

TYPES OF VASCULAR ACCESS

HEMODIALYSIS

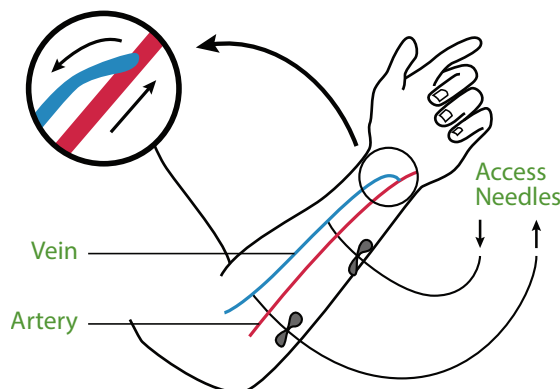
In order to have hemodialysis you need a vascular access. A vascular access provides a way to access your blood and connect you to a hemodialysis machine so that your blood can be cleaned.

It is very important to have an access that works well and has enough blood flow so that your blood can be cleaned properly. There are different types of vascular accesses.

AV Fistula

An arteriovenous fistula (AVF) is created when an artery is surgically connected to a vein in the lower or upper arm or leg. Pressure from the arterial blood flow causes the vein to get bigger which increases the blood flow in the vein. AV fistula is the preferred type of access because it usually lasts longer and has fewer complications than the other types of accesses. It can take two months or longer for an AVF to be ready to use for dialysis. Two needles are inserted into the AVF every treatment.

FIGURE 1: AV Fistula

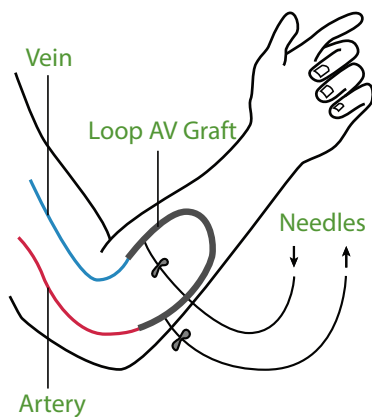


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AV Graft

An Arteriovenous Graft (AVG) is used if your veins are too small for an AVF. An artery in your lower or upper arm or leg is surgically connected to a vein using a synthetic tube. The tube is then tunnelled under the skin. An AVG can be used a few days or weeks after surgery depending on the type of graft material used and once the swelling has reduced. This is the second choice for an access because it can be more prone to infection and blocking than an AVF. Two needles are placed in the graft during each hemodialysis treatment.

FIGURE 2: AV Graft



Catheter

A Central Venous Catheter (CVC) is a tube usually inserted into a large vein in your neck. The tip of the catheter rests in the right atrium (an upper chamber in the heart). The tube consists of two channels - one port allows blood to be pumped out of the body and the other returns the blood back after it has been cleaned. The exit site is the place on the skin where the tube comes out of the body to allow access to the ports. The exit site is usually on your chest.

This access can be used immediately but is not preferred as it offers a much higher risk of infection and clotting than an AVF or AVG. It can also cause narrowing and blockage in the veins leading to your heart which can lead to further health issues. It is important to keep the catheter exit site dry and to report any symptoms of infection like chills or fever to your healthcare team.

FIGURE 3: Catheter

