Intravenous Insulin Prescription and Fluid Protocol
FOR SURGERY/PRE-OPERATIVE/Nil by Mouth

For use for ALL ADULT pre-operative/Nil by Mouth patients receiving Variable Rate Intravenous Insulin Infusion (VRIII)

NOT FOR USE IN CHILDREN

NEVER use an IV syringe to draw up insulin

ALWAYS draw up insulin using an insulin syringe

ALWAYS continue subcutaneous basal insulin

Dosing Algorithm

<table>
<thead>
<tr>
<th>CBG Levels (mmol/L)</th>
<th>Infusion Rate (Units/hr = ml/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;4</td>
<td>STOP INSULIN (recheck CBG in 10 minutes)</td>
</tr>
<tr>
<td>4.0 - 6.0</td>
<td>0.2</td>
</tr>
<tr>
<td>6.1 - 6.6</td>
<td>0.5</td>
</tr>
<tr>
<td>6.7 - 8.2</td>
<td>1.5</td>
</tr>
<tr>
<td>8.3 - 9.9</td>
<td>2.0</td>
</tr>
<tr>
<td>10 - 11.6</td>
<td>3.0</td>
</tr>
<tr>
<td>11.7 - 13.2</td>
<td>4.0</td>
</tr>
<tr>
<td>13.3 - 14.9</td>
<td>5.0</td>
</tr>
<tr>
<td>15 - 16.6</td>
<td>6.0</td>
</tr>
<tr>
<td>16.7 - 18.2</td>
<td>7.0</td>
</tr>
<tr>
<td>18.3 - 19.9</td>
<td>8.0</td>
</tr>
<tr>
<td>&gt;20</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Algorithm Guide

For use with ALL ADULT patients, pre-operative/nil by mouth, with capillary blood glucose (CBG) persistently >14 mmol/l

FOR DKA, HHS and ACS – Please refer to separate chart

Algorithm 1

Starting point for most patients

Algorithm 2

For patients: Not controlled by algorithm 1

On glucocorticoids

Receiving > 80 units/day as an outpatient

Algorithm 3

For patients not controlled Algorithm 2

No patient starts here without medical review

Algorithm 4

For patients not controlled on algorithm 3

No patient starts here

Patients not achieving control with these algorithms need medical review

Conquest: Bleep 2681 or 2969

EDGH: Bleep 0964 or 0867

Out of Hours: Contact the medical SpR on call via switchboard

Target CBG Levels 4-12 mmol/l

Check CBG every hour whilst on IV insulin

Move Up if the CBG is > 12 mmol/l and has not reduced by at least 3mmol/L in 1 hour

Move Down when CBG is < 4mmol/L

Drug (approved name) | Dose | Volume | Route | Doctor's Signature | Date |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>HUMAN ACTRAPID INSULIN</td>
<td>50 UNITS</td>
<td>Made up to 50ml with SODIUM CHLORIDE 0.9% (1 UNIT per ml)</td>
<td>IV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Syringe Preparation

Prepared & administered by | Date | Time started | Time stopped

Intravenous Fluid Management

Prescribe Intravenous fluids on the Intravenous Fluid Prescription Chart (see over)

Fluid of choice Glucose 10% with Potassium Chloride 0.15% (10mmol) 500ml to run at 50ml/h unless:

Initial CBG > 12mmol/L

Start with 1 litre Sodium chloride 0.9% with Potassium Chloride 0.15% (20mmol) to run at 50ml/hr until CBG < 12mmol/l

When CBG < 12mmol/l change to Glucose 10% with Potassium Chloride 0.15% (10mmol) 500ml to run at 50ml/h

Do not change back if CBG subsequently exceeds 12mmol/L

Hyperkalaemia

Glucose 10% 1 litre to run at 50ml/hr

Fluid Overload

Glucose 20% 500ml to run at 25ml/hr

When eating and drinking consider restarting original insulin regimen

Maintain IV infusion for 30 minutes after re-starting original insulin regime—IV insulin has a 5 minute half life

Signed

Print Name

Date

Ward

Consultant

Admission Date

Patient Details

Surname

First Name

Hospital Number

NHS Number

Address

Date of Birth / Age

Version 1                  03/2014
<table>
<thead>
<tr>
<th>Date</th>
<th>Solution</th>
<th>Volume</th>
<th>Additives and dose</th>
<th>Rate</th>
<th>Duration</th>
</tr>
</thead>
</table>

For information on dilutions, infusions rates, compatibilities and monitoring parameters, consult the Injectable Medicines Guide or contact Medicines Information (13) 3785 / (14) 7067.