## ***Hypertensive Patient***

A post op cardiovascular patient has a BP of 180/90

*Review and initiate the following order. Work calculations and then start pump.*

**Order:** Nicardipine (Cardene) 25 mg in 250 mL NS

Initiate infusion at 5 mg/hr and titrate by 1 – 2.5 mg/hr every 15 minutes to keep SBP less than 150 mmHG

Check vital signs every 15 minutes with titration, then every 1 hour and PRN.

Recommended Maximum dose: 15 mg/hr

After 15 minutes the BP is 170/80. What should you do now?

When should you notify the health care provider that the nicardipine is ineffective?

## ***Hypotensive Patient***

A patient admitted with septic shock has a BP of 78/50 (59).

*Review and initiate the following order. Work calculations and then start pump.*

**Order:** Norepinephrine (Levophed) 4 mg in 250 mL NS

Initiate infusion at 5 mcg/min and titrate by 1 – 5 mcg/min every 5 minutes to keep SBP greater than 90 mmHG

Check vital signs every 15 minutes with titration, then every 1 hour and PRN

Recommended maximum dose: 50 mcg/min

After 5 more minutes the BP is 82/40 (54). What should you do now?

Why is it important to assess the patient's fluid status prior to administering a vasopressor like norepinephrine?

## ***Sedation Patient***

A 198 lb. patient was intubated and placed on a ventilator.

*Review and initiate the following order. Work calculations and then start pump.*

**Order**: Propofol (Diprovan): 1000 mg in 100 mL

Initiate infusion at 5 mcg/kg/min and titrate by 5 – 10 mcg/kg/min every 5 minutes to RASS Score of -2 to -4

Recommended maximum dose: 100 mcg/kg/min

Change IV tubing every 12 hours. Order triglyceride level on every 4 th day of sedation if drip continues.

| Richmond Agitation and Sedation Scale (RASS) | | |
|---|---|---|
| +4 | Combative | violent, immediate danger to staff |
| +3 | Very Agitated | Pulls or removes tube(s) or catheter(s); aggressive |
| +2 | Agitated | Frequent non-purposeful movement, fights ventilator |
| +1 | Restless | Anxious, apprehensive but movements not aggressive or vigorous |
| 0 | Alert & calm | |
| -1 | Drowsy | Not fully alert, but has sustained awakening to *voice* (eye opening & contact ≥ 10 sec) |
| -2 | Light sedation | Briefly awakens to *voice* (eye opening & contact < 10 sec) |
| -3 | Moderate sedation | Movement or eye-opening to *voice* (but no eye contact) |
| -4 | Deep sedation | No response to voice, but movement or eye opening to *physical* stimulation |
| -5 | Unarousable | No response to *voice or physical* stimulation |

The patient continues to pull at the wrist restraints, gag on the ETT, and try to sit up despite your calming reassurance. What is the patient's Richmond Agitation Sedation Scale (RASS) score? What is the RASS goal?

What should you do now?

4 hours later you turn the Propofol infusion off for 3 to 5 minutes for a "sedation vacation". What is the priority assessment?

The patient nods appropriately that they are in pain. What should you do next?

**DKA patient**

Patient weighs 70 kg. Admitting blood glucose is 350 mg/dL

*Review and initiate the following order. Work calculations and then start pump.*

**Order**: Start insulin gtt at 0.1 units/kg/hour

After 1 more hour the BG is 310 mg/dL. According to the insulin gtt grid, what rate should the insulin drip be adjusted to?

**BG ≥ 110 mg/dL: STEP 1:** Determine the **CURRENT BLOOD GLUCOSE LEVEL** → Identify the appropriate **COLUMN** in the table.

**STEP 2:** Calculate the **HOURLY RATE OF CHANGE IN BG** → Identify the appropriate **CELL** in the table. *(Current BG level – Previous BG level) ÷ Time between levels (hrs) = HOURLY RATE OF CHANGE (mg/dL/hr.)*

**STEP 3:** Move right for **INSTRUCTIONS.**

| BG 110 -139 | BG 140 - 179 | BG 180 - 219 | BG ≥ 220 | Instructions |
|---|---|---|---|---|
| | | BG ↑ > 50 mg/dL/hr | BG ↑<br>BG unchanged | ↑ Infusion by 40%<br>(1.40 x current rate) |
| | BG ↑ > 15 mg/dL/hr | BG ↑ 1-50 mg/dL/hr<br>BG unchanged<br>BG ↓ 1-20 mg/dL/hr | BG ↓ 1-40 mg/dL/hr | ↑ Infusion by 20%<br>(1.20 x current rate) |
| BG ↑ > 15 mg/dL/hr | BG ↑ 1-15 mg/dL/hr<br>BG unchanged<br>BG ↓ 1-20 mg/dL/hr | BG ↓ 21-50 mg/dL/hr | BG ↓ 41-75 mg/dL/hr | No Infusion Change |
| BG ↑ 1-15 mg/dL/hr<br>BG unchanged<br>BG ↓ 1-25 mg/dL/hr | BG ↓ 21-50 mg/dL/hr | BG ↓ 51-75 mg/dL/hr | BG ↓ 76-100 mg/dL/hr | ↓ Infusion by 20%<br>(0.80 x current rate) |
| BG ↓ > 25 mg/dL/hr<br>**SEE BELOW | BG ↓ > 50 mg/dL/hr | BG ↓ > 75 mg/dL/hr | BG ↓ > 100 mg/dL/hr | Hold x 30 min, then<br>↓ Infusion by 40%<br>(0.60 x current rate) |

After an additional hour, the BG is 250. What adjustment to the insulin drip is needed now?