3. **Scheduled Check desired therapy**

<table>
<thead>
<tr>
<th>Glucose Goal:</th>
<th>Premeal = 80-130 mg/dL</th>
<th>Bedtime = 90-150 mg/dL</th>
</tr>
</thead>
</table>

**Pre-Prandial Insulin Orders**
- **Novolog**
- **Regular**

**Give _____ units**

**Basal Insulin Orders**
- **NPH**
- **Lantus**

**Give _____ units**

<table>
<thead>
<tr>
<th>Give _____ units</th>
<th>Give _____ units</th>
<th>Give _____ units</th>
<th>Give _____ units</th>
</tr>
</thead>
</table>

* Lantus usually given once daily, but may be divided based on patient circumstance.

4. **INSULIN CORRECTION REGIMEN** (in addition to scheduled)

This regimen alone should not be used more than 2 days as the only method of glucose control.
- Use before meals
- Use at every measurement
- Other:

**Start the following correct insulin dose:**
- **Regular**
- **Novolog**

<table>
<thead>
<tr>
<th>Blood Glucose</th>
<th>Low For patients requiring less than 40 units of insulin/day, thin, or elderly.</th>
<th>Medium For patients requiring 40 to 80 units of insulin/day.</th>
<th>High For patients requiring more than 80 units of insulin/day, on steroids, or infected.</th>
<th>Patient Specific (For Endocrine or Attending Staff MD Use Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For patients requiring more than 80 units of insulin/day, on steroids, or infected.</td>
<td>Patient Specific (For Endocrine or Attending Staff MD Use Only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>151-200</td>
<td>1 unit</td>
<td>1 unit</td>
<td>2 units</td>
<td>____ units</td>
</tr>
<tr>
<td>201-250</td>
<td>2 units</td>
<td>3 units</td>
<td>4 units</td>
<td>____ units</td>
</tr>
<tr>
<td>251-300</td>
<td>3 units</td>
<td>5 units</td>
<td>7 units</td>
<td>____ units</td>
</tr>
<tr>
<td>301-350</td>
<td>4 units</td>
<td>7 units</td>
<td>10 units</td>
<td>____ units</td>
</tr>
<tr>
<td>351-400</td>
<td>5 units</td>
<td>8 units</td>
<td>12 units</td>
<td>____ units</td>
</tr>
<tr>
<td>Greater than 400</td>
<td>Call MD</td>
<td>Call MD</td>
<td>Call MD</td>
<td>Call MD</td>
</tr>
</tbody>
</table>

5. **One time dose:** ___________ units subcutaneous now

6. **Hypoglycemic Treatment for Blood Glucose less than 60 mg/dL**
   - If patient can take po, give 15 grams of fast acting carbohydrate (4 oz fruit juice/non-diet soda, or 8oz non-fat milk)
   - If patient cannot take po, give 25 gm (50 ml) of 50% Dextrose as IV push. May repeat D50W IV push once if patient remains unresponsive after the first dose.
   - Check finger capillary glucose in 15 minutes and repeat above if blood glucose less than 60 mg/dL and call MD.

Nurse’s Signature: ___________________________ Date: ___________ Time: ___________
**SUGGESTED HOSPITALIZATION GUIDELINES**

<table>
<thead>
<tr>
<th>Type 1, NPO for greater than 24 hrs</th>
<th>Type 2 on insulin NPO greater than 24 hrs</th>
<th>Type 1, eating or Type 2 on insulin eating</th>
<th>Type 1 or 2 initiating insulin therapy</th>
<th>Type 1 or 2 on tube feedings</th>
<th>Type 1 or 2 on TPN</th>
</tr>
</thead>
<tbody>
<tr>
<td>If ICU patient, start insulin drip and IV of 10% Dextrose or basal insulin</td>
<td>If ICU patient, start insulin drip and IV of 10% Dextrose or basal insulin</td>
<td>Resume usual regimen. (If glucose low, consider starting at 50% or 75% of usual dose)</td>
<td>0.25 – 0.5 units insulin/kg= total insulin dosage NPH: 67% NPH, 33% prandial or NPH alone divided as 67% am and 33% pm Lantus: 50% Lantus, 50% prandial (prandial divided between meals TID)</td>
<td>Start with NPH BID or Glargine; insulin correction prn</td>
<td>For first 24 hours, hang separate insulin drip. Evaluate 24 hours insulin needs, add 75% of daily needs to subsequent bags.</td>
</tr>
</tbody>
</table>

### Types of Diabetes

#### Type 1

**Basal/bolus regimens are most physiologic, and are easily adapted and modified in the hospitalized patient:**

- **Basal:** given as NPH every am and/or bedtime or Lantus once daily. **Must provide basal insulin at all times.**
- **Prandial:** given only when patient is eating.

Give standing dose of meal time insulin when blood glucose is in normal range. Add correction if blood glucose is greater than 150.

Give usual dose of basal insulin - **Do not hold.** If NPO greater than 24 hours may need to reduce basal insulin – depending on blood glucose.

If on NPH twice daily, Can give 80% of total NPH dose as a single dose of Glargine or 50% am NPH dose and full bedtime NPH dose

Monitor blood glucose every 4 or 6 hours and use correction regimen if needed.

#### Type 2

**Insulin Treated**

Similar to Type 1, though patients are less prone to ketosis.

Give usual pre-hospitalization insulin dose and supplement with correction as necessary.

#### Type 2

**Diet or Oral Agent Treated**

The efficacy of oral hypoglycemic agents depends on endogenous insulin secretion:

- **Sulfonylureas** – increase insulin secretion in a glucose-independent manner
- **Metformin** – sensitizes the liver to insulin action
- **Thiazolidinediones (TZDs)** – sensitize fat and muscle to insulin action

**Hold sulfonylureas.** Can continue metformin and TZDs as insulin sensitizers do not cause hypoglycemia.

Can use correction every 4 or 6 hours if needed.

May continue oral agents, unless impending contrast study. Also:

- **Hold** metformin if CrCl is less than 60 (serum creatine greater than 1.4 in women, greater than 1.5 in men)
- **Hold** TZDs if liver dysfunction, edema or CHF
- **Reduce** sulfonylurea for renal or hepatic dysfunction

### Commonly Used Insulin Preparations and Action Times

<table>
<thead>
<tr>
<th>Type</th>
<th>Onset (hours)</th>
<th>Peak (hours)</th>
<th>Duration (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Acting (Novolog)</td>
<td>¼</td>
<td>1</td>
<td>3 – 4</td>
</tr>
<tr>
<td>Regular (Novolin R)</td>
<td>½ - 1</td>
<td>2 - 4</td>
<td>6 – 8</td>
</tr>
<tr>
<td>NPH (Novolin N)</td>
<td>1½ - 2</td>
<td>5 – 8</td>
<td>12 – 18</td>
</tr>
<tr>
<td>Glargine (Lantus)</td>
<td>1 - 2</td>
<td>None</td>
<td>24</td>
</tr>
</tbody>
</table>

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