# Neurological Assessment

<table>
<thead>
<tr>
<th>Oriented to:</th>
<th>Person</th>
<th>Place</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication/ Speech:</td>
<td>WNL</td>
<td>Non-verbal</td>
<td>Dysarthria</td>
</tr>
<tr>
<td>Pupils:</td>
<td>PERRLA OR</td>
<td>Equal:</td>
<td>Yes</td>
</tr>
<tr>
<td>Reactive to Light:</td>
<td>Yes</td>
<td>N</td>
<td>Reaction:</td>
</tr>
<tr>
<td>Accommodation:</td>
<td>R</td>
<td>L (hold finger 4” above nose, bring closer to face, do both eyes maintain focus?)</td>
<td></td>
</tr>
</tbody>
</table>

## Glasgow Coma Scale (Score range 0 to 15, Coma <= 7)

<table>
<thead>
<tr>
<th>Eye opening to:</th>
<th>Spontaneous = 4</th>
<th>Verbal command = 3</th>
<th>Pain = 2</th>
<th>No response = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal response to:</td>
<td>Oriented, converses = 5</td>
<td>Disoriented, converses = 4</td>
<td>Uses inappropriate words = 3</td>
<td>Incomprehensible sounds = 2</td>
</tr>
<tr>
<td>Motor response to:</td>
<td>Verbal command = 6</td>
<td>Localized pain = 5</td>
<td>Flexes and withdraws = 4</td>
<td>Flexes abnormally (decorticate) = 3</td>
</tr>
</tbody>
</table>

## Location | Muscle Tone | Muscle Strength | Sensation | Tremor
---|---|---|---|---
Head/ Neck | WNL | Flaccid | Spastic | WNL | To pain | No response to pain | No | Present |
R hand | WNL | Flaccid | Spastic | |
L hand | WNL | Flaccid | Spastic | |
RUE | WNL | Flaccid | Spastic | |
LUE | WNL | Flaccid | Spastic | |
RLE | WNL | Flaccid | Spastic | |
LLE | WNL | Flaccid | Spastic | |

**Muscle Strength:** 5 = WNL, 4 = 75% normal, 3 = 50% normal, 2 = 25% normal, 1 = 10% normal, 0 = complete paralysis

## Respiratory Assessment

<table>
<thead>
<tr>
<th>Pulse ox:</th>
<th>WNL (95-100%)</th>
<th>WNL for this patient at _ _ _ _ _ _</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough:</td>
<td>None</td>
<td>Non-productive, dry</td>
</tr>
<tr>
<td>Sputum:</td>
<td>None</td>
<td>Consistency:</td>
</tr>
<tr>
<td>Oxygen:</td>
<td>N/A Room air</td>
<td>liters nasal cannula</td>
</tr>
<tr>
<td>Respiratory rate:</td>
<td>WNL</td>
<td>Tachypnea/ hyperventilation (too fast)</td>
</tr>
<tr>
<td>Respiratory effort:</td>
<td>Relaxed and regular</td>
<td>Pursed lip breathing</td>
</tr>
<tr>
<td></td>
<td>Dyspnea at rest</td>
<td>Dyspnea with minimal effort, talking, eating, repositioning in bed, etc.</td>
</tr>
<tr>
<td></td>
<td>Dyspnea with moderate exertion, dressing, walking &lt;= 20 feet, etc.</td>
<td>Dyspnea when walking ____ feet or with exercise</td>
</tr>
<tr>
<td>Recovery time following dyspneic episode:</td>
<td>minutes</td>
<td></td>
</tr>
</tbody>
</table>

## Respiration Rhythm

<table>
<thead>
<tr>
<th>WNL</th>
<th>Regular, tachypnea</th>
<th>Regular, bradypnea</th>
<th>Regular with periods of apnea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular pattern of increasing rate and depth, followed by decreasing rate and depth, followed by apnea (Cheyne-Stokes)</td>
<td>Regular, abnormal, rapid and deep respiration (central neurogenic hyperventilation)</td>
<td>Regular, abnormal, prolonged inspiration with a pause or sigh with periods of apnea (apneustic)</td>
<td></td>
</tr>
<tr>
<td>Irregularly irregular pattern/ depth (ataxic)</td>
<td>Irregular with periods of apnea (cluster breathing)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Breath sounds (auscultate anterior & posterior, R & L upper, mid, lower chest):

- Clear (vesicular) throughout
- Decreased (atelectasis?)
- Crackles: Fine (sounds like hair rubbing) Coarse/ moist
- Gurgles/ rhonchi (low pitched, moaning, snoring sounds)
- Wheezes: Inspiratory Expiratory
- Friction rub (sounds like leather rubbing against leather)
- Absent (pneumothorax?)

### Upper chest:
- Right _____ Left _____

### Mid chest:
- Right _____ Left _____

### Lower chest:
- Right _____ Left _____

---

*An Easy Guide to Head to Toe Assessment © Mary C. Vrtis, Ph.D., RN, 2011 available from [www.aperionmlc.com](http://www.aperionmlc.com)*
An Easy Guide to Head to Toe Assessment
© Mary C. Vrtis, Ph.D., RN, 2011 available from www.aperiomialc.com

Cardiovascular Assessment

<table>
<thead>
<tr>
<th>Skin:</th>
<th>Warm/ dry</th>
<th>Cool</th>
<th>clammy/ diaphoretic</th>
<th>Skin turgor:</th>
<th>WNL</th>
<th>Tenting</th>
<th>Weight:</th>
<th>kg/ lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capillary refill:</td>
<td>WNL</td>
<td>Delayed &gt; 2 seconds</td>
<td>Apical pulse rhythm:</td>
<td>Regular</td>
<td>Regularly irregular</td>
<td>Irregularly irregular</td>
<td>Apical pulse rate:</td>
<td>WNL (60-100)</td>
</tr>
<tr>
<td>Heart sounds:</td>
<td>Normal S1, S2</td>
<td>S1 (gallop)</td>
<td>Valve click [artificial heart valve]</td>
<td>Murmur:</td>
<td>Holosystolic</td>
<td>Midsystolic</td>
<td>Diastolic</td>
<td></td>
</tr>
<tr>
<td>B/P:</td>
<td>WNL</td>
<td>Hypertension</td>
<td>Hypotension</td>
<td>R/ L diff.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orthostatic systolic drop</td>
<td>&lt; 20 mm Hg</td>
<td>=&gt; 20 mm Hg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capillary refill:</td>
<td>Delayed &gt; 2 seconds</td>
<td>Apical pulse rhythm:</td>
<td>Regular</td>
<td>Regularly irregular</td>
<td>Irregularly irregular</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peripheral Pulses</td>
<td>R radial</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>R hand/ arm</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
</tr>
<tr>
<td>R femoral</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>R knee to thigh</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
<td>+</td>
</tr>
<tr>
<td>R pedal</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>R ankle to knee</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
<td>+</td>
</tr>
<tr>
<td>R post tib</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>R foot/ ankle</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
<td>+</td>
</tr>
<tr>
<td>L radial</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>L hand/ arm</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
<td>+</td>
</tr>
<tr>
<td>L femoral</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>L knee to thigh</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
<td>+</td>
</tr>
<tr>
<td>L pedal</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>L ankle to knee</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
<td>+</td>
</tr>
<tr>
<td>L post tib</td>
<td>Yes</td>
<td>Doppler</td>
<td>No</td>
<td>L foot/ ankle</td>
<td>Sacrum</td>
<td>No</td>
<td>Non-pitting</td>
<td>Pitting</td>
</tr>
<tr>
<td>Edema</td>
<td>Pitting ___+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ECG assessment if applicable, see below

Genitourinary Assessment

| Genitalia: | WNL | Abnormalities, describe: |
| Assessment of urination: | WNL | Burning | Frequency | Urgency |
| Bladder distention | No | Pelvic pain/ discomfort | Lower back/ flank pain/ discomfort |
| Continent: | Yes | Stress incontinence with coughing, etc. | Rarely incontinent | Regularly incontinent |
| Urine amount: | WNL (over 30 mls/ hr, output approximates intake) | Less than 30 mls/ hr (dehydration? Post-op volume depletion? SIADH?) | Output greatly exceeds intake (Post-op diuresis? Diabetes insipidus?) |
| Urine color: | Yellow, WNL | Amber | Orange | Dark amber | Pink | Red tinged | Grossly bloody |
| Urine characteristics: | Clear, WNL | Cloudy | Sediment | Abnormal odor |
| Urostomy: | N/A | Urostomy/ ileal conduit | Continence maintaining nipple valve ostomy |
| Stoma status: | Pink, viable | Red | Deep red | Dusky | Dark | Retracted below skin | S/S of infection |
| Urinary stents: | N/A | R ureter | L ureter |
| Urinary catheter: | N/A | Foley, short term | Foley, long term at home |
| Insertion site: | WNL | S/S of infection |
### Gastrointestinal Assessment

<table>
<thead>
<tr>
<th>Oral mucosa:</th>
<th>□ Intact □ Moist □ Dry □ Pink □ Pale</th>
<th>Tongue:</th>
<th>□ WNL □ Pink □ White patches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdomen:</td>
<td>□ WNL □ Distended □ Taut □ Ascites □ Abdominal incision</td>
<td>Abdominal girth (PRN): cm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abdominal pain, see pain assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowel movements: □ WNL □ Constipation □ Diarrhea □ Bowel program required □ Other,________________</td>
</tr>
<tr>
<td>Last bowel movement: □ Today □ Yesterday □ Other,________________</td>
</tr>
<tr>
<td>Continent: □ Yes □ Rarely incontinent □ Regularly incontinent</td>
</tr>
<tr>
<td>Nausea/ vomiting: □ No □ Yes, describe:________________</td>
</tr>
<tr>
<td>Nutritional intake: □ Adequate □ Inadequate, address in care planning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bowel sounds (all four quadrants):</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Active, WNL □ Hyperactive</td>
</tr>
<tr>
<td>□ Hypoactive □ Absent (listen for 5 full minutes)</td>
</tr>
</tbody>
</table>

| Tubes: □ None □ Salem sump □ Nasoduodenal feeding tube □ PEG tube □ Jejunostomy (J) tube pH aspirate: ___ |
| Insertion site: □ WNL □ Pressure areas □ Redness □ Purulent drainage □ Tenderness □ Warmth |
| Tube feeding: Type: □ Amount mls over ___ hours via □ Gravity □ Pump |
| □ Intermittent □ Continuous (keep head of bed elevated to prevent aspiration, check placement – pH should be 0 to 4) |

| Stoma: □ N/A □ Colostomy □ Ileostomy (Notify the surgeon of all abnormalities observed for new colostomies) |
| Stoma status: □ Pink, viable □ Red □ Deep red □ Musky □ Dark □ Retracted below skin □ S/S of infection |

PEG tube = percutaneous endoscopic gastrostomy tube

### Skin Integrity Assessment

| Skin color: □ WNL □ Pale □ Jaundice □ Dusky □ Cyanotic |
| Skin is: □ Intact □ No, see below □ No, describe:________________ |
| Braden Scale Score: |
| Signs/ symptoms of inflammation/ infection: □ Redness □ Tenderness/ pain □ Warmth □ Swelling |

<table>
<thead>
<tr>
<th>Contusion(s)/ Echymosis: □ N/A Size: Length cm Width cm Depth cm</th>
<th>Location(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location(s): Client’s explanation of bruising: ________________</td>
<td></td>
</tr>
</tbody>
</table>

| Wounds
<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Size</th>
<th>Tunneling</th>
<th>Undermining</th>
<th>Surrounding Tissue</th>
<th>Drainage</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Abrasion □ Avulsion □ Burn □ Laceration □ Puncture □ Pressure ulcer, Stage □ Stasis ulcer □ Surgical incision, closed, edges are approximated □ Surgical, open areas □ total wound dehiscence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Length cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Width cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Depth cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Incision length cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ # of staples/ sutures (circle one)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Present at o’clock, depth cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Present, surrounding tissue is: □ Dusky □ Soft □ Boggy □ Fluid-full □ Other, describe:________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ WNL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Redness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Tenderness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Warmth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Streaking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Excoriation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Bruising</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Discoloration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Musky</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ WNL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Hyperkeratotic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ No □ Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ No □ Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ No □ Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ No □ Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Is client on a pressure reduction or relief surface: □ No □ Yes, type:________________

*Undermining is due to liquefaction of necrotic tissue or mechanical forces that sheared and separated underlying tissues.
### Pain Assessment

**Location of pain:**
- N/A
- Sleep
- Activity
- Exercises
- Relationships
- Emotions
- Concentration

**Appetite:** Other:

**Description of pain:**
- Sharp
- Stabbing
- Throbbing
- Shooting
- Burning
- Electric-shock like

**Blood sugars:**
- N/A

**TPN/PPN:**
- N/A

**IV fluids:**
- Triple lumen CVL
- PICC
- Tunneled CVL
- Implanted port

**Opioid medication(s):**
- Route:______
- Last dose:______

**Breakthrough medication(s):**
- Route:______
- Last dose:______

**NSAIDs/Adjuvants:**
- Route:______
- Last dose:______

**Consecutive dose:**
- Morphine
- Morphine
- Dilaudid
- Dilaudid
- Fentanyl via
- Fentanyl via

**Continuous dose:**
- ____________ @ _______ mls/hr
- ____________ @ _______ mls/hr
- ____________ @ _______ mls/hr
- ____________ @ _______ mls/hr

**Blood sugars ranges:**
- WNL
- High with coverage needed

**PCA:**
- N/A
- N/A

**Blood sugars ranges:**
- Continuous
- Continuous
- Continuous
- Continuous

**Doses per hour:**
- Max doses per hour:
- Max doses per hour:
- Max doses per hour:
- Max doses per hour:

**What makes the pain worse?**
- Activity
- Exercises
- Other:

**What makes the pain decrease?**
- Rest/sleep
- Medication
- Heat
- Cold
- Family presence
- Music
- Reading/Distraction/Meditation/Guided imagery/Relaxation techniques/Other:

**Highest pain level today:**
- Acceptable level of pain for this client:
- Best pain level today:
- Best pain ever gets:

**Does the client have concerns about overusing medications/addiction?**
- No
- Yes

### IV Assessment

**Type of line:**
- Peripheral, site
- Triple lumen CVL
- PICC
- Tunneled CVL
- Implanted port

**Insertion site:**
- WNL
- Redness
- Tenderness/pain
- Warmth
- Swelling
- Drainage

**IV fluids:**
- N/A
- Heplock
- IV fluids:
- LRS
- Continuous
- over
- hrs

**TPN/PPN:**
- N/A
- TPN
- PPN

**Blood sugars:**
- q 6 hrs
- q 8 hrs
- other:

**PCA:**
- N/A
- N/A

**Blood sugars ranges:**
- WNL
- High with coverage needed

**Continuous dose:**
- ____________ @ _______ mls/hr
- ____________ @ _______ mls/hr
- ____________ @ _______ mls/hr
- ____________ @ _______ mls/hr

**Doses per hour:**
- Max doses per hour:
- Max doses per hour:
- Max doses per hour:
- Max doses per hour:

### Cast/Extremity Assessment

**Hot spots over cast?**
- No
- Yes, describe:

**Cast intact?**
- Yes
- No, describe:

**Drainage?**
- None
- Yes, describe:

**Extremity check**

**Color:**
- WNL
- Pale

**Temperature:**
- Warm
- Cool

**Sensation:**
- WNL
- Loss of sensation

**Pain increasing?**
- No
- Yes, describe:

**Swelling increasing?**
- No
- Yes, describe:

### TYPES OF APHASIA:

- **Dysarthria** – patient has problems with speech due to muscular control.
- **Expressive aphasia (Broca’s)** – patient understands, can respond w/great difficulty in short abbreviated, phrases. Aware and frustrated. Often frontal lobe damage.
- **Receptive aphasia (Wernicke’s)** – patient cannot understand spoken and sometimes written words, speaks fluently, long sentences that do not make sense. Patient may not be aware of deficits. Often secondary to L-temporal lobe damage.
- **Global or mixed aphasia** – patient has difficulty in understanding and speaking/communicating. Often secondary to extensive damage of the language areas of the brain.

### ASSESSMENT FOLLOW UP:

- **Notify** the physician of all abnormal findings!!
- Use the nursing process to:
  - Analyze subjective and objective findings.
  - Make a nursing diagnosis.
  - Plan and implement appropriate interventions.
  - Evaluate the effectiveness of the plan and revise as needed.
An Easy Guide to Head to Toe Assessment
© Mary C. Vrtil, Ph.D., RN 2011 available from www.aperiomlc.com

### Putting it All Together

#### As you walk into the room assess:
- Awake/ alert, asleep?
- Skin color
- Respiratory effort

#### As you converse with the patient assess:
- Orientation to person, place, time
- Communication/ speech
- Respiratory effort and rhythm
- On/ off O₂
- Glasgow coma score
- Pain

#### At the head assess:
- Skin color, temp, moisture and integrity
- Incisions and dressings
- Oral mucosa/ tongue
- Skin tenting on forehead
- Tremors
- Pupils
- Jugular/ subclavian CVL
- NG/ Nasoduodenal tube

#### At the chest/ back assess:
- Skin color, temp, moisture and integrity
- Incisions and dressings
- Breath sounds
- Respiratory rate, depth, rhythm and effort
- Oxygen settings
- Apical pulse
- Apical/ radial deficit
- Heart sounds

#### At the upper extremities assess:
- Skin color, temp, moisture and integrity
- Incisions and dressings
- Capillary refill
- Radial pulses
- Skin tenting on forearm
- Edema
- Periph IV/ PICC insertion sites
- Tremors
- Hand grasps
- Muscle tone and strength
- Casts

#### At the abdomen assess:
- Skin color, temp, moisture and integrity
- Incisions and dressings
- Nutritional intake
- Nausea/ vomiting
- Bowel movements
- Distention/ ascites
- Bowel sounds
- PEG/ J tube site
- Tube feedings
- Stomas
- Continence
- Abdominal/ flank pain
- Bladder distention, s/s of UTI
- Urine output, color, characteristics
- Urinary catheter

#### At the genitalia/ buttocks:
- Skin color, temp, moisture and integrity
- Incisions and dressings
- Femoral pulses
- Sacral edema

#### At the lower extremities assess:
- Skin color, temp, moisture and integrity
- Pedal and posterior tibial pulses
- Edema
- Muscle tone and strength

#### Notify the Physician of abnormal findings of concern
- Implement the nursing process
- Analyze the data
- Identify the appropriate nursing diagnoses.
- Develop and implement a plan
- Evaluate the outcomes
## Cardiac Rhythm Assessment by ECG

### Sinus rhythm:
- Normal sinus rhythm (NSR) [P wave before every QRS, P-R interval < 0.20, rate is between 60 to 100]
- Sinus tachycardia [rate => 101]
- Sinus bradycardia [rate =< 59]
- Sinus arrhythmia [P wave before every QRS, but rate varies with respiration]

### Atrial dysrhythmias:
- Atrial fibrillation [atria of heart is fibrillating, ECG shows wavy line, conduct ion thru A-V node to ventricles is erratic]
- Atrial flutter with __:1 conduction block [atrial rate approx 300, ventricular (heart) rate 150 = 2:1, HR 75 = 4:1]
- Atrial fibr/flutter [atria mixture of flutter and fibrillation]
- Paroxysmal supraventricular tachycardia (PSVT) [sudden onset, very fast rates, narrow QRS, P wave absent or behind QRS]

### A-V Heart Blocks:
- First degree heart block [delayed conduction thru AV node, P-R interval > 0.20]
- Second degree A-V block, Mobitz I* [P-R interval lengthens until a QRS is absent, cyclic pattern with every X beat dropped]
- Second degree A-V block, Mobitz II** [P-R interval is stable, no QRS after some P waves due to intermittent AV block]
- Third degree A-V block*** [no relationship between P waves and QRS complexes due to complete block at AV node]

### Paced Rhythms:
- Atrial-ventricular (AV) sequential pacing [spike before the P wave and spike before the QRS]
  - 1:1? Yes No
- Ventricular pacing [spike before the QRS only]
  - 1:1? Yes No
- Demand pacing [heart rate is higher, pacemaker fires only if there is a delay in spontaneous activity]?
  - Yes No
- Automatic internal defibrillator (IAD)?
  - Yes No Has client felt it fire?
  - No Yes, when

### Ectopic Beats:
- Ventricular premature beats (VPB, PVC) [an early, wide QRS, extra beat originating in the ventricle]
  - Bigeminy [every other beat is a VPB]
  - Trigeminy [every 3rd beat is a VPB]
  - Quadrigeminy [every 4th beat is a VPB]
- Premature atrial beats (PAB, PAC) [an early, narrow QRS, extra beat originating in the atria, P wave shape may be different]
- Premature junctional beats (PJB) [an early, narrow QRS, extra beat originating above the A-V node, no P wave]

### Lethal dysrhythmias:
- Ventricular escape rhythm (also called idioventricular) [wide QRS complexes, HR @ ventricular intrinsic rate, 30- 40]
- Ventricular tachycardia [wide QRS, tachycardic rates, minimal cardiac output due to ineffective pumping, cannot sustain life]
- Ventricular fibrillation [eratic line, ventricles are quivering, no pumping action, cardiac output is 0]

* A fib with rapid response (HR > 100) increases myocardial oxygen needs and risk of LV failure is high, also high risk for PE.
** Previously called Wenckebach.
*** Mobitz II second degree and third degree block can result in life threatening bradycardia.