



MANITOBA RENAL PROGRAM

SUBJECT <ul style="list-style-type: none"> ▪ Fresenius 5008 ISO Ultrafiltration 	SECTION 30.10 Hemodialysis Equipment and Procedures
	CODE 30.10.06
AUTHORIZATION <ul style="list-style-type: none"> ▪ Professional Advisory Committee, Manitoba Renal Program ▪ Nursing Practice Council, St. Boniface Hospital 	EFFECTIVE DATE July 2007
	REVISION DATE October 2010 September 2012 November 2016 October 2018

PURPOSE:

1. To facilitate fluid removal without diffusion for patients who have more fluid to be removed than usual in their conventional hemodialysis time.

POLICY:

1. Registered Nurses and Licensed Practical Nurses in Dialysis may initiate ISO UF as per physician orders.
2. The maximum fluid removal rate is 30 mL/kg/hour to a maximum of 3L per hour unless otherwise ordered. If it is higher, decrease the goal or increase the UF time, or both.
3. ISO UF may be performed independently or at any point during the treatment; however, ISO ultrafiltration is typically tolerated better at the start of hemodialysis.
4. Notify physician or delegate as per standing orders - Form # SAP 295044 (W-00109C).

EQUIPMENT:

- Fresenius 5008 Delivery System

PROCEDURE:

KEY POINT:

A. ISO Ultrafiltration at Start of Treatment:

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| <ol style="list-style-type: none"> 1. Calculate total fluid removal for treatment and calculate desired volume for ISO ultrafiltration. 2. Touch UF Menu button. 3. Enter Total UF and total time (HD + ISO UF) | <ul style="list-style-type: none"> ▪ Re-check pre-weight unless specific fluid removal ordered. Keep in mind the maximum fluid removal rate. ▪ The UF profile and Na profile cannot be set prior to programming ISO UF |
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PROCEDURE:

4. Enter desired ISO UF goal and ISO time.
5. Program UF and Na profiles to be used during HD if applicable
6. Initiate treatment.
7. On completion of ISO UF time, the dialysate flow will resume and HD will commence.

KEY POINT:

- The target to remove during the ISO phase
- Machine will automatically commence Isolated Ultrafiltration.
- Display in UF Menu shows ISO data as well as recalculated UF data.
- Machine automatically switches to hemodialysis when the ISO UF time/goal is reached. UF and Na profiles will also automatically start if programmed

The UF Goal and UF time programmed include the TOTAL time and fluid removal

Example:

Routine HD orders for this patient are for 4 hours HD.

Today, he is to receive 30 minutes of ISO UF in which 1000 mL fluid is to be removed.

After ISO UF, the remaining goal is 3000 mL to be removed during the remaining 4 hours of HD.

UF goal ml	UF time h:min	UF volume ml	
4000	4:30	0	
ISO goal ml	ISO time h:min	ISO rate ml/h	ISO volume ml
1000	0:30	2000	0
Remain. goal ml	Remain. time h:min	Remain. rate ml/h	
3000	4:00	750	

B. ISO Ultrafiltration at End of Treatment:

1. If the ISO UF post treatment is planned but not programmed and the patient has an AVF, reset the heparin pump to stop time of 0 minutes. Once ISO UF commences, ensure that the heparin stop time is reset to 30 minutes.
2. When 5008 is finished HD scheduled time, a prompt will appear to reinfuse or to continue treatment. Select CONTINUE.
3. On UF menu screen:
 - a. Reprogram UF time to reflect additional ISO time. Press O.K.
 - b. Reprogram total UF to reflect addition of fluid to be removed during ISO UF. Press OK.
 - c. Set the ISO UF:
Input the ISO GOAL and press OK
Input the ISO TIME and press OK
4. Press the UF Timer Light on.
5. Confirm that the heparin pump has resumed (if necessary) and that the stop time is set correctly for the prescription.

PROCEDURE:

KEY POINT:

C. ISO Ultrafiltration During Treatment

1. If using Na/UF profiling:

- From the treatment screen note the current dialysate Na (found under “Na profile mmol/l”) and the UF rate (found under “UF profile ml/min”).
 - Press UF timer I/O off. A prompt to stop both profiles or continue treatment will appear. Select STOP both profiles.
2. Go to UF menu. Add the ISO Goal and ISO time to the total UF Goal and Time.
3. Set the ISO UF
- a. Input the ISO GOAL and press OK
 - b. Input the ISO TIME and press OK
4. Press the UF Timer light
- Note the Dialysate flow will stop automatically.
5. Once the ISO UF is complete, the 5008 automatically returns to HD treatment
- There is no audible alert
6. Reset the UF Profile and then the Na profile if desired
- Start Na = dialysate Na from step 1
 - Will not be possible to restart Na/UF profiles if inadequate time remaining; profiles will be greyed out if not possible.
7. Press UF Timer Light ON

DOCUMENTATION:

- Hemodialysis Treatment Record
- Hemodialysis Flow Sheet
- Integrated Progress Notes

REFERENCES:

Fresenius Medical Care 5008 Hemodialysis System Operating Instructions: Edition 9/10.10

Robbins, K. C. (2006). Hemodialysis: Prevention and management of treatment complications. In A. Molzahn & E. Butera (Eds.), *Contemporary Nephrology Nursing Principles and Practice*. Pitman, NJ: American Nephrology Nurses' Association.