


**BOLUS INFUSIONS OF SODIUM CHLORIDE 0.9%
ON HAEMODIALYSIS and INFUSATE ON
HAEMODIAFILTRATION (HDF)**

University Hospitals of Leicester 
NHS Trust

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RRVC CMG

1. Introduction and Who Guideline applies to

Hypotension and cramp due to rapid fluid shifts can be a complication of haemodialysis occurring in up to 30% of treatment sessions. If these symptoms do not respond to reduction or stopping ultrafiltration, they may require administration of bolus doses of Sodium Chloride 0.9% (NaCl 0.9%) or infusate if receiving haemodiafiltration. NaCl 0.9% is an intravascular volume expander and is most commonly used to replace loss of isotonic fluids.¹

This guideline offers advice on the administration of these boluses.

This guideline applies to all haemodialysis nurses, both registered and non-registered, who are competent in haemodialysis and haemodiafiltration, or under direct supervision of a haemodialysis competent nurse and patients and carers who will be undertaking home haemodialysis

2. Guideline Standards and Procedures

Procedure / Process for administration of saline bolus

1 Litre bag of NaCl 0.9% (check contents and expiry date with second registered nurse) attached with giving set to arterial dialysis line with at least 500mls NaCl 0.9% remaining.

Complication

	Cause	Prevention	Treatment
Hypotension	Dry weight too low Excessive UFR Antihypertensive drugs Acetate	Regular assessment of target weight correct UFR calculation Bicarbonate dialysis	0.9%NaCl lay patient flat reduce UFR adjust fluid Loss.

Complication	Cause	Prevention	Treatment
Cramp	Excessive UFR	Correct UFR calculations Heat pad/massage	0.9%NaCl

- Stop ultrafiltration
- Put patient in trendleburg position (feet up/head down)
- Check blood pressure
- Allow 10 minutes if patients' conscious state allows in order for refill of fluid compartments to occur before rechecking blood pressure and giving another bolus.

Administering intermittent 100-200mls bolus NaCl 0.9%

- Open roller clamp on the giving set (non-registered nurses to summon assistance from registered nurse)
- Open clamp on arterial blood line
- Close clamp on arterial line after 100-200mls NaCl 0.9% has been infused.
- Recheck vital signs of patient

NB:

No more than 100-200mls NaCl 0.9% bolus to be given at any one time unless advised by nurse in charge of shift.

Medical Staff to be informed if more than 500mls of NaCl 0.9% is required to treat an episode of hypotensive / cramp.

Administering intermittent 100-200mls bolus of infusate on HDF

- The emergency button on the haemodiafiltration machine should be selected.
- This will immediately deliver an infusate bolus.

3. Education and Training

Non-registered nurses, and registered nurses should have successfully completed the competencies identified in unit 3 of the UHL Renal Nurse Development Programme, or equivalent.

4. Monitoring and Audit Criteria

Key Performance Indicator	Method of Assessment	Frequency	Lead
Episodes of cramp	Dialysis record sheet / documentation	Monthly	
Episodes of hypotension	Dialysis record sheet / documentation	Monthly	
Amount of saline /infusate administered	Dialysis record sheet / documentation	Weekly	

5. Legal Liability Guideline Statement

Guidelines or Procedures issued and approved by the Trust are considered to represent best practice. Staff may only exceptionally depart from any relevant Trust guidelines or Procedures and always only providing that such departure is confined to the specific needs of individual

circumstances. In healthcare delivery such departure shall only be undertaken where, in the judgement of the responsible healthcare professional' it is fully appropriate and justifiable - such decision to be fully recorded in the patient's notes

6. Supporting Documents and Key References

1. Wilkinson R, Barber SG, Robson V. Cramps, thirst and hypertension in hemodialysis patients -- The influence of dialysate sodium concentration. Clin Nephrol 7:101-105, 1977
2. Renal Nursing edited by Toni Smith (1997)

7. Key Words

Intermittent saline bolus, Haemodialysis, cramp, hypotension

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14.01.22	3	Suzi Glover, Richard Baines, Matrons	No changes