

Entering CRRT Orders in Power Chart No Anticoagulation

Use these orders for no anticoagulation (using predilution for filter anticoagulation).

Use these orders for patients who are receiving therapeutic systemic anticoagulation with no additional heparin via CRRT circuit.

Search: CRRT Type: Inpatient

- CRRT Citrate Prescription VH
- CRRT Heparin Prescription VH
- CRRT No/Other Anticoagulant Prescription VH
- EPH - Continuous Renal Replacement Therapy (CRRT) Heparin
- EPH - Continuous Renal Replacement Therapy (CRRT) No Anticoagulation or Other Anticoagulation
- EPH - Continuous Renal Replacement Therapy (CRRT) Citrate (VH)
- BLOOD TRANSFUSION - Cryoprecipitate (CRY) - Full Protocol
- BLOOD TRANSFUSION - Cryoprecipitate (CRYO) - Product Only
- carboprost
- carboprost (250 mcg, injection, IM, ONCE)
- CardioRespiratory Monitoring (Peds)
- Carrot,Serum (F31)
- CORNERSTONE
- Convert
- Convert (0.01 mg/kg, injection, IV, ONCE, infuse over 10 min)
- "Enter" to Search
- Diagnostic Cardiology
- ED/UCC Orders
- Diet
- Discharge Planning
- Geriatric Outreach
- Health Records
- Infection Control
- IV Solutions
- IV Therapy
- Laboratory
- Medical Imaging
- Miscellaneous
- Molecular Diagnostics
- Multidisciplinary Cancer Conference Referrals
- Music Therapy
- Nursing Orders
- Nephrology
- Nutrition Services

For new orders, always choose the appropriate **Power Plan**. The Power Plan includes the CRRT prescription plus the relevant labwork, nursing instructions and medication orders.

Use the **stand-alone orders** if you want to make a change to an existing prescription only.

If you want to change a prescription (e.g. from heparin to no anticoagulation), discontinue the old Power Plan and initiate the appropriate new Power Plan.

The screenshot shows a medical software interface. On the left is a sidebar menu with options like 'Nurse View', 'Summaries ViewPoint', 'SBAR', 'IView / I&O', 'Task List', 'MAR Summary', 'MAR', 'Medication List', 'Orders', 'Quick Orders', 'Allergies', 'Clinical Documents/R...', 'Documents', 'Clinical Notes Viewer', 'Form Browser', 'Results Review', 'Infection Control', 'Blood Product Information', 'Patient Information', 'Appointments', 'Behaviour Safety Alert Summary', and 'Client Info'. The 'Orders' menu item is highlighted.

The main interface has a top bar with 'Orders' and 'Document Medication by Hx | Reconciliation'. Below this is a tree view on the left showing a hierarchy of orders: 'Orders for Signature' -> 'Plans' -> 'Document In Plan' -> 'Medical' -> 'NEPH - Continuous Renal Replacement Therapy (C...)' -> 'Suggested Plans (0)' -> 'Orders' -> 'Patient Care' and 'Medications'. The 'Patient Care' and 'Medications' categories are checked.

The main area displays a table of orders for the selected plan:

Component	Status	Dose ...	Details
NEPH - Continuous Renal Replacement Therapy (CRRT) No Anticoagulation or Other Anticoagulation (Planned Pending)			
Patient Care			
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> CRRT No/Other Anticoagulant Prescription VH			Change filter if urea ultrafiltrate:serum ratio <0.80
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Communication Order			q6 hour schedule while on CRRT
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Electrolytes (Na/K/Cl/CO2) Nurse order when			q6 hour schedule while on CRRT
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Phosphate, Magnesium Nurse Order When			q12 hour schedule while on CRRT
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Urea Serum Nurse order when			q12 hour schedule while on CRRT
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Creatinine Serum Nurse order when			q12 hour schedule while on CRRT
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Urea Fluid Nurse order when			q12 hour schedule while on CRRT
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Communication Order			Ultrafiltrate Nurse to discontinue CRRT No anticoagulation powerplan when CRRT prescription discontinued
Medications			
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> sodium citrate (sodium citrate 4% injectable solution)			2.5 mL, injection, BLOCK, as directed, PRN Other: See Comments Instill 4% sodium citrate solution into each catheter limb (total volume= limb v...

At the bottom right, there is a button labeled 'Initiate Now' with a lightning bolt icon, which is highlighted with a red box and an arrow pointing to it.

These are the orders within the No Anticoagulation Power Plan. Note that the prescription (first order requiring details) is contained within the Power Plan along with the labwork, nursing instructions and medication orders.

You need to **initiate** this Power Plan **first** to activate the orders. The No Anticoagulation prescription Power Form will automatically launch as soon as you choose initiate.

This Power Form launches automatically once you select initiate order.

*Performed on: 2020/08/18 1544 EDT By: CCTCRN, Train 1

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup

Prismaflex Mode

Dialysate Solution If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate mL/hr

PRE Replacement Solution via pre blood pump (PBP)

PRE Replacement Rate mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump

POST Replacement Rate mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol?*** Yes

Anticoagulation No anticoagulation Systemic anticoagulation Other anticoagulant

Anticoagulant

Bolus

Infusion

Special Instructions Yes No

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level	Final KCl Concentration in Dialysate
-----------------------	--------------------------------------

Choose start or update prescription. If the patient has a previous prescription, it will automatically populate the fields. You will have to modify carefully to make sure the prescription is still correct.

✓ CRRT No/Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup **ST 150**

Prismaflex Mode

Blood Flow Rate

Priming Solution

Do not use heparin if patient is HIT positive

Net Fluid Removal Target mL/hr Start at 0 mL/hr and increase as long as MAP is maintained

Dialysate Solution **ST 150 is the standard filter.** and high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate mL/hr

PRE Replacement Solution via pre blood pump (PBP)

PRE Replacement Rate mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump

POST Replacement Rate mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol? Yes

Anticoagulation

No anticoagulation Systemic anticoagulation Other anticoagulant

Anticoagulant

Bolus

Infusion

Special Instructions Yes No

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level

if less than 3.0 mmol/L

Final KCl Concentration in Dialysate

* KCl bolus I.V. as per CRIT CARE - Electrolyte Replacement (Module).

* Recheck serum Magnesium and treat as per CRIT CARE - Electrolyte

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode **CVVHDF**

Blood Flow Rate

Priming Solution

Net Fluid Removal Target mL/hr Start at 0 ml/hr and progress to tar

Dialysate Solution If no anticoagulation in use, recom

Dialysate Solution Rate mL/hr

PRE Replacement Solution via pre blood pump (PBP)

PRE Replacement Rate mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump

POST Replacement Rate mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol? **Yes**

Anticoagulation No anticoagulation Systemic anticoagulation Other anticoagulant
Anticoagulant _____
Bolus _____
Infusion _____

Special Instructions Yes No _____

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level Final KCl Concentration in Dialysate

Always order CVVHDF. This is the order for how to set the machine up, not the actual prescription. This allows the delivered CRRT treatment to be modified without changing the filter by adjusting flow rates.

CRRT No/Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVVHDF

Blood Flow Rate

Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Do not use heparin if patient is HIT positive

Net Fluid Removal Target

Dialysate Solution

Dialysate Solution Rate

PRE Replacement Sol

PRE Replacement Rate

POST Replacement S

POST Replacement Rate

mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol?*** Yes

Anticoagulation No anticoagulation Systemic anticoagulation Other anticoagulant

Anticoagulant

Bolus

Infusion

Special Instructions Yes No

Rapidly increasing the blood flow at the start of treatment reduces clotting. Nurses may need to adjust the blood flow to keep access or return pressures within the acceptable range. For no anticoagulation or heparin, we strive to get blood flow 250 – 300 ml/min within minutes of starting treatment.

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

✓ CRRT No/Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution

Net Fluid Removal Target 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride
2 litres of 0.9% sodium chloride

Dialysate Solution

Dialysate Solution Rate

PRE Replacement Solution

PRE Replacement Rate

POST Replacement Solution

POST Replacement Rate

Add POTASSIUM CHLORIDE

Anticoagulation

Special Instructions

Add KCl to dialysate and

Do not use heparin if patient is HIT positive

Prime with heparin (even if anticoagulation is contraindicated due to bleeding), UNLESS there is a concern of HIT/allergy. The heparin adheres to the filter but is rinsed out of the circuit with the second prime. This reduces filter clotting even when no anticoagulation is being used.

The patient does not receive a heparin bolus when using an ST 150 filter as this filter requires a 2 L prime. If using a smaller filter such as an ST 100 (rarely used in adults now), a heparin bolus would be given as this filter requires a single prime.

✓ CRRT No./Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CWHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride

Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution Dialysis fluid

Dialysate Solution Rate

PRE Replacement Solution

PRE Replacement Rate mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump

POST Replacement Rate mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol? Yes

Anticoagulation

No anticoagulation

Systemic anticoagulation

Other anticoagulant

Anticoagulant

Bolus

Infusion

Special Instructions

Yes

No

Enter desired net fluid removal. Nurses will start at 0 and then attempt to achieve this target based on hemodynamic stability.

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level

if less than 3.0 mmol/L

Final KCl Concentration in Dialysate

* KCl bolus I.V. as per CRIT CARE - Electrolyte Replacement (Module).

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription

Filter Setup ST 150

Prismaflex Mode CVVHDF

Blood Flow Rate Target Blood flow 250-300 mL/m

Priming Solution 5,000 units of heparin sodium in

Net Fluid Removal Target 100 mL/hr

Dialysate Solution

Dialysate Solution Rate

PRE Replacement Solution via pre blood pump (PBF)

PRE Replacement Rate

POST Replacement Solution via replacement pump

POST Replacement Rate

Add POTASSIUM CHLORIDE to dialysate according

Anticoagulation No anticoagulation
 Systemic anticoagulation
 Other anticoagulant

Special Instructions Yes
 No

Potassium Titrat

Add KCl to dialysate and all replacement fluids accordi

Choose PrismaSol 4 if potassium is < 5.7. Choose PrismaSol 0 if potassium is 5.7 or higher. Potassium will generally fall after the first hour of CRRT; if potassium remains higher than the concentration in the replacement fluid, look for other causes for hyperkalemia than renal failure.

Regardless of the solution ordered, nurses change back and forth as needed to achieve the desired final potassium concentration per protocol, or to manage available supply. The concentration of sodium (140 mmol/L) and bicarbonate (32 mmol/L) is the same between solutions.

BLOOD SUGAR and insulin infusions need to be monitored closely when switching between solutions because PrismaSol 4 contains glucose 6.1 mmol/L but PrismaSol 0 contains zero.

PrismaSOL 0 may cause hypoglycemia or normoglycemia (consider DKA for patients with unexplained anion gap acidosis when PrismaSol 0 is in use).

BEFORE RECONSTITUTION Each 1000 mL contains	Prisma SOL 0	Prisma SOL 4	Prism OCAL
Compartment A			
Sodium bicarbonate			58.8 g
Magnesium chloride, hexahydrate	2.033 g	2.036 g	
Lactic acid	5.4 g	5.4 g	
Calcium chloride dihydrate	5.145 g	5.148 g	
Glucose anhydrous		24.2 g	
Compartment B			
Lactic acid			0.284 g
Magnesium chloride, hexahydrate			0.108 g
Sodium chloride	6.45 g	6.45 g	6.449 g
Sodium bicarbonate	3.09 g	3.09 g	
Potassium chloride		0.314 g	

AFTER RECONSTITUTION		Prisma SOL 0		Prisma SOL 4		Prism OCAL	
		mmol/L	mEq/L	mmol/L	mEq/L	mmol/L	mEq/L
Calcium	Ca ²⁺	1.75	3.50	1.75	3.50		
Magnesium	Mg ²⁺	0.5	1.0	0.5	1.0	0.5	1.0
Sodium	Na ⁺	140	140	140	140	140	140
Chloride	Cl ⁻	109.5	109.5	113.5	113.5	106	106
Lactate		3.0	3.0	3.0	3.0	3.0	3.0
Bicarbonate	HCO ₃ ⁻	32	32	32	32	32	32
Potassium	K ⁺	0	0	4.0	4.0	0	0
Glucose		0	0	6.1		0	0

These are the 3 solutions that are stocked in CCTC. The two used for No Anticoagulation or Heparin are highlighted.

Prism OCAL is a calcium free product used only with citrate. Note that all 3 solutions contain the same final concentration of bicarbonate and sodium. They all contain 3 mmol/L of lactate which is added for pH adjustment; the lactate is metabolized to bicarbonate. Potassium is added by the nurse to achieve a minimum concentration of 2 mmol/L by protocol.

Each 5 L bag is divided into 2 compartments (250 mL upper and 4750 lower compartments). These must be mixed together at the time the solution is hung (stability is only 24 hours once mixed).

Refer to the “AFTER RECONSTITUTION” for the final concentration of electrolytes.

Failure to break the seal between the bags will change the concentration to that of the lower compartment only. The machine will also enter an alarm mode, potentially drawing in air from the bag as it assumes there is 5 L on the scale (but only 4750 is accessible).

✓ CRRT No./Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PRP)

PRE Replacement Rate

POST Replacement Solution

POST Replacement Rate

Add POTASSIUM CHLORIDE

Anticoagulation

Special Instructions

When running no anticoagulation, the default setting when using no anticoagulation is "0". This makes the actual delivered treatment CVVHF. You can add a dialysis flow rate after treatment begins if necessary (which will change the delivered treatment to CVVHDF).

Add a dialysis flow rate if you cannot achieve adequate clearance with the standard pre and post dilution flow rates.

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level Final KCl Concentration in Dialysate

✓ CRRT No/Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CWHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 mL/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP) PrismaSol 4

PRE Replacement Rate

POST Replacement Solution via replacement pump

POST Replacement Rate mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol? Yes

Anticoagulation	<input type="radio"/> No anticoagulation	Anticoagulant	<input type="text"/>
	<input type="radio"/> Systemic anticoagulation	Bolus	<input type="text"/>
	<input type="radio"/> Other anticoagulant	Infusion	<input type="text"/>

Special Instructions Yes No

We use the same solution on all pumps when running No Anticoagulation to reduce risk for error

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level

Final KCl Concentration in Dialysate

✓ CRRT No./Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP) PrismaSol 4

PRE Replacement Rate 2000 mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement

POST Replacement

Add POTASSIUM

Anticoagulation

Special Instructions

Add KCl to dialysate

baseline KCl in the solutions being used.

Serum Potassium Level

if less than 3.0 mmol/L

Final KCl Concentration in Dialysate

* KCl bolus I.V. as per CRIT CARE - Electrolyte Replacement (Module).

Our standard flow rate is 2000 ml/hr. This provides adequate clearance and filter dilution with a delivered prescription dose > 25 ml/kg in most patients.

Higher predilution flow rates do not necessarily improve filter life by increased dilution. Because fluid must be pulled across the filter membrane at a rate equal to the pre plus post dilution plus fluid removal volumes, higher hemofiltration rates may fatigue the filter prematurely. If higher clearance is needed, add the additional clearance in the form of some hemodialysis flow (e.g., 500 or 1000 ml/hr).

✓ CRRT No/Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP) PrismaSol 4

PRE Replacement Rate 2,000 mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump

PrismaSol 4

We use the same solution on all 3 pumps to reduce risk for error

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol

Anticoagulation	<input type="radio"/> No anticoagulation	Anticoagulant	<input type="text"/>
	<input type="radio"/> Systemic anticoagulation	Bolus	<input type="text"/>
	<input type="radio"/> Other anticoagulant	Infusion	<input type="text"/>

Special Instructions Yes No

Potassium Titration Protocol

✓ CRRT No./Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP) PrismaSol 4

PRE Replacement Rate 2,000 mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump PrismaSol 4

POST Replacement Rate 500 mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol? Yes

Anticoagulation
 No anti
 Systemi
 Other a

Special Instructions
 Yes
 No

We always need some post dilution replacement, only for the prevention of clotting in the deaeration chamber. Historically, 200-250 ml was always sufficient but we are currently using 500 ml to try and prevent foam build up in the deaeration chamber. We are still playing with the optimal rate with the new machines.

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride

Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP) PrismaSol 4

PRE Replacement Rate 2,000 mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump PrismaSol 4

POST Replacement Rate 500 mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol? **Yes**

Anticoagulation No anticoagulation Systemic anticoagulation Other anticoagulant
Anticoagulant _____
Bolus _____

Special Instructions Yes No

Yes auto-populates. This enables the nurse to titrate the potassium concentration by protocol. The minimum final potassium concentration is 2 mmol/L.

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level

if less than 3.0 mmol/L

Final KCl Concentration in Dialysate

* KCl bolus I.V. as per CRIT CARE - Electrolyte Replacement (Module).

✓ CRRT No./Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP) PrismaSol 4

PRE Replacement Rate 2,000 mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump PrismaSol 4

POST Replacement Rate 500 mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol?*** Yes

Anticoagulation No anticoagulation Systemic anticoagulation Other anticoagulant

Anticoagulant

Bolus

For this Power Plan, choose “NO anticoagulation”. *This refers to anticoagulation delivered through the filter only.* If the patient is on systemic therapeutic anticoagulation, choose “NO anticoagulation” and use “NO anticoagulation” Power Plan.

✓ CRRT No./Other

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

CRRT Prescription Status Start or update prescription Discontinue

Filter Setup ST 150

Prismaflex Mode CVHDF

Blood Flow Rate Target Blood flow 250-300 mL/min; increase to target within first minute of initiation

Priming Solution 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP) PrismaSol 4

PRE Replacement Rate 2,000 mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump PrismaSol 4

POST Replacement Rate 500 mL/hr Recommended minimum

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol?

Anticoagulation No anticoagulation Systemic anticoagulation Other anticoagulant
Anticoagulant _____
Bolus _____
Infusion _____

Special Instructions Yes No

If there are any special instructions, choose "yes" and enter in text box.

Example: "Heater on only if core temperature < 35.5"

All titration protocols appear at the end of the Power Form. These are also available on the CCTC website and are printed by nurses for ease of use.

Potassium Titration Protocol

Add KCl to dialysate and all replacement fluids according to the following protocol. Note the amount of baseline KCl in the solutions being used.

Serum Potassium Level

Final KCl Concentration in Dialysate

if less than 3.0 mmol/L

- * KCl bolus I.V. as per CRIT CARE - Electrolyte Replacement (Module).
- * Recheck serum Magnesium and treat as per CRIT CARE - Electrolyte Replacement (Module)
- * KCl to equal 6 mmol/L
- * Notify Nephrology and Critical Care if repeat potassium level is < 3.0 mmol/L

if 3.0 - 3.4 mmol/L

KCl to equal 5 mmol/L

if 3.5 - 4.5 mmol/L

KCl to equal 4 mmol/L

if 4.6 - 5.0 mmol/L**

KCl to equal 3 mmol/L

if 5.1 - 6.0 mmol/L**

KCl to equal 2 mmol/L

if greater than 6.0 mmol/L**

Notify Nephrology and Critical Care if repeat potassium level is > 6 mmol/L

** If serum potassium is 4.6 - 5.6 mmol/L at the start of dialysis, the treatment may be started using PrismaSol 4. Repeat the serum potassium 1 hour after treatment is started.

If potassium remains greater than 4.6 mmol/L change solution to PrismaSol 0 and add appropriate KCl as per protocol.

If the serum potassium remains above 5 mmol/L with dialysis KCl 2 mmol/L, notify Nephrology and Critical Care to review possible causes for persistent hyperkalemia.



Sign Form on: 2020/08/18 1657 EDT

By: Morgan, Brenda (RN)

Click the green check box in top left corner to sign the form and complete the prescription order.

CRRT No Anticoagulation/Other Anticoagulant Prescription VH

Continue

Use to target within first minute of initiation

Priming Solution: 5,000 units of heparin sodium in 1 litre of 0.9% sodium chloride then reprime with 1 litre of 0.9% sodium chloride Do not use heparin if patient is HIT positive

Net Fluid Removal Target: 100 mL/hr Start at 0 ml/hr and progress to target as long as MAP is maintained

Dialysate Solution: PrismaSol 4 If no anticoagulation in use, recommend high predilution replacement flow rate and NO dialysis fluid

Dialysate Solution Rate: 0 mL/hr

PRE Replacement Solution via pre blood pump (PBP): PrismaSol 4

PRE Replacement Rate: 2,000 mL/hr Recommended minimum rate of 2000 mL/hr (if no anticoagulation used)

POST Replacement Solution via replacement pump: PrismaSol 4

POST Replacement Rate: 500 mL/hr Recommended minimum rate of 500 mL/hr

Add POTASSIUM CHLORIDE to dialysate according to Potassium Titration Protocol? Yes

Anticoagulation:

- No anticoagulation
- Systemic anticoagulation
- Other anticoagulant

Anticoagulant: _____

Bolus: _____

Infusion: _____

Special Instructions:

- Yes
- No

Full screen Print 9 minutes ago

Reconciliation Status
 ✓ Meds History Admission Discharge

+ Add to Phase Comments Start: 2020/08/18 16:57 Duration: None

Component	Status	Dose ...	Details
NEPH - Continuous Renal Replacement Therapy (CRRT) No Anticoagulation or Other Anticoagulation (Initiated Pending)			
4 Patient Care			
CRRT No/Other Anticoagulant Prescription VH	Order		
Communication Order	Order		Change filter if urea ultrafiltrate:serum ratio <0.80
Electrolytes (Na/K/Cl/CO2) Nurse order when	Order		q6 hour schedule while on CRRT
Phosphate, Magnesium Nurse Order When	Order		q6 hour schedule while on CRRT
Urea Serum Nurse order when	Order		q12 hour schedule while on CRRT
Creatinine Serum Nurse order when	Order		q12 hour schedule while on CRRT
Urea Fluid Nurse order when	Order		q12 hour schedule while on CRRT Ultrafiltrate
Communication Order	Order		Nurse to discontinue CRRT No anticoagulation powerplan when CRRT prescription discontinued
Medications			
sodium citrate (sodium citrate 4% injectable solution)	Order		2.5 mL, injection, BLOCK, as directed, PRN for Other: See Comments, Start: 2020/08/18 16:57 EDT Instill 4% sodium citrate solution into each catheter limb (total volume= limb volume + 0.1 mL)

Details for CRRT No/Other Anticoagulant Prescription VH

Orders For Nurse Review Save as My Favorite Initiate Now Orders For Signature

You will be brought back to this page to sign the orders. You will not be able to sign until you enter a reason for initiation of CRRT in the details section. If the highlighted Reason/Clinical History box does not appear, click on the CRRT No Anticoagulation Prescription at the top.

Full screen Print 11 minutes ago

Reconciliation Status
✓ Meds History Admission Discharge

+ Add to Phase Comments Start: 2020/08/18 16:57 ... Duration: None ...

Component	Status	Dose ...	Details
NEPH - Continuous Renal Replacement Therapy (CRRT) No Anticoagulation or Other Anticoagulation (Initiated Pending)			
Patient Care			
CRRT No/Other Anticoagulant Prescription VH	Order		
Communication Order	Order		Change filter if urea ultrafiltrate:serum ratio <0.80
Electrolytes (Na/K/Cl/CO2) Nurse order when	Order		q6 hour schedule while on CRRT
Phosphate, Magnesium Nurse Order When	Order		q6 hour schedule while on CRRT
Urea Serum Nurse order when	Order		q12 hour schedule while on CRRT
Creatinine Serum Nurse order when	Order		q12 hour schedule while on CRRT
Urea Fluid Nurse order when	Order		q12 hour schedule while on CRRT Ultrafiltrate
Communication Order	Order		Nurse to discontinue CRRT No anticoagulation powerplan when CRRT prescription discontinued
Medications			
sodium citrate (sodium citrate 4% injectable solution)	Order		2.5 mL, injection, BLOCK, as directed, PRN for Other: See Comments, Start: 2020/08/18 16:57 EDT Inst. 4% sodium citrate solution into each catheter limb (total volume= limb volume + 0.1 mL)

Details for CRRT No/Other Anticoagulant Prescription VH

Orders For Nurse Review Save as My Favorite Initiate Now Orders For Signature

The detail box may be difficult to view. If you cannot see the details, drag the box up to make it visible.

Full screen Print 11 minutes ago

Reconciliation Status
✓ Meds History Admission Discharge

+ Add to Phase Comments Start: 2020/08/18 16:57 Duration: None

Component	Status	Dose ...	Details
NEPH - Continuous Renal Replacement Therapy (CRRT) No Anticoagulation or Other Anticoagulation (Initiated Pending)			
Patient Care			
CRRT No/Other Anticoagulant Prescription VH	Order		
Communication Order	Order		Change filter if urea ultrafiltrate:serum ratio <0.80
Electrolytes (Na/K/Cl/CO2) Nurse order when	Order		q6 hour schedule while on CRRT
Phosphate, Magnesium Nurse Order When	Order		q6 hour schedule while on CRRT

Details for CRRT No/Other Anticoagulant Prescription VH

Details Order Comments Offset Details

*Requested Start Date/Time: 2020/08/18 1657 EDT *Reason/Clinical History: AKI

Special Instructions:

Orders For Nurse Review Save as My Favorite Initiate Now Orders For Signature

Enter a reason for starting CRRT then choose "order for signature".

Order Name	Status	Start	Details
NEPH - Continuous R... Initiated ... placing 9 order(s)			
V-C53; C5-3 OF; A VISIT #:411442900 Admit: 2008/05/27 13:41			
Patient Care			
CRRT No/Other Anticoagulant Prescri...	Order	2020/08/18 16:57	Reason: AKI
Communication Order	Order	2020/08/18 16:57	Change filter if urea ultrafiltrate:serum ratio <0.80
Electrolytes (Na/K/Cl/CO2) Nurse ...	Order	2020/08/18 16:57	q6 hour schedule while on CRRT
Phosphate, Magnesium Nurse Order When	Order	2020/08/18 16:57	q6 hour schedule while on CRRT
Urea Serum Nurse order when	Order	2020/08/18 16:57	q12 hour schedule while on CRRT
Creatinine Serum Nurse order when	Order	2020/08/18 16:57	q12 hour schedule while on CRRT
Urea Fluid Nurse order when	Order	2020/08/18 16:57	q12 hour schedule while on CRRT Ultrafiltrate
Communication Order	Order	2020/08/18 16:57	Nurse to discontinue CRRT No anticoagulation powerplan when CRRT prescription discontinued
Medications			

Details

0 Missing Required Details Orders For Nurse Review **Sign**

Sign the Order

Full screen Print 12 minutes ago

Reconciliation Status
✓ Meds History Admission Discharge

Component	Status	Dose ...	Details
Processing. Please refresh.			

Details




























Orders For Nurse Review Save as My Favorite Orders For Signature

Refresh

Full screen Print 0 minutes ago

Reconciliation Status Refresh the Orders
 ✓ Meds History Admission Discharge

Start: 2020/08/18 16:57 Stop: None

Component	Status	Dose ...	Details
NEPH - Continuous Renal Replacement Therapy (CRRT) No Anticoagulation or Other Anticoagulation (Initiated)			
Last updated on: 2020/08/18 17:06 by: Morgan, Brenda (RN)			
Patient Care			
<input checked="" type="checkbox"/>  	 CRRT No/Other Anticoagulant Prescription VH	Ordered	Reason: AKI
<input checked="" type="checkbox"/>  	 Communication Order	Ordered	Change filter if urea ultrafiltrate:serum ratio <0.80
<input checked="" type="checkbox"/>  	 Electrolytes (Na/K/Cl/CO2) Nurse order when	Ordered	q6 hour schedule while on CRRT
<input checked="" type="checkbox"/>  	 Phosphate, Magnesium Nurse Order When	Ordered	q6 hour schedule while on CRRT
<input checked="" type="checkbox"/>  	 Urea Serum Nurse order when	Ordered	q12 hour schedule while on CRRT
<input checked="" type="checkbox"/>  	 Creatinine Serum Nurse order when	Ordered	q12 hour schedule while on CRRT
<input checked="" type="checkbox"/>  	 Urea Fluid Nurse order when	Ordered	q12 hour schedule while on CRRT Ultrafiltrate
<input checked="" type="checkbox"/>  	 Communication Order	Ordered	Nurse to discontinue CRRT No anticoagulation powerplan when CRRT prescription discontinued
Medications			
<input checked="" type="checkbox"/>  	 sodium citrate (sodium citrate 4% injectable solution)	Ordered	2.5 mL, injection, BLOCK, as directed, PRN for Other: See Comments, Start: 2020/08/18 16:57:00 E... Instill 4% sodium citrate solution into each catheter limb (total volume= limb volume + 0.1 mL)

Details

Orders For Nurse Review Save as My Favorite Orders For Signature

Orders have been completed