

Pupil's name	Date of Birth
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### Continuous Glucose Monitoring with TSlim X2 Insulin Pump – Basal IQ

A continuous glucose monitor is a device that measures interstitial glucose levels every 5 minutes and sends these readings to an insulin pump. As it is measuring interstitial glucose it can lag behind blood glucose levels.

The CGM that is used with this insulin pump is called DEXCOM and has been licensed for 'no finger prick testing' – therefore the sensor data at snack and lunch time can be used without a finger prick, follow guidance below when finger prick may be required.

The CGM is set with limits of acceptable glucose levels and will alert via the insulin pump if these limits are reached. These will be documented on the care plan clearly for staff reference.

*The Basal IQ feature of the system means the pump has the additional feature to auto suspend insulin delivery if it predicts a fall in the child's CGM (Dexcom) levels within a 30 minute time period.*

- If CGM level is < 3.9 mmols – suspension will occur immediately and the pump will alarm (details below on action)*
- If CGM level is predicted < 4.4 mmols in the next 30 mins it will suspend insulin delivery (pump will alarm details below on action)*

*Insulin will resume automatically on the insulin pump unless there is a requirement for the 'user' to manually resume the insulin:*

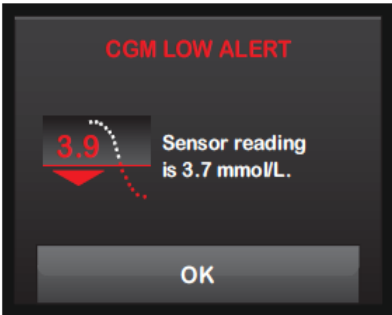

- If it is snack or lunchtime and the pump is on suspend (see table below for action)*
- To allow you to give insulin via 'Bolus' the suspension of insulin needs to be resumed to allow the Bolus calculator to be accessed.*

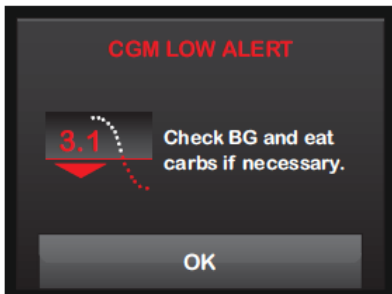

Signature of parent/carer

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**Alarms/Alerts and Actions:**

<p>What will I see on the screen?</p> 	<p>What does it mean?</p> <p>Your most recent sensor glucose reading is at or below the Low Alert setting.</p>
	<p>How will the System notify me?</p> <p>3 vibrations, then 3 vibrations/beeps every 5 minutes until confirmed or your glucose value goes above the Alert level.</p>
	<p>Will the System re-notify me?</p> <p>Only if you have turned on the Repeat feature.</p>
<p>How should I respond?</p> <p>Tap  to confirm.</p>	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p><b>See Action Advice Below</b></p> </div>

<p>What will I see on the screen?</p> 	<p>What does it mean?</p> <p>Your most recent sensor glucose reading is at or below 3.1 mmol/L.</p>
	<p>How will the System notify me?</p> <p>4 Vibrations, then 4 vibrations/beeps every 5 minutes until confirmed or your glucose value goes above 3.1 mmol/L.</p>
	<p>Will the System re-notify me?</p> <p>Yes, 30 minutes after each confirmation until your glucose value goes above 3.1 mmol/L.</p>
<p>How should I respond?</p> <p>Tap  to confirm.</p>	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p><b>See Action Advice Below</b></p> </div>

<p><b>Advised to confirm Blood Glucose (BG) value via finger prick:</b></p> <ul style="list-style-type: none"> <li>• If below 4.0 – treat hypo following the ‘hypoglycaemic flow chart’</li> <li>• If BG value between ___ and ___ mmol/mol then advised to give child ___grams of carbs WITHOUT</li> </ul>
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**Other Pump Alerts:**

- **Transmitter Out of Range** – pump and CGM not communicating, may happen if pump not attached to body for more than 20 minutes - ensure position of pump on body with screen facing outwards
- **Calibration Required** – Call parents to action
- **Transmitter Error/Sensor Failure** – Call parent to action

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**Individual Patient Settings:**

These are subject to change by the parent/carer and it is their responsibility to update the care plan when changes are made.

**Low Limit:** \_\_\_\_\_

**High Limit:** \_\_\_\_\_

**What the Sensor Icons Mean:**

→	Sensor Glucose is constant and rise or fall may be up to 0.9 mmol in next 15 mins
↗ or ↘	Sensor Glucose is rising or falling slowly up to 1.7 mmol/L in the next 15 minutes
↑ or ↓	Sensor Glucose is rising or falling up to 2.5 mmol/L in the next 15 minutes
↑↑ or ↓↓	Sensor Glucose is rising or falling more than 2.5 mmol/L in the next 15 minutes
No Arrows	No rate of change

**Basal IQ:**

If this function is switched on then the pump has the ability to:

- PREDICT when approaching low glucose levels 30 minutes in advance
- Automatically STOP insulin delivery before going hypo
- Automatically RESUME it when your glucose levels recover

**Alert Message:** If BG trending low or falls to low limit:

**Key Action Points:**

- Allow pump to suspend and resume insulin delivery according to the BG levels.
- If bolus of insulin is required for food/correction and pump is suspended then the pump must be manually restarted before proceeding.
- Always do a manual Blood Glucose (BG) check before resuming insulin and at the snack and mealtimes in insulin pump care plan.
- If hypo does occur then follow hypo flowchart as per the insulin pump care plan
- Calibrating sensor – the system should never require this, if it does contact parents.

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