Morfin JA, Fluck RJ, Weinhandl ED, Kansal S, McCullough PA, Komenda P. Intensive Hemodialysis and Treatment Complications and Tolerability. *American Journal of Kidney Diseases, Volume 68, Issue 5, S43 - S50.*

Intensive hemodialysis reduced post-treatment fatigue and recovery time

Hemodialysis can be difficult to tolerate. Common complications are intradialytic hypotension and long recovery time after treatment.[1] Intradialytic hypotension may be caused by aggressive ultrafiltration in response to interdialytic weight gain, related to myocardial stunning and cardiac arrhythmias, and is associated with increased risk of death.[2] Long recovery times may impair physical and mental function and decrease qualify of life.[3] Patients and caregivers rank fatigue more highly than any other problem, including life expectancy.[4]

Topics discussed in this summary include:

- Intradialytic hypotension
- Post-treatment recovery time

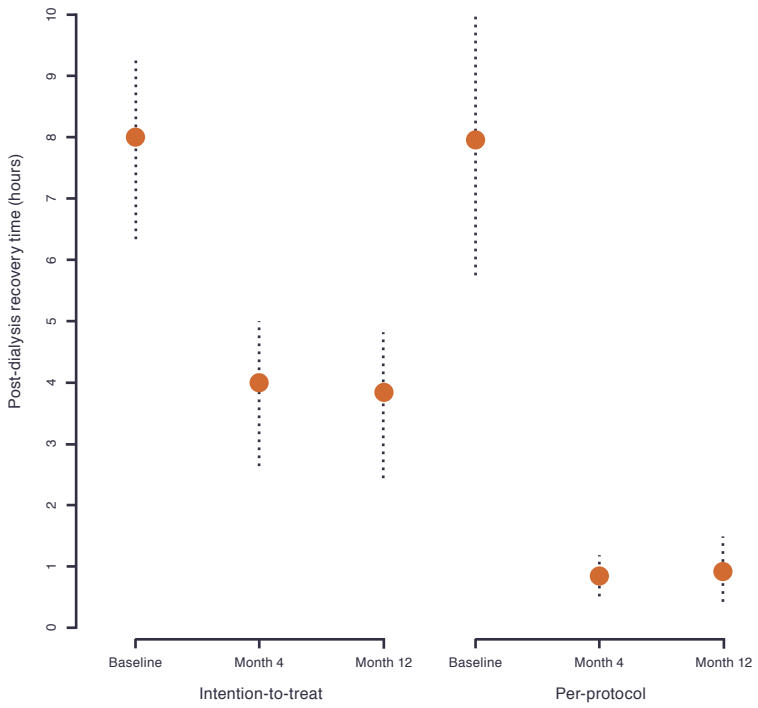
Studies show that intensive hemodialysis likely reduces intradialytic hypotension and recovery time.

Due to lower ultrafiltration volume and/or ultrafiltration rate, intensive hemodialysis may reduce intradialytic blood pressure variability.

- In the Frequent Hemodialysis Network trials, short daily and nocturnal schedules reduced per-session probabilities of symptomatic intradialytic hypotension by 20% and 68%, respectively, relative to three sessions per week.[5,6]
- In the Following Rehabilitation, Economics, and Everyday-Dialysis Outcome Measurements (FREEDOM), a prospective cohort study of short daily hemodialysis, mean post-dialysis recovery time was reduced after 12 months from eight hours to one hour.[7]
- Recovery time after nocturnal hemodialysis may be minutes in duration.[8]

CHAPTER 5, FIGURE 4:[9]

Mean post-dialysis recovery time in intention-to-treat and per-protocol cohorts of the FREEDOM Study.[7] Dashed bars span one standard deviation above and below the mean.



Conclusion

Accumulated evidence shows that intensive hemodialysis may improve the tolerability of hemodialysis treatment by reducing the risk of intradialytic hypotension and dramatically lowering recovery time after each session. Therefore, intensive hemodialysis may address some of the issues cited by patients as important outcomes and may improve the patient centeredness of dialysis delivery.

All forms of hemodialysis, including treatments performed in-center and at home, involve some risks. In addition, there are certain risks unique to treatment in the home environment. Patients differ and not everyone will experience the reported benefits of more frequent hemodialysis.

Certain risks associated with hemodialysis treatment are increased when performing nocturnal therapy due to the length of treatment time and because therapy is performed while the patient and care partner are sleeping.

About this review

This summary is from a six-part series on intensive hemodialysis, covering the impact of intensive hemodialysis on cardiovascular disease, hypertension, mineral and bone disease, health-related quality of life, treatment tolerability, and potential risks. It was originally published as a supplement in the November 2016 issue of the *American Journal of Kidney Disease*.

For details, methodology, and full references for this summary—as well as the other topics in the series—visit **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.

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