

CHSALHN

CSII (INSULIN PUMP) OUTPATIENT RECORD (MR-COR)

Affix patient identification label in this box

UR Number:

Surname:

Given name:

Second given name:

Hospital:

D.O.B: ___ / ___ / _____ Sex:

BASAL RATE	DATE	DATE	DATE	DATE	DATE
0000-0100					
0100-0200					
0200-0300					
0300-0400					
0400-0500					
0500-0600					
0600-0700					
0700-0800					
0800-0900					
0900-1000					
1000-1100					
1100-1200					
1200-1300					
1300-1400					
1400-1500					
1500-1600					
1600-1700					
1700-1800					
1800-1900					
1900-2000					
2000-2100					
2100-2200					
2200-2300					
2300-2400					
TOTAL BASAL INSULIN DOSE					
TARGET BGL					
CORRECTIONAL FACTOR 1 unit lowers BGL by ___ mmol/L					
BREAKFAST CARBOHYDRATE RATIO 1 unit for ___ grams					
LUNCH CARBOHYDRATE RATIO 1 unit for ___ grams					
EVENING MEAL CARBOHYDRATE RATIO 1 unit for ___ grams					
ACTIVE INSULIN (INSULIN ON BOARD (IOB)) Insulin action is ___ hours					
HbA1c					
SICK DAY MANAGEMENT Temporary Rate					
% BASAL RATE DURATION (HRS)					
PHYSICAL ACTIVITY PLANNING Temporary Rate					
% BASAL RATE DURATION (HRS)					
OTHER					

CHSALHN CSII (INSULIN PUMP)
OUTPATIENT RECORD
MR-COR

CHSA CSII (INSULIN PUMP) OUTPATIENT RECORD (MR-COR)

Pump settings adjustment should only occur if there is no problem with the delivery set and the blood glucose levels provided and carbohydrate (CHO) counting is accurate. If hypoglycaemia is occurring, aim to eliminate this first, as hypoglycaemia and its treatment, will affect subsequent blood glucose levels.

Adjusting Basal Rates:

The total daily amount of basal insulin is usually 50% of the total daily dose (TDD). Most people have more than one basal rate over the 24 hour period. This is due to different basal insulin requirements at different times of the day. Basal rate settings must be individualised.

Frequent lows at a similar time of day, a drop in BGL when a meal is skipped, excessive carbohydrate (CHO) intake to avoid hypos and weight gain is reason to question if the basal rate is too high. Frequent highs at a similar time of day, a rise in BGL when a meal is skipped and the need for frequent correction boluses is reason to question if the basal rate is too low.

Assessing the Basal Rate:

When assessing the basal rate/s, the aim is to find a rate/s that keeps the BGL stable (± 2 mmol/L) when no food is eaten. Basal rates are tested before boluses are given and should be done on a typical day (no illness or excessive exercise) when there has not been any significant hypo or hyperglycaemia. The following assessment strategy has been adapted from the Adelaide Women's and Children's Hospital.

Night time Basal Rate:	Start at bedtime (at least 3.5 hours after the last bolus) and only if the bedtime BGL is in the target range 6 - 10mmol/L. Skip any supper. Test the BGL at bedtime, at 2 or 3 am and on waking. A good basal rate will keep the BGL stable (± 2 mmol/L) overnight.
Morning Basal Rate:	Start the test when the BGL is between 5 - 8mmol/L before breakfast. Skip breakfast and breakfast bolus. Test at the start and every 1 – 2 hours for 5 hours. A good basal rate will keep the BGL (± 2 mmol/L) over this period.
Afternoon Basal Rate:	Start the test when the BGL is between 5 - 10mmol/L before lunch. Skip lunch and the lunch bolus. Test at the start and every 1 – 2 hours for 5 hours. A good basal rate will keep the BGL (± 2 mmol/L) over this period.
Evening Basal Rate:	Start the test when the BGL is between 5 - 10mmol/L before dinner. Skip dinner and the dinner bolus. Test at the start and every 1 – 2 hours for 5 hours. A good basal rate will keep the BGL (± 2 mmol/L) over this period.

If the blood glucose rises more than 2mmol/L during any of these tests, a slight increase in the basal rate covering that time is recommended. Usually the increase is 10 -20% and should be retested on another day. If the blood glucose falls more than 2mmol/L during any of these tests, decrease the basal rate covering this time. This decrease is usually 10-20% and should be retested on another day.

Because of the 'lag' in insulin effect, any changes in basal rate/s need to be made 3 to 4 hours before the point in time where the blood glucose change is needed.

Adjusting Carbohydrate (CHO) Ratio Boluses:

The amount of insulin needed to cover each gram of CHO will have to be adjusted periodically. Ensure that the basal rate is checked and found to be correct by basal rate testing, before making changes to the CHO ratio bolus.

The lower the CHO ratio the larger the CHO bolus. An appropriate CHO ratio bolus is that which returns the BGL to within 2mmol/L of the starting BGL after 3-4 hours. If not, it is recommended to adjust the CHO ratio by 10-20%. The person's sensitivity to CHO ratio boluses can differ during the day (eg a lower CHO ratio is needed at breakfast time, due to relative insulin resistance in the mornings).

Adjusting Correctional Boluses:

The amount of insulin bolus needed to correct a high BGL will also have to be adjusted periodically. Ensure that the basal rate is checked and found to be correct by basal rate testing, before making changes to the correctional bolus.

The lower the sensitivity factor the larger the correctional bolus. An appropriate correctional bolus returns the BGL to within 2mmol/L of the target BGL after 3-4 hours. If not, adjust the sensitivity (correction factor) by 10-20%.