PATIENT INFORMATION · PROCEDURE 09

Dialysis Fistula & Vascular Access

Arteriovenous fistula creation and revision for haemodialysis.

Patients with end-stage renal disease need reliable vascular access before starting haemodialysis. An arteriovenous fistula — surgically joining an artery to a vein in the arm — is the gold-standard access.

What it involves

Dr Marais creates radiocephalic, brachiocephalic and brachiobasilic fistulas as anatomy allows. He also revises failing fistulas and places tunnelled dialysis catheters when a fistula is not yet mature or has failed.

The three fistula types follow the fistula-first hierarchy. A radiocephalic fistula at the wrist is preferred — it preserves proximal vessels for future use. A brachiocephalic fistula at the elbow is next. If neither is possible, a brachiobasilic fistula is created with a second-stage transposition to bring the deep vein to the surface.

Pre-operative vein mapping with ultrasound is standard. It identifies suitable veins (over 2.5 mm), documents inflow, and prevents wasted operations on inadequate anatomy. A failed fistula sets the patient back months.

Once created, a fistula needs six to twelve weeks to mature — the vein arterialises, dilates, and thickens. During this period, avoid blood pressures, drips, and blood samples on that arm. A monthly check confirms progression.

When it's indicated

As soon as a nephrologist identifies a patient heading towards dialysis. Fistulas need six to twelve weeks to mature before they can be used — early referral matters.

The approach

This is one of the quieter parts of the practice, referred by nephrologists rather than patients directly. It is also one of the most satisfying — a well-made fistula transforms years of dialysis life.

Recovery

Day-case procedure under regional or local anaesthesia in most cases. Some arm swelling for the first week is normal. Full dialysis use after six to twelve weeks depending on maturation.

Common questions

How soon before dialysis should a fistula be created?

Ideally three to six months before dialysis is expected to start. Fistulas take time to mature and a rushed timeline forces reliance on catheters, which carry higher infection risk.

Why is a fistula better than a catheter?

Long-term catheter use carries higher infection, thrombosis, and mortality rates. A working fistula has fewer complications and better dialysis quality.

What if my fistula stops working?

Fistulas can develop stenosis (narrowing) or thrombosis (clot). Both are treatable — sometimes with angioplasty, sometimes with surgical revision. Dr Marais assesses and revises failing fistulas.

This brochure is general information about a surgical procedure and does not replace a consultation. Every patient's circumstances are different — please discuss your specific case with Dr Marais before deciding on treatment.