

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.

Nicardipine infusion 5 mg/hr; titrate 1 - 2.5 mg/hr every 15 minutes to keep SBP less than 150 mmHG. Maximum dose 15 mg/hr.

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

Starting dose: *Formula: mL/hr = dose / concentration*

Max dose:

After 15 minutes the BP is 170/80. What should the nurse 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.

Norepinephrine infusion 5 mcg/min; titrate 1 - 5 mcg/min every 5 minutes to keep MAP \geq 70 mmHG. Maximum dose 50 mcg/min.

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

Starting dose: *Formula: dose X wt (kg) X 60 / concentration*

Hint: if no weight available, leave out that part and just figure dose X 60 / concentration.

Max Dose:

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

The hypotensive patient was intubated and placed on a ventilator. Current weight 198 pounds.

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

Propofol infusion 5 mcg/kg/min; titrate 5 – 10 mcg/kg/min every 5 minutes to RASS Score of 0 to -2. Maximum dose 70 mcg/kg/min.

Change IV tubing every 12 hours.

Order triglyceride level on every 4th 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 \geq 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

Starting dose: *Formula: dose X wt (kg) X 60 / concentration*

Max dose:

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? How do you assess pain when a patient is under sedation like Propofol?

DKA Patient

0815 The nurse receives an order to start a regular insulin drip on the hypertensive patient. Current blood glucose is 550 mg/dL. Weight is 70 kg.

Review and initiate the following order. Work calculations and follow insulin protocol.

Initiate insulin protocol. Regular insulin infusion 0.1 units/kg/hour. Check blood glucose hourly.

BG 75-99 mg/dL	BG 100-139 mg/dL	BG 140-199 mg/dL	BG ≥ 200 mg/dL	INSTRUCTIONS*
		BG ↑ by > 50 mg/dL/hr	BG ↑	↑ INFUSION by "2Δ"
	BG ↑ by > 25 mg/dL/hr	BG ↑ by 1-50 mg/dL/hr OR BG UNCHANGED	BG UNCHANGED OR BG ↓ by 1-25 mg/dL/hr	↑ INFUSION by "Δ"
BG ↑	BG ↑ by 1-25 mg/dL/hr, BG UNCHANGED, OR BG ↓ by 1-25 mg/dL/hr	BG ↓ by 1-50 mg/dL/hr	BG ↓ by 26-75 mg/dL/hr	NO INFUSION CHANGE
BG UNCHANGED OR BG ↓ by 1-25 mg/dL/hr	BG ↓ by 26-50 mg/dL/hr	BG ↓ by 51-75 mg/dL/hr	BG ↓ by 76-100 mg/dL/hr	↓ INFUSION by "Δ"
BG ↓ by > 25 mg/dL/hr see below†	BG ↓ by > 50 mg/dL/hr	BG ↓ by > 75 mg/dL/hr	BG ↓ by > 100 mg/dL/hr	HOLD x 30 min, then ↓ INFUSION by "2Δ"

†D/C INSULIN INFUSION;
√BG q 30 min; when BG ≥ 100
mg/dL, restart infusion @75% of
most recent rate.

*CHANGES IN INFUSION RATE ("Δ") are determined by the current rate:

Current Rate (U/hr)	Δ = Rate Change (U/hr)	2Δ = 2X Rate Change (U/hr)
< 3.0	0.5	1
3.0 - 6.0	1	2
6.5 - 9.5	1.5	3
10 - 14.5	2	4
15 - 19.5	3	6
20 - 24.5	4	8
≥ 25	≥ 5	10 (consult MD)

Starting dose:
Formula:
 $mL/hr = dose$
 $(unit/hr) /$

concentration (units/mL)

Hint: Need to multiply units/kg/hr by the patient weight (kg) to get units/hr

0915 BG is 530 mg/dL.

1015 BG is 470 mg/dL.

What medication should the nurse anticipate adding when the BG is less than 250 mg/dL?