

Patient-Centered Hemodialysis at Home in 3 Steps

| Step 1: | Step 2: | Step 3: |
|--|--|--|
| <p>FREQUENCY</p> <p>Medical indications for increased time and duration</p> <p>Clinical indications/goals of therapy: Drives Frequency</p> | <p>TREATMENT TIME</p> <p>Balancing ultrafiltration and volume status</p> <p>Fluid/salt water control: Time on therapy and ultrafiltration</p> <p>Current literature shows that UF rates under 8ml/kg/hr offers better outcomes</p> | <p>DIALYSATE VOLUME</p> <p>Small solute clearance and saturation</p> <p>Small molecule clearance: Volume of dialysate saturation</p> |

To learn more about how to determine treatment frequency and duration, watch our simplified dosing webinar <https://www.nxstage.com/hcp/training-resources/webinars>

DIALYSATE VOLUME FOR MEN: DIURNAL TREATMENTS

| Weight (kg) | 6 days/ week | 5 days/ week | 4 days/ week | 3.5 days/ week |
|-------------|--------------|--------------|--------------|----------------|
| <60 kg | 20 | 20 | 25 | 30 |
| 80 kg | 20 | 25 | 40 | 40 |
| 100 kg | 25 | 30 | 50 | 60 |
| 120 kg | 30 | 40 | 60 | |
| 140 kg | 40 | 50 | 60 | |

Allows for UF of <1.5 L/day
 Minimum of 20L of dialysate per treatment. Minimum of 12 hours of treatment per week. 15 hours of treatment per week is typical.

DIALYSATE VOLUME FOR WOMEN: DIURNAL TREATMENTS

| Weight (kg) | 6 days/ week | 5 days/ week | 4 days/ week | 3.5 days/ week |
|-------------|--------------|--------------|--------------|----------------|
| <60 kg | 20 | 20 | 20 | 25 |
| 80 kg | 20 | 20 | 25 | 40 |
| 100 kg | 20 | 25 | 40 | 50 |
| 120 kg | 25 | 30 | 50 | 60 |
| 140 kg | 30 | 40 | 50 | 60 |

Allows for UF of <1.5 L/day
 Minimum of 20L of dialysate per treatment. Minimum of 12 hours of treatment per week. 15 hours of treatment per week is typical.

DIALYSATE VOLUME FOR MEN: NOCTURNAL TREATMENTS

| Weight (kg) | 6 days/ week | 5 days/ week | 4 days/ week | 3.5 days/ week |
|-------------|--------------|--------------|--------------|----------------|
| <60 kg | 30 | 30 | 30 | 30 |
| 80 kg | 30 | 30 | 40 | 40 |
| 100 kg | 30 | 30 | 40 | 50 |
| 120 kg | 30 | 40 | 50 | 60 |
| 140 kg | 40 | 50 | 60 | |

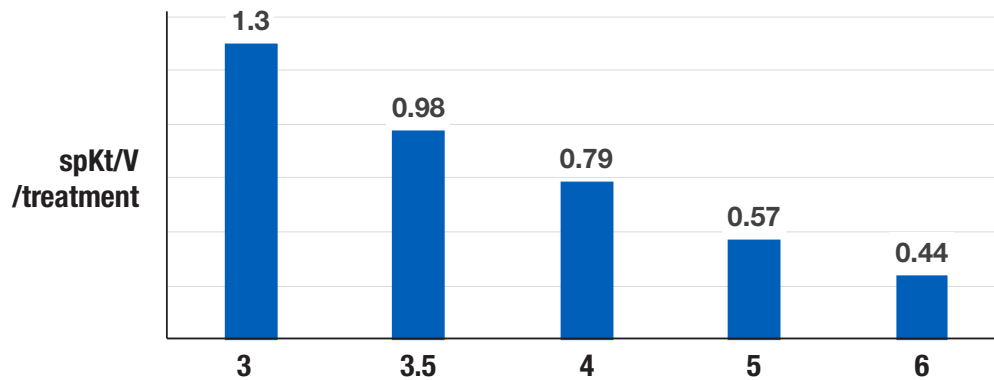
Allows for UF of <1.5 L/day
 Minimum of 30L of dialysate per treatment. Minimum of 20 hours of treatment per week.
 30 - 35 hours of treatment per week is typical.

DIALYSATE VOLUME FOR WOMEN: NOCTURNAL TREATMENTS

| Weight (kg) | 6 days/ week | 5 days/ week | 4 days/ week | 3.5 days/ week |
|-------------|--------------|--------------|--------------|----------------|
| <60 kg | 30 | 30 | 30 | 30 |
| 80 kg | 30 | 30 | 30 | 40 |
| 100 kg | 30 | 30 | 40 | 40 |
| 120 kg | 30 | 30 | 50 | 50 |
| 140 kg | 30 | 40 | 50 | 60 |

Allows for UF of <1.5 L/day
 Minimum of 30L of dialysate per treatment. Minimum of 20 hours of treatment per week.
 25 - 30 hours of treatment per week typical.

Methodology – Volume Cleared (spKt/V) by Treatment Frequency: Example for a StdKt/V of 2.1



Gotch FA. Modeling the Dose of Home Dialysis. Home Hemodial Int, Vol. 3, 37-40, 1999.

Calculations and Assumptions

- $Kt_{est} = \text{dialysate volume (Vd)} \times 0.9$ (When Qd/Qb 30 – 40%)
- $Kt_{est} = \text{dialysate volume (Vd)} \times 0.95$ (When Qd/Qb is <25)

Estimate Total Body Water

- $V = 0.9 \times wt^1$
- or -
- $V = 0.42 \times wt$ (women)²
- $V = 0.50 \times wt$ (men)²

Dialysate Volume

- $(0.9 \times Vd) / 0.42 \text{ wt} = \text{spKt/V}$ (women)
- $(0.9 \times Vd) / 0.50 \text{ wt} = \text{spKt/V}$ (men)

Calculate

- Solve for Vd with known spKt/V based on frequency
- $Vd = \text{dialysate} + \text{UF volume}$

¹Daugaridas et al; Anthropometrically estimated total body water volumes are larger than modeled urea volume in chronic hemodialysis patients: Effects of age, race and gender. KI 64(2003), 1108 – 1119.

²Daugaridas et al; Standard Kt/V urea: a method of calculation that includes effects of fluid removal and residual renal clearance. KI77(2010), 637 – 644.



The reported benefits of home hemodialysis (HHD) may not be experienced by all patients. The NxStage System is a prescription device. All forms of hemodialysis involve some risks. When vascular access is exposed to more frequent use, infection of the site, and other access related complications may also be potential risks. Certain risks associated with hemodialysis treatment are increased when performing nocturnal therapy due to the length of treatment time and because the patient and care partner are sleeping.