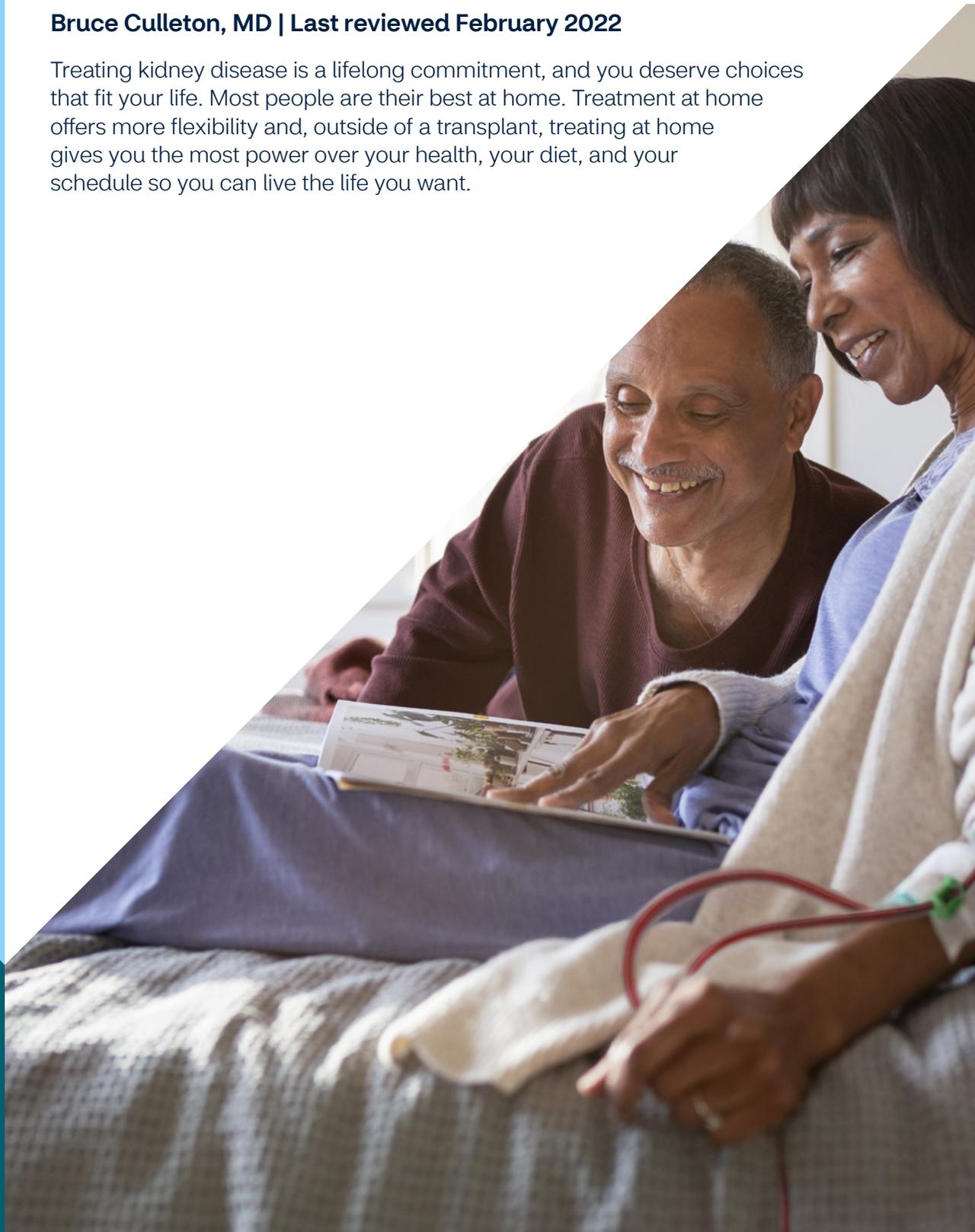


Your care, your way, at home: home hemodialysis

Bruce Culleton, MD | Last reviewed February 2022

Treating kidney disease is a lifelong commitment, and you deserve choices that fit your life. Most people are their best at home. Treatment at home offers more flexibility and, outside of a transplant, treating at home gives you the most power over your health, your diet, and your schedule so you can live the life you want.



When kidneys can no longer work well on their own, you can replace what they do with a therapy called dialysis. One type of dialysis is called hemodialysis (HD), which can either be done at home or in a center.

We'll help you understand HD at home and what happens during and after a treatment session so you can choose the approach that best suits your life and goals.

What is home hemodialysis?

Home HD lets you treat your kidney disease at home. Home HD is done more often than in-center dialysis, so it cleans your blood more often. This is important because how often and the length of each session matters.

Treating more often for longer each time can make you feel better. More frequent home HD also has better life span than in-center dialysis.^{1,2,3} You can even treat while you sleep if that works best for your schedule.

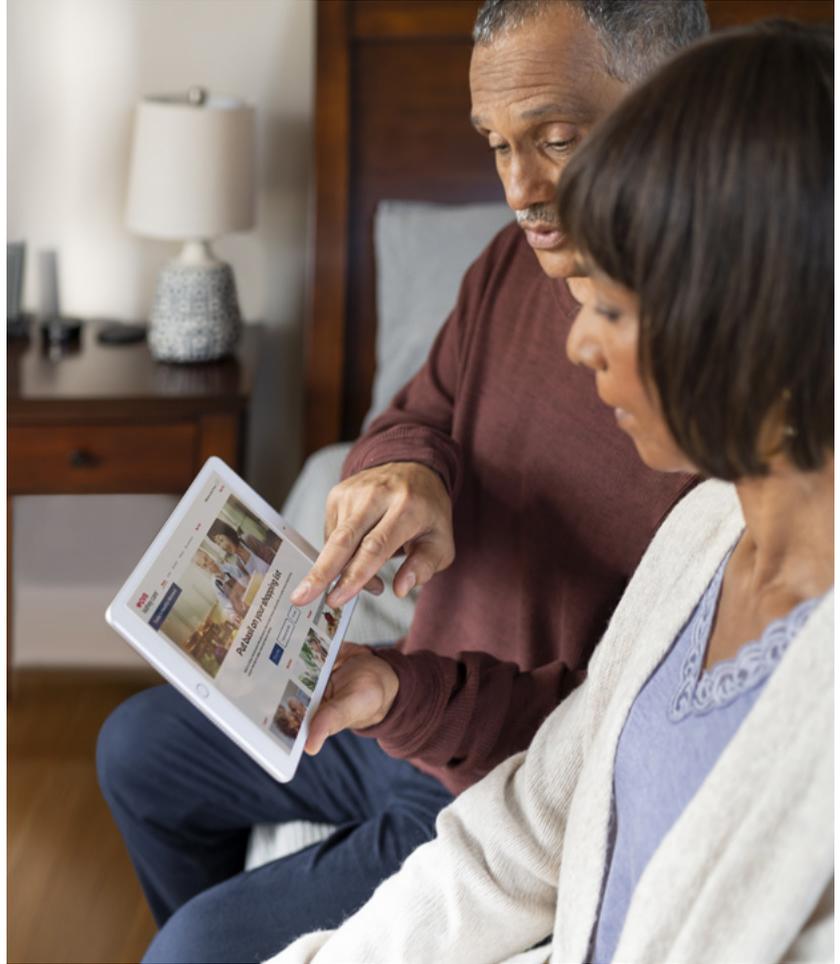
Many people also can stop some medications when they do more frequent dialysis. Some people even sleep better and have more energy to do everyday activities.⁴

How hemodialysis works

HD uses a machine to clean your blood. The machine has a special filter called a dialyzer. During dialysis, the blood flows out of your body, through the filter, and is then returned. The filter is very fine. Blood cells and proteins that the body needs are too big to go through the filter, so they are returned to your body. But waste and extra water are small enough to pass through the filter, so they are removed from your body.

Before hemodialysis

You should start planning for dialysis as early as you can. Your doctor may refer you to a surgeon at least six months before you start HD.



You'll need a way for your blood to move between your body and the filter with HD, called a vascular access. This creates a connection between your blood vessels and the tubes leading to the filter. It's usually placed in your arm with minor surgery, or it can less often be placed in your leg.

Types of vascular access

There are three different types of vascular access, and your surgeon can help you choose the best one for you. They are:

- **Fistula:** This is usually the preferred first choice, because it lasts the longest and has fewer problems, such as infections or blood clots.⁵ The surgeon makes a fistula by joining an artery to a vein under your skin to make a bigger blood vessel. It takes one to four months to heal before it can be used.



Get more frequent treatments to cut down on headaches, nausea, muscle cramping and feeling tired after a treatment.

- **Graft:** Grafts tend to have more problems than fistulas,⁵ but your surgeon may perform a graft if a fistula isn't right for you. A graft is made by using a piece of soft tube to join an artery and vein in your arm. It usually needs to be in place for two weeks before you can use it.
- **Catheter:** A catheter is usually saved for temporary use, such as if you need to start dialysis before your fistula is ready. It tends to have more problems and infections than fistulas or grafts,⁵ but it can be a long-term option if you can't have a fistula or a graft. It's made by inserting a soft tube into a large vein in the neck or chest.

Home HD schedules

Home HD provides the comfort of being in your own place and a flexible schedule. Rather than a dialysis center making your appointments, you choose when you want to have your sessions. There are a few different schedules for home dialysis:

Conventional dialysis

- Three times a week.
- Each session lasts about three to five hours.

This schedule is like the one used in a dialysis center. Dialysis treatment itself doesn't hurt, but if your blood pressure gets too low, you may have some muscle cramping and feel nauseous.

Short daily dialysis

- Five to seven times a week.
- Each session lasts two to four hours while you're awake.

Some people like this schedule because doing dialysis more often means that less fluid needs to be removed each time. This can cut down on headaches, nausea, muscle cramping and feeling tired after a treatment.

Nightly dialysis

- Four to seven nights a week.
- Each session lasts eight hours, while you're sleep.

These dialysis treatments are done overnight while you are asleep. Depending on what your doctor prescribes, you may do this every night or every other night. More hours of dialysis each week can mean that more waste is removed from the blood, so many people find that this schedule boosts their overall energy level.⁴

Home hemodialysis

Home HD is a good fit for many people with chronic kidney disease (CKD), but there are certain requirements. For example:

- You must have a clean space in your house for your home dialysis machine, equipment and supplies (you need about 15 square feet in total). Your dialysis room should be a pet-free zone, but it's okay to have pets elsewhere in your house.
- You must have a reliable dialysis partner (such as a spouse, partner or close friend) who can help you with each of your treatments.
- You and your partner will need to complete a program that helps you learn about the dialysis machine, supplies, how to do home dialysis treatments and how to record the treatments in a log. The program is held in a dialysis center with a dialysis nurse. Most people learn how to do home dialysis correctly and comfortably in a number of weeks.⁶

Although it takes some getting used to, many people find that doing dialysis at home gives them the flexibility and energy level to live their best lives.⁶ You can use our pros and cons list as you think about it. Talk to your doctor about whether home hemodialysis is the right choice for you.



At-home treatments allow you to have more hours of dialysis, which can boost your overall energy levels.⁴

Pros

- You do your treatments in the comfort of your own home.
- There's no need to travel to and from a dialysis center.
- You set the schedule and choose when to do dialysis.
- You're in charge of your own day-to-day care and have a greater control.
- There may be fewer rules around eating and drinking, as compared to in-center dialysis.
- You may have more energy, enjoy a better quality of life and, potentially, live longer.^{1,2,3}

Cons

- You need a clean, dedicated space in your home for the machine and supplies and access to running water (if needed).
- You must have a dialysis care partner who can stay with you during each treatment.
- Both you and your partner must invest time in training.
- You don't have the in-person support of other people who are also doing dialysis treatments.

It's always your choice which treatment you decide. Consider your health and lifestyle, and your home, work or education, and family. We're here to answer any questions on treatment options so you can choose what best meets your needs and priorities.

¹Nesrallah GE, Lindsay RM, Cuerden MS, et al. Journal of the American Society. April 2012;23(4):696-705

²Jaber BL, Lee Y, Collins AJ, et al. Effect of daily hemodialysis on depressive symptoms and post dialysis recovery time: interim report from the FREEDOM (Following Rehabilitation, Economics and Everyday-Dialysis Outcome Measurements) Study. Am J Kidney Dis. 2010;56(3):531-539

³Culleton BF, Walsh M, Klarenbach SW, et al. Effect off frequent nocturnal hemodialysis vs conventional hemodialysis on left ventricular mass and quality of life: a randomized controlled trial. JAMA. 2007;298(11):1291-1299.

⁴The National Kidney Foundation. Hemodialysis: What You Need To Know. 2013. Available at: [Kidney.org/sites/default/files/11-50-0214_hemodialysis.pdf](https://www.kidney.org/sites/default/files/11-50-0214_hemodialysis.pdf). Accessed February 28, 2022.

⁵Life Options and Medical Education Institute, Inc. Vascular Access for Hemodialysis. February 28, 2022. Available at: [Lifeoptions.org/living-with-kidney-failure/vascular-access/](https://www.lifeoptions.org/living-with-kidney-failure/vascular-access/). Accessed February 28, 2022.

⁶The National Kidney Foundation. Home Hemodialysis. April 16, 2020. Available at: [Kidney.org/atoz/content/homehemo](https://www.kidney.org/atoz/content/homehemo). Accessed February 28, 2022.

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