ALG-OS (Evaluation of an **ALGO**rithm to Guide Patients with Type I Diabetes Treated with Continuous **S**ubcutaneous Insulin Infusion on How to Respond to Real-Time Continuous Glucose Levels.) **Study Group:** *Southern Health*: Ms. M. Buszard, Mr. A. Lamendola, Assoc Prof. C. Rodda, Prof. H. Teede, Ms. M. Williamson; *Royal Children's Hospital*: Assoc. Prof. F. Cameron, Ms. R. Humphreys,, Dr. M. O'Connell; *Royal Melbourne Hospital*: Prof. P. Colman, Ms. E. Fitzgerald, Ms. K. Palmer, Ms. K. Steele; Western Hospital Footscray: Assoc. Prof. S. Hamblin, Ms. C. .Steele; *St Vincent's Hospital*: Prof. J. Best, Ms. J. Horsburgh, Assoc. Prof. A. Jenkins, Dr. B. Krishnamurthy, Dr. D. O'Neal.

Appendix A (ALG-OS)

(i) Wallet Card Advising Reactive Responses to RT-CGM Information.

Front of short term adjustment card

TREND ARROW	**LOW (Below 4.0 pre-meal or below 6.0 after meal or bed-time)**	**TARGET (4.0-8.0 pre-meal or 6.0-10.0 after meal or bed-time)**	**HIGH (more than 8.0 pre-meal or more than 10.0 after meal or bed-time)**
↑↑	**Recheck** in **10-15min**	**Recheck** in **1 hour Confirm meal bolus given.**	**Line Check**. **Ketone Check. Correction Bolus** and **Recheck** in **1-2 hrs**
↑	**Eat, Recheck** in **10-15 min**	No Action	**Line Check. Ketone Check. Correction Bolus** and **Recheck** in **1-2 hrs**
No arrows	**EAT**. Set **temp basal** . **Recheck** in 10-15 min	No Action	**Correction Bolus Recheck** in **1 hr**
↓	**EAT**. Set **temp basal** . **Recheck** in **10- 15 min**	**6.0-8.0** at **bedtime temp basal** and **recheck in 1 hr**	**Recheck** in **2 hrs.** Consider Correction Bolus.
↓↓	**EAT**. Set **temp basal** . **Recheck** in **10-15 min**	**6.0-8.0** (**Bedtime below 10**): **EAT** (Consider temp basal) and **recheck in 30min**. **4.0-6.0**: **EAT** + **temp basal** and **recheck** in **15 min**.	**Recheck** in **2 hrs.**

Back of short term adjustment card

Alarms < 4.5 and >11.0
Bolus Wizard Target Range 5.0 – 8.0

Insulin Sensitivity: _ _ _ _ _ _ _ _
(100 / Total Daily Insulin Dose = glucose drop for 1 unit insulin)

Medtronic Pump Helpline:
Endocrinologist: _ _ _ _ _ _ _ _ Ph: _ _ _ _ _ _ _ _
Diabetes Nurse: _ _ _ _ _ _ _ _ Ph: _ _ _ _ _ _ _ _

(ii) Wall Chart Advising Prospective Responses to RT-CGM Information.

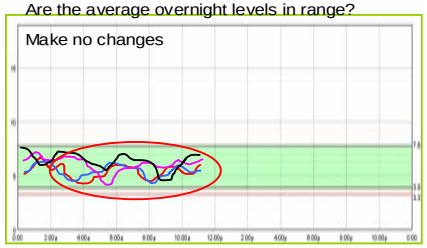
ALG-OS WALL CHART

-Have you uploaded to Carelink in the last 7 days?
-Have you calculated your insulin sensitivity in the last 2 weeks?
100/ average total daily dose = 1 Unit will drop glucose level by X mmol/L
-Are you using the Bolus Wizard?
-Address problems with hypoglycaemia first.
-Base your changes on information from more than one day.
-Consider that week days may be different from weekends.
-Have you had any low sugars that caused you symptoms in the last 7 days?

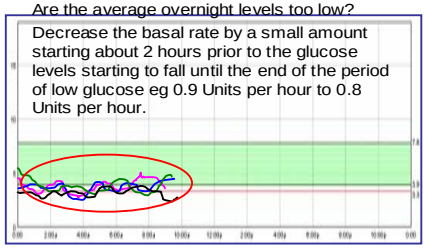
1. Assess the basal rates: Use the Carelink Sensor Daily Overlay.

a) Look at the average overnight levels:

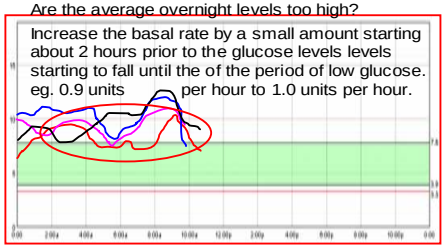
Are the average overnight levels in range?



Are the average overnight levels too low?

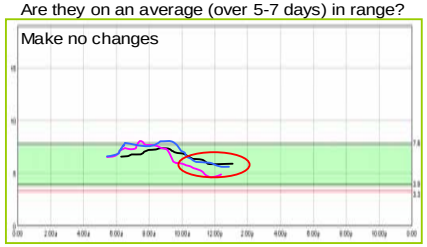


Are the average overnight levels too high?

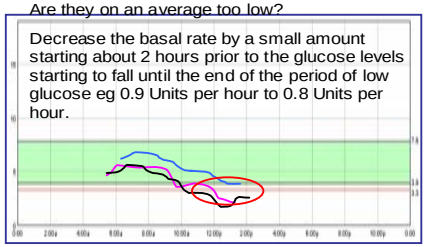


b) Look at each pre-meal (3-5 hours after the last meal) level separately.

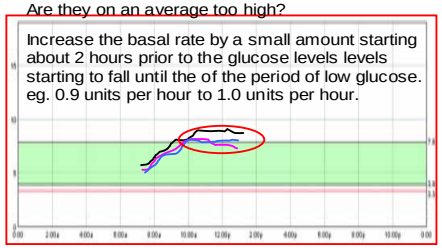
Are they on an average (over 5-7 days) in range?



Are they on an average too low?



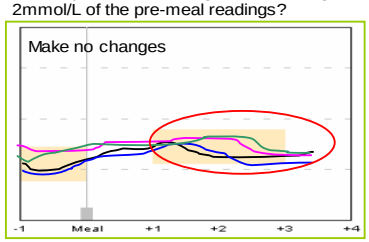
Are they on an average too high?



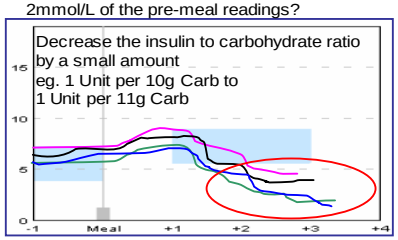
2. Assess the bolus ratio: Use the Sensor Overlay by Meal and Meal Statistics/ Modal daily Blood Glucose by Period

Look at the 2-3 hour period after each meal or a snack separately. Are you carbohydrate counting accurately?
Are you adjusting your bolus profiles according to the composition of the meal? Do you need to change the sort of food you are eating?

Are the post meal readings on an average within 2mmol/L of the pre-meal readings?



Are the post meal readings on an average less than 2mmol/L of the pre-meal readings?



Are the post meal readings on an average greater than 2mmol/L of the pre-meal readings?