# AV fistula: how do I take care of it?

azdelta

Uw ziekenhuis.

Dear patient,

Due to your greatly reduced kidney function, it is necessary for you to begin renal replacement therapy in the near future, if it has not already begun.
A good access route to the bloodstream is required for dialysis. Your doctor may have an arteriovenous fistula created or a dialysis catheter put in place for this purpose. Arteriovenous fistulae, or AV fistulae, are discussed further in this leaflet.
If you need additional information, please do not hesitate to contact the Hemodialysis Clinic. You will find the contact details on the back of this leaflet.

The Department of Nephrology

# 1. Description

An arteriovenous fistula is a subcutaneous connection between an artery and a vein. This connection creates a stronger blood flow through the vein, giving it a larger diameter and thicker wall, thus facilitating the good bi-directional transfer of blood needed for effective dialysis.

There are two types of AV fistulae:

- A fistula is made with the patient's own blood vessels.

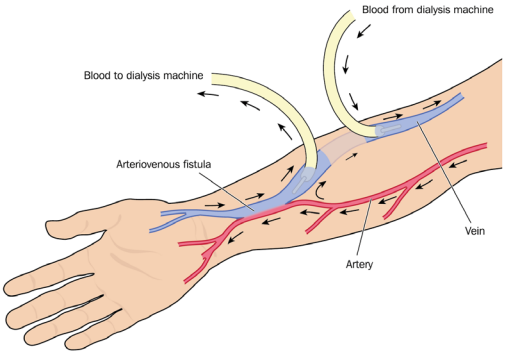


*Image of an AV fistula*

- A Gore-Tex prosthesis or graft is made of plastic. It offers an alternative if the patient's own blood vessels are not suitable for fistula creation.

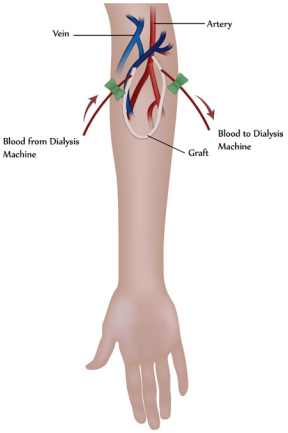


*Image of an AV graft*

# 2. Fistula placement

AV fistulae are created in patients who will receive long-term dialysis. Unless the fistula has been created long enough in advance, the first treatments are performed through a dialysis catheter while waiting for the fistula to be created and allowed to develop.

A fistula is created during a surgical procedure in the operating theatre, usually under general anaesthesia. To limit discomfort from the fistula after healing, the preference is to locate it at the wrist or elbow of the non-dominant arm (the left arm for right-handed people and the right for left-handed people). The procedure takes about an hour, but you will need to stay in the hospital until the next day.

The arm is often somewhat swollen and tender in the first few days after the operation, and blue discolouration (bleeding under the skin) can occur, which usually resolves spontaneously over one to four weeks.

After six weeks, the fistula is usually sufficiently developed and can have needles inserted for dialysis.

# 3. Fistula care

As a patient, you should spare the fistula arm as much as possible from now on and carefully follow a number of precautions.

**What is allowed and not allowed:**

**NEVER** allow your blood pressure to be taken on the fistula arm.
**NEVER** allow an AV fistula to be used for blood sampling, except at the dialysis clinic itself.
**NEVER** wear tight clothing over an AV fistula. Be careful with watches and compression straps!
**NEVER** scratch at the needle puncture sites.
**NEVER** touch the puncture sites just before insertion or just after removal of the dialysis needles.
**NEVER** keep a tissue or handkerchief under the sleeve of a fistula arm (risk of infection).

**ALWAYS** remove the plasters on the puncture sites from the previous dialysis session, no later than the following day, and always wash the fistula arm before dialysis treatment.
**ALWAYS** wear suitable clothing during dialysis (short sleeves or wide sleeves that can easily be rolled up without putting pressure on the fistula).
**ALWAYS** keep puncture sites clean and cover them during work that could get dirty (e.g. garden work).
**ALWAYS** call the dialysis clinic in case of pain, swelling, redness, pus or fever (over 37.5°C).
**ALWAYS** notify the dialysis clinic if your AV fistula stops vibrating or murmuring.
**ALWAYS** apply pressure on the puncture sites with a sterile compress for 10 minutes in case of bleeding from a fistula puncture site (after dialysis). Then apply a dressing or plaster.

# 4. Daily fistula check

The flow of the fistula must be checked daily. This is important so that medical staff can intervene in time if problems arise. Here are some guidelines for the check.

### Listening to the fistula

Hold the fistula to your ear and listen to its murmur. Doing this regularly allows you to learn the normal fistula sound and also recognise any changes. Possible changes are: a softer sound, a higher-pitched sound or no sound.

### Feeling the fistula

Place your fingers on your fistula and feel the vibrations. Take note of altered or no perceptible vibration or an increased feeling of warmth in the area of the fistula compared to other times.

### Viewing the fistula

The following changes may indicate a problem: skin discolouration; fingers becoming numb, cold and/or blue; skin showing wounds or irregularities.

**If you notice one or more of these changes, it is very important to contact the dialysis clinic immediately. Timely intervention can prevent complications, and the fistula can often be preserved**.

# 5. Showering and bathing

After the construction of an AV fistula, taking a shower or having a bath is allowed from the time that the operation wound is fully healed. If you wish to shower or bathe immediately after a dialysis session, ask the nurse to stick a watertight plaster over the wound.

# 6. Complications

After each dialysis session, the place where the fistula was punctured remains susceptible to possible bleeding for some time. It is therefore important that you apply pressure on the puncture sites with a sterile compress for about 15 to 20 minutes after the needles are removed. If bleeding occurs after leaving the hospital, immediately apply pressure on the puncture sites until the bleeding stops, preferably with a sterile compress. If this has not stopped after 15 to 20 minutes, contact the dialysis clinic.

Subcutaneous bruising may also occur in the area of the fistula:

- during or after creation of the fistula
- due to difficulties in puncturing the fistula
- through a blow or a bump on the arm
- resulting from pressing on the puncture sites
- due to subcutaneous bleeding
- as a side effect of using blood-thinning medicines.

**If you have increasing bruising, pain or swelling, you must contact the dialysis clinic.**

# Contact

Dialysis Dispatch
**t** 051 23 38 98
**e** dialysermt@azdelta.be

You can call the dialysis room directly Monday through Saturday between 7 a.m. and 6:30 p.m.
**Roeselare**
**t** 051 23 38 98
**Menen**
**t** 056 52 23 75
**Tielt**
**t** 051 42 55 77
**Torhout**
**t** 050 23 25 91
**Veurne**
**t** 051 33 38 20

Outside these hours, call the hemodialysis on-call service on AZ Delta's general number
**t** 051 23 71 11

www.azdelta.be

*Source: Department of Nephrology*

# Physicians

Dr Gert De Schoenmakere
Dr Bart Maes
Dr Thomas Malfait
Dr Hans Schepkens
Dr An Vanacker
Dr Ignace Vandewiele

**AZ Delta** Deltalaan 1, 8800 Roeselare **t** 051 23 71 11 **e** info@azdelta.be **w** www.azdelta.be
0520 5440-EN **This brochure is revised on 17/06/2022**