Post Surgical Assessment & Complications for the Bariatric Patient
METRIC

<table>
<thead>
<tr>
<th>WEIGHT:</th>
<th>LENGTH:</th>
</tr>
</thead>
<tbody>
<tr>
<td>KILOGRAM (kg)</td>
<td>METER (m)</td>
</tr>
<tr>
<td>1kg = 2.2 lbs</td>
<td>1 m = 3.28 feet</td>
</tr>
</tbody>
</table>

CALCULATING BODY MASS INDEX (BMI)

BMI: \( \text{WEIGHT}/(\text{HEIGHT})^2 \) \( \text{kg/m}^2 \)

BMI: \( \text{WEIGHT (lbs.)}/(\text{HEIGHT}^2 \text{ (inches}^2) \times 703 \)

CONVERTING POUNDS TO KILOGRAMS

WEIGHT IN POUNDS \quad \text{weight in kilograms}

2.2lb/kg

CONVERTING HEIGHT IN FEET TO METERS

Height in feet \times 0.3 \text{ m} = \text{height in meters}
# Post-Surgical Assessment for the Bariatric Patient

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th>DESIRED RESPONSE</th>
<th>NOT WNL CONSIDER:</th>
</tr>
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</table>
| Neurological | - Awake  
- Alert  
- Oriented x3                                      | - Medication issues  
- Sepsis                                |
| Cardiac    | - Heart rate regular  
- Brisk capillary refill  
- Pedal pulses present  
- No edema present  
- Extremities warm & pink | - PE  
- DVT  
- Sepsis                                |
| Pulmonary  | - Regular rate and rhythm  
- Clear breath sounds in all lung fields  
- No pain on inspiration  
- No shortness of breath  
- Able to breathe deeply  
- No cough or sputum; no hemoptysis | - GI Leak  
- PE  
- Pneumonia  
- Uncontrolled Pain  
- Sepsis  
- Pickwickian Syndrome |
| Integumentary | - Operative site(s) clean, dry and intact  
- No redness, pain, heat or swelling  
- No bleeding at operative site(s)  
- Record drain output  
- Incision edges well-approximated | - Hemorrhage  
- Wound Infection  
- Wound Dehiscence |
| GI         | - Abdomen soft  
- Bowel sounds present  
- Abdominal pain controlled  
- No nausea/vomiting | - Obstruction/Stenosis  
- Sepsis  
- Uncontrolled Pain  
- Hemorrhage                                |
| Urinary    | - Monitor intake and output  
- Urine clear, yellow; not blood-tinged  
- Patient able to void | - Hemorrhage  
- GI Leak  
- Rhabdomylosis                          |
## Post-Surgical Complications for the Bariatric Patient

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<tr>
<th>COMPLICATION</th>
<th>SIGNS AND SYMPTOMS</th>
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<tr>
<td>GI Leak</td>
<td>Tachycardia&lt;br&gt;Tachypnea&lt;br&gt;Fever&lt;br&gt;“Sense of doom”&lt;br&gt;Pain- left shoulder/chest/abdomen&lt;br&gt;Oliguria&lt;br&gt;Hiccups&lt;br&gt;Swollen or painful legs</td>
</tr>
<tr>
<td>PE</td>
<td>Dyspnea&lt;br&gt;Tachypnea&lt;br&gt;Pain in the chest/back/shoulder&lt;br&gt;Pleuritic pain&lt;br&gt;Hemoptysis&lt;br&gt;Cardiac Arrhythmia</td>
</tr>
<tr>
<td>DVT</td>
<td>Redness/heat/swelling of extremity&lt;br&gt;Pain in extremity&lt;br&gt;Decreased pedal pulses&lt;br&gt;Doppler studies</td>
</tr>
<tr>
<td>Sepsis</td>
<td>Tachycardia&lt;br&gt;Hyperventilation&lt;br&gt;Fever or hypothermia&lt;br&gt;Chills&lt;br&gt;Shaking&lt;br&gt;Hypotension&lt;br&gt;Confusion/decreased mental status&lt;br&gt;Abnormal WBC (↑ or ↓)</td>
</tr>
<tr>
<td>Wound Infection</td>
<td>Redness&lt;br&gt;Pain&lt;br&gt;Heat&lt;br&gt;Swelling&lt;br&gt;Purulent/foul drainage from incision</td>
</tr>
<tr>
<td>Herniation</td>
<td>Heartburn&lt;br&gt;Sour or bitter taste in mouth</td>
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| **Pneumonia**                       | Fever  
Increased sputum production  
Cough  
Respiratory distress  
Positive sputum culture  
Positive chest x-ray | |
| **Hemorrhage**                      | Weak rapid pulse  
Slow and shallow breathing  
Cold, clammy skin  
Excessive bleeding from incision  
Excessive drain output – frank blood | |
| **Pickwickian Syndrome**            | Hypoventilation  
Prolonged drowsiness  
Twitching  
Cyanosis  
Periodic breathing  
Secondary polycythemia  
Right sided heart failure | |
| **Stricture**                       | Nausea, vomiting  
Severe abdominal pain especially after eating  
May mimic gallbladder disease | |
| **Ulcers**                          | Nausea, vomiting  
Slight tachycardia and dyspnea (dependent on blood loss)  
Decreased hemoglobin  
Melena | |
| **Bowel Obstruction/ Stenosis**     | Abdominal pain  
Abdominal distention  
Decreased bowel sounds | |
| **Rhabdomylosis**                   | Severe muscle pain in back and/or in buttocks  
Elevated Serum Creatinine  
Brownish pigment in urine | |
DO NOT
Discount what the patient may tell you. Listen to your patient – they often have a clear understanding of what is going on even if they cannot express it well.

DO NOT
Insert an NG tube without visualization!

DO NOT
Administer medications based on actual body weight.

Use Adjusted Body Weight (ABW) for medication dosing (ABW = Ideal Body Wt. + 0.4 (actual wt. – Ideal body wt.)

Normal Digestive Tract
Roux-en-Y Procedure
Gastric Bypass
Bilopancreatic Diversion with Duodenal Switch
Adjustable Banded Gastroplasty
Step 1: Risk factors associated with clinical setting:
Choose no more than one of the below listed disease states or associated hospital service to determine the baseline risk factor score.

<table>
<thead>
<tr>
<th>Score 1 factor</th>
<th>Score 2 factors</th>
<th>Score 3 factors</th>
<th>Score 5 factors</th>
</tr>
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<tr>
<td>Minor surgery</td>
<td>Major surgery (&gt;45 min.)</td>
<td>Major surgery with - Myocardial infarction or - Congestive heart failure or - Severe sepsis/infection</td>
<td>Elective major lower extremity arthroplasty</td>
</tr>
<tr>
<td></td>
<td>Laparoscopic surgery (&gt;45 min.)</td>
<td>Immobilizing plaster cast</td>
<td>Hip, pelvis, or leg fracture</td>
</tr>
<tr>
<td></td>
<td>Patients confined to bed (&gt;72 hrs.)</td>
<td>Central venous access</td>
<td>Stroke</td>
</tr>
<tr>
<td></td>
<td>Immobilizing plaster cast</td>
<td>Medical patient with additional risk factors</td>
<td>Multiple trauma</td>
</tr>
<tr>
<td></td>
<td>Central venous access</td>
<td></td>
<td>Acute spinal cord injury (paralysis)</td>
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Baseline risk factor score (if score = 5, go to step 4)
Score 1 factor unless noted
Age 41 to 60 years
Age over 60 years (2 factors)
History of DVT/PE (3 factors)
History of prior major surgery
Pregnancy, or postpartum (<1 month)
Malignancy (2 factors)
Varicose veins
Inflammatory bowel disease
Obesity (>20% of ideal body weight)
Oral contraceptives or hormone replacement therapy

Step 2: Risk factors associated with patient:

**Clinical**
(score 1 factor unless noted)
- Age 41 to 60 years
- Age over 60 years (2 factors)
- History of DVT/PE (3 factors)
- History of prior major surgery
- Pregnancy, or postpartum (<1 month)
- Malignancy (2 factors)
- Varicose veins
- Inflammatory bowel disease
- Obesity (>20% of ideal body weight)
- Oral contraceptives or hormone replacement therapy

**Hypercoagulable States (Thrombophilia)**

**Inherited** (score 3 factors for each)
- Factor V Leiden/Activated protein C resistance
- Antithrombin III deficiency
- Protein C or S deficiency
- Dysfibrinogenemia
- Homocysteinemia

**Acquired** (score 3 factors for each)
- Lupus anticoagulant
- Antiphospholipid antibodies
- Myeloproliferative disorders
- Disorders of plasminogen & plasmin activation
- Heparin-induced thrombocytopenia
- Hyperviscosity syndrome
- Homocysteinemia

Total additional risk factor score

Step 3: Total risk factor score (baseline + additional)
**Step 4: Recommended prophylactic regimens for each risk group:**

<table>
<thead>
<tr>
<th>Low Risk (1 factor)</th>
<th>Moderate Risk (2 factors)</th>
<th>High Risk (3 – 4 factors)</th>
<th>Highest Risk (5 or more factors)</th>
</tr>
</thead>
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<tr>
<td>No Specific Measures Early Ambulation</td>
<td>IPC or LDUH (q12h) or LMWH or GCS</td>
<td>GCS* and IPC or LDUH (q8h) or LMWH</td>
<td>GCS* and IPC† + (LDUH or LMWH) or ADH or LMWH Oral Anticoagulants</td>
</tr>
</tbody>
</table>

* Combining GCS with other prophylactic methods (LDUH, LMWH or IPC) may give better protection than any modality alone.
† Data demonstrates benefit of Plantar Pneumatic Compression in total joint arthroplasty. Plantar Pneumatic Compression can also be used when IPC is not feasible, including leg trauma.

**Step 5: Please Check The Modality(s) Chosen From The List Below, and Sign/Date.**

- Contraindication to anticoagulants? ☐ Yes ☐ No If yes, explain: ________________________________
  - Graduated compression stockings (GCS)
  - Intermittent pneumatic compression (IPC)
  - Plantar Pneumatic Compression
  - Adjusted dose Heparin (ADH)
  - Low molecular weight heparin (LMWH) (Regimen: _______________)
  - Low dose unfractionated heparin (LDUH) (Regimen: _______________)
  - Oral Anticoagulant (Regimen: _______________)
  - Other (__________________)
  - No Prophylaxis

Examining Physician’s Signature: ________________________________ Date: _________________________

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