

# APPLIED CLINICAL PRACTICE

# INCREASED HEMODIALYSIS

# TIME AND FREQUENCY

Guidelines from 5 Medical Societies in North America, Europe, and Asia

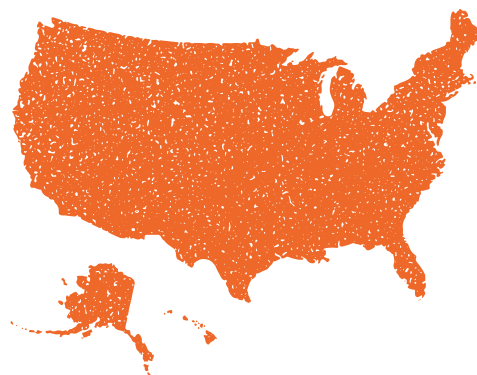
## SUMMARY

Proliferation of research about intensive hemodialysis has led to better understanding of when to increase hemodialysis time and frequency. Since 2006, at least 5 medical societies from around the world have released clinical practice guidelines about increased hemodialysis frequency and time. These guidelines are largely in agreement about appropriate indications.

## NKF-KDOQI NATIONAL KIDNEY FOUNDATION KIDNEY DISEASE OUTCOMES QUALITY INITIATIVE – 2015

Consider additional hemodialysis sessions or longer hemodialysis treatment times for patients with:

- large weight gains
- high ultrafiltration rates
- poorly controlled blood pressure
- difficulty achieving dry weight
- or poor metabolic control (such as hyperphosphatemia, metabolic acidosis, and/or hyperkalemia) (Not Graded)



National Kidney Foundation. KDOQI Clinical Practice Guideline for Hemodialysis Adequacy: 2015 Update. Am J Kidney Dis. 2015;66(5):884-930.

## JSDT JAPANESE SOCIETY FOR DIALYSIS THERAPY – 2015

The dialysis time or frequency should be increased in the following patient situations:

- Patients with symptoms that cannot be controlled by conventional HD:
  - cardiac failure or hemodynamic instability during dialysis
  - hypertension despite fluid removal, the administration of antihypertensive agents, and the restriction of salt intakes
  - hyperphosphatemia despite dietary controls and phosphate control
- Patients who are stable under conventional HD and are expected to benefit more from dialysis with increased dialysis times and/or frequencies.

Watanabe Y, et al. Japanese Society for Dialysis Therapy Clinical Guideline for "Maintenance Hemodialysis: Hemodialysis Prescriptions". Ther Apher Dial. 2015;19(Suppl 1):67-92.



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## UK RA UNITED KINGDOM RENAL ASSOCIATION – 2011

We suggest that an increase in treatment and/or frequency of HD should be considered in patients with:

- refractory fluid overload
- uncontrolled hypertension
- hyperphosphataemia
- malnutrition
- cardiovascular disease (2C)

Mactier R, et al. Renal Association Clinical Practice Guideline on Haemodialysis. *Nephron Clin Pract.* 2011;118(Suppl 1):c241-286.

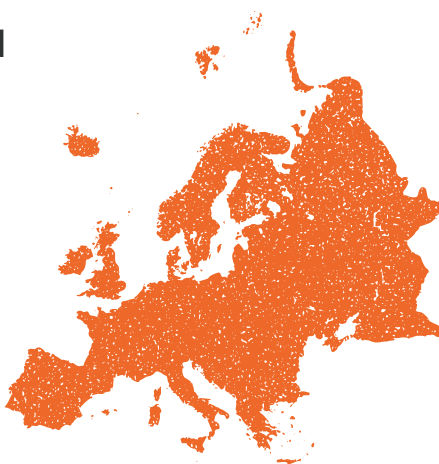


## EBPG EUROPEAN BEST PRACTICE GUIDELINES – 2007

An increase in treatment time and/or frequency should be considered in:

- patients with haemodynamic or cardiovascular instability (Evidence level II)
- patients who remain hypertensive despite maximum possible fluid removal (Evidence level III)
- patients with impaired phosphate control (Evidence level III)
- malnourished patients (Opinion)

Tattersall J, et al. EBPG Guideline on Dialysis Strategies. *Nephrol Dial Transplant.* 2007;22(Suppl 2):ii5-21.



## CSN CANADIAN SOCIETY OF NEPHROLOGY – 2006

- In patients with poorly controlled BP, consider the use of frequent hemodialysis (Grade D) or sustained hemodialysis (Grade C)
- In patients with significant left ventricular hypertrophy or impaired left ventricular systolic function, consider the use of frequent hemodialysis as adjunctive therapy (Grade D)
- In patients who exhibit hemodynamic instability with conventional hemodialysis, the use of frequent hemodialysis should be considered (Grade D, opinion)
- In patients with refractory hyperphosphatemia and/or secondary hyperparathyroidism, consider the use of NHD as adjunctive therapy (Grade D, opinion)
- In patients with refractory peripheral vascular disease and ectopic calcification, consider the use of NHD as salvage therapy (Grade D, opinion)
- In patients who exhibit chronic malnutrition, consider the use of frequent hemodialysis as salvage therapy (Grade D, opinion)



Jindal K, et al. Hemodialysis Clinical Practice Guidelines for the Canadian Society of Nephrology. *J Am Soc Nephrol.* 2006;17(3 Suppl 1):S1-27.

# INCREASED HEMODIALYSIS TIME AND FREQUENCY APPLIED CLINICAL PRACTICE

For supporting details, methodology, and references—as well as the other topics concerning more frequent hemodialysis—[visit AdvancingDialysis.org](https://AdvancingDialysis.org).

AdvancingDialysis.org is dedicated to providing clinicians and patients with better access to and more awareness of the reported clinical benefits and improved quality of life made possible with home dialysis, including more frequent, more intensive, and nocturnal therapy schedules.

AdvancingDialysis.org is a project of NxStage Medical, Inc.