

UNDERSTANDING DIALYSIS

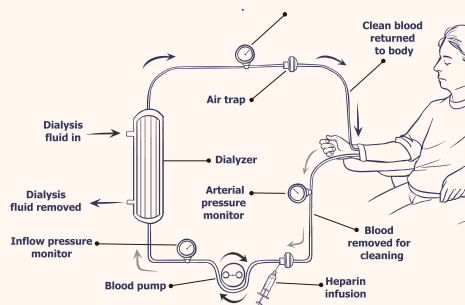
A Guide for Healthcare Professionals

Healthmap Solutions (Healthmap) is here to help you manage your patients with chronic kidney disease (CKD) and end-stage renal disease (ESRD). We focus on optimizing renal replacement therapy for ESRD patients, with an emphasis on transplant and in-home dialysis options when appropriate.

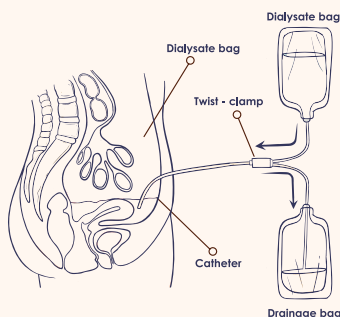
For patients who require dialysis, there are several types of treatments and dialysis access options to consider. Regardless of the treatment modality a patient chooses, the Healthmap team will ensure a successful transition by collaborating with the patient, their providers, and their care partners.

What is DIALYSIS?

Dialysis is a treatment that removes excess waste and fluid from the body when the kidneys are no longer able to effectively do so. When the kidneys have failed, a person is not able to live without dialysis. There are two types of dialysis: hemodialysis and peritoneal dialysis.



HEMODIALYSIS is a procedure that cleanses the blood by using a special filter on a dialysis machine called a dialyzer. In hemodialysis, blood is pumped out of the body, filtered, and returned by tubes that connect the patient to the machine. In order to undergo hemodialysis treatments, patients must have an access site such as a fistula, graft, or catheter.



PERITONEAL DIALYSIS is a treatment that uses the inside lining of the peritoneum as a natural filter. A soft plastic tube (catheter) is surgically placed in the peritoneum. A sterile cleansing fluid is put into the peritoneum through the catheter. After the filtering process in the abdomen is finished, the fluid leaves the body through the catheter.

IN-HOME Dialysis vs. IN-CENTER Dialysis Options

Both hemodialysis and peritoneal dialysis can be done in a patient's home. Hemodialysis can also be done in a center. Healthmap supports in-home dialysis options for patients whenever appropriate and encourages each patient to talk to their provider to discuss which dialysis option is right for them. Regardless of the dialysis type chosen, a

nephrologist, Registered Dietitian, and social worker are a part of the patient's care team. In addition, patients enrolled in Healthmap's Kidney Health Management (KHM) program will have additional access to nurses, Registered Dietitians, and social workers on our Care Navigation team.

In-home HEMODIALYSIS

There are three types of home hemodialysis: conventional, short daily, and nocturnal. All three are done by the patient and/or their care partner at home.

All treatment options require in-depth training for the patient and their care partner that usually lasts several weeks but no longer than one month.

CONVENTIONAL HOME HEMODIALYSIS is done three times per week for three to four hours or longer each time.

NOCTURNAL HOME HEMODIALYSIS treatments are done while the patient sleeps. These are slow and long sessions. This can be done six nights a week or every other night depending on the provider's recommendation.

SHORT DAILY HOME HEMODIALYSIS is typically done five to seven times per week. The machine used for this therapy is designed to shorten the length of time required to dialyze, which promotes flexibility for the patient. Less fluid is expected to be removed each time due to the treatment being done more frequently. This can reduce symptoms such as nausea, headaches, cramping, and fatigue after treatments.

In-center HEMODIALYSIS

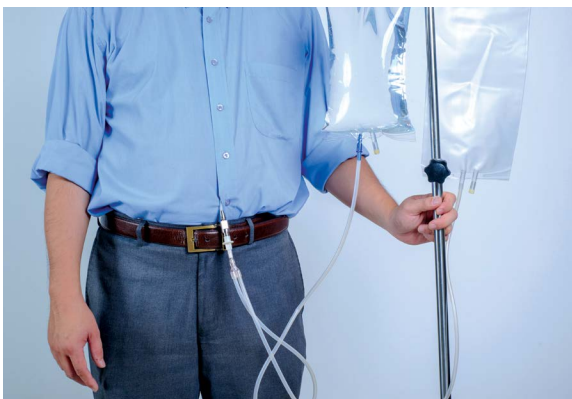
In-center hemodialysis is performed three times per week in a dialysis center. Patients should expect treatments to last around four hours per visit. The amount of treatment needed is based on the nephrologist's order and is individualized for each patient. Appropriate access (either a fistula, graft, or catheter) is required for all hemodialysis treatment.

In-center hemodialysis requires a set schedule with a local dialysis center based on the center's availability. The dialysis treatment will be performed by nurses and technicians.



PERITONEAL DIALYSIS

There are two types of peritoneal dialysis: continuous ambulatory peritoneal dialysis (CAPD) and automated peritoneal dialysis (APD). These treatments are similar, but the frequency of treatments and the way they are performed differ.



CAPD is a continuous, machine-free option that can be done while performing regular daily activities. The cleansing fluid is pulled into the abdomen by gravity, removes the waste from the blood, and is then drained and thrown away. Depending on the individual, this can be done three, four, or five times in a 24-hour period.

APD is typically performed at night; it uses a machine that delivers the cleansing fluid and then drains the cleansing fluid for the patient while they sleep. During the day, a person is generally not performing dialysis and is free to go about their usual activities such as work or school.

Types of **DIALYSIS ACCESS**

There are four types of access options depending on the type of dialysis treatment:

Arteriovenous fistula (AVF)

Arteriovenous graft (AVG)

Central venous catheter (CVC)

Peritoneal dialysis (PD) catheter

AVF, AVG, and CVC access are used for hemodialysis treatments, while PD catheter access is used for peritoneal dialysis.

ARTERIOVENOUS FISTULA (AVF)

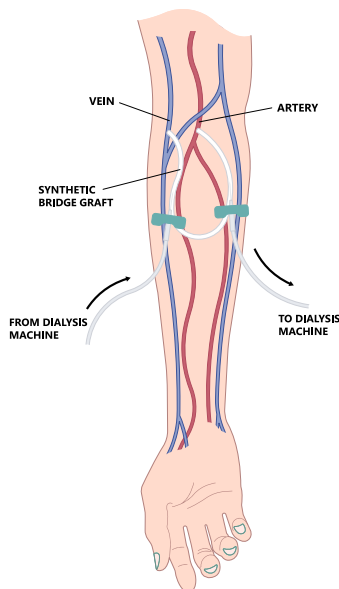
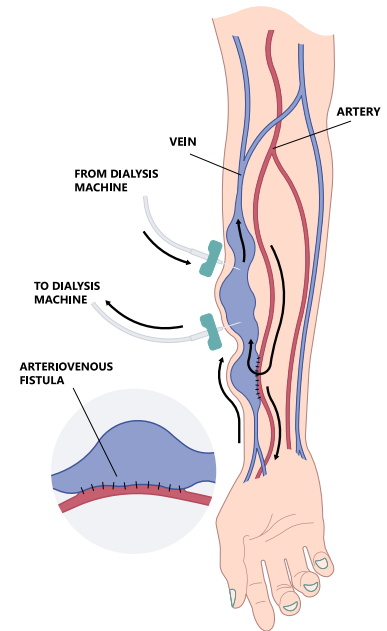
This type of access is used for hemodialysis treatments, including in-center and in-home hemodialysis. A fistula is an access where an artery is connected to a vein, usually in the lower or upper arm.

ADVANTAGES

- Best choice for access
- A patient's own artery and vein are used to create it without adding artificial material
- Lasts longer than other vascular access sites
- Lowest risk of infection and blood clots occurring

DISADVANTAGES

- Not an option for all patients
- May not mature or develop appropriately
- Typically cannot be used for six to eight weeks after placement



ARTERIOVENOUS GRAFT (AVG)

As with AVF access, AVG access is also used for both in-center and in-home hemodialysis. A graft is an access where an artificial material is placed to connect an artery to a vein.

ADVANTAGES

- An AVG can be used sooner after placement than an AVF
- Good option for patients whose vasculature cannot support a fistula

DISADVANTAGES

- Higher risk of infection and clotting than an AVF
- Usually does not last as long as an AVF

CENTRAL VENOUS CATHETER (CVC)

A central venous catheter is used for hemodialysis and is placed into a large vein with the tip of the catheter situated at the junction of the superior vena cava and the right atrium of the heart.

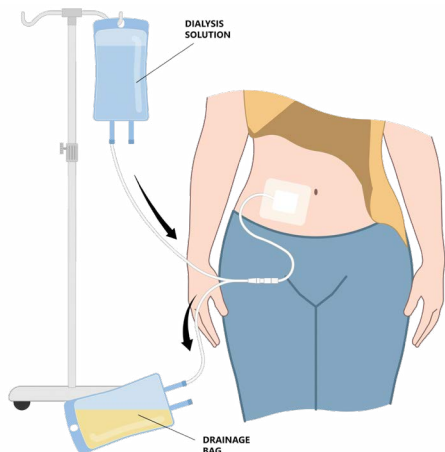
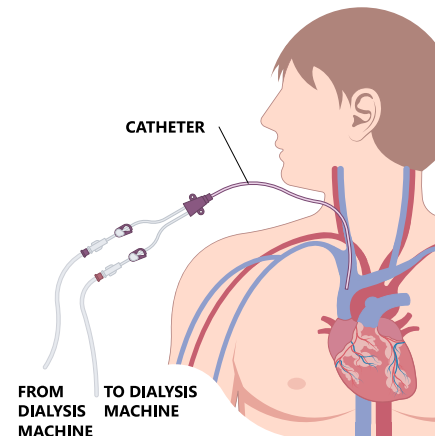
CVC access is usually utilized for short-term use. It can be used for longer periods if there is not an arterial venous option, or if the patient has a limited life expectancy or special medical circumstances.

ADVANTAGES

- Can be used for dialysis immediately after placement

DISADVANTAGES

- Higher risk of hospitalizations
- Higher risk of infection and clotting
- Higher risk of mortality compared to an AVF or AVG
- May require longer dialysis treatments



PERITONEAL DIALYSIS (PD) CATHETER

PD catheter access is used for peritoneal dialysis treatments and is placed through the abdomen into the peritoneal cavity. The optimal timeframe for healing is two weeks before it can be used for dialysis, unless ordered by a physician to be used sooner. Patients who have a PD catheter in place cannot use hot tubs or swim in public pools.

Which DIALYSIS OPTION IS BEST?

Ultimately, it is up to each patient and their care team to determine which dialysis option is most appropriate. The Healthmap team helps patients prepare for planned dialysis starts and uses a shared decision-making approach to educate them about their options as they approach ESRD. Our Care Navigation team is also available to help coordinate care for patients who struggle to adhere to their treatment plan. By fostering a collaborative partnership between patients, providers, and the Healthmap team, we aim to optimize renal replacement therapy and improve the lives and outcomes of ESRD patients.

The road to better kidney health management starts with Healthmap Solutions. Contact Healthmap to learn more.
www.healthmapsolutions.com | 1 (800) 481-0474