NR, et al. Factors Affecting the Absorption of Subcutaneously Administered Insulin: Effect on Variability. J Diabetes Res. 2018;1205121. 8. Ziegler R, Freckmann G, Heinemann L. Boluses in Insulin Therapy: A Commentary. Journal of Diabetes Science and Technology. 2017. p. 11(1). 9. Battelino T, Danne T, Bergenstal RM, Amiel SA, Beck R, Biester T, et al. Clinical targets for continuous glucose monitoring data interpretation: Recommendations from the international consensus on time in range. Diabetes Care. 2019;42(8):1593–603. 10. Ponder SW, McMahon KL. Sugar Surfing: Basics for Diabetes Educators. AADE Pract.
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