

Services offered at The Kidney Centre

Main Dialysis Unit

State-of-the-art unit equipped with 66 dialysis machines and runs in four shifts

Deluxe Dialysis Unit

8 private dialysis cubicles with TV, internet, telephone and sitting area for the attendant

Consulting Clinics

Nephrology, Urology, Pediatrics (Neurology+Nephrology), Cardiology, Diabetes, Hematology, Gastroenterology, Neurology, Ophthalmology

Four **Operating Theatres** of international standards

Fully functioning **Intensive Care Unit (ICU)**

Cardiology Unit - non-invasive procedures:

Echocardiogram, Exercise Tolerance Test, Holter Monitoring, Electrocardiogram Treadmill, Colour Doppler, Ambulatory Blood Pressure Monitoring

Laboratory

Complete ELIZA testing and Automated analyzers for most clinical pathology testing

Radiology

CT Scan and Ultrasound Unit with Color Doppler, X-ray with CR system

Gastroenterology

Upper Gastrointestinal Endoscopy, Colonoscopy, Sigmoidoscopy, Variceal Band Ligation, Reload Banding, Sclerotherapy and PEG Tube Placement

Lithotripsy

Minimally invasive procedures used in breaking of renal stones and soft tissue

Pharmacy

Open 24 hours a day

Emergency

24 hour services catering to all kidney-related diseases and allied health care services



CHRONIC KIDNEY DISEASE & END STAGE RENAL DISEASE

Designed by: SPECTRUM | Y&R as a public service

197/9, Rafiqi Shaheed Road, Karachi - 75530

Tel: 021-3566-1000 (10 Lines) Fax: 3566-1050

Email: mail@kidneycentre.com

Website: www.kidneycentre.com

Facebook: www.facebook.com/TheKidneyCentre

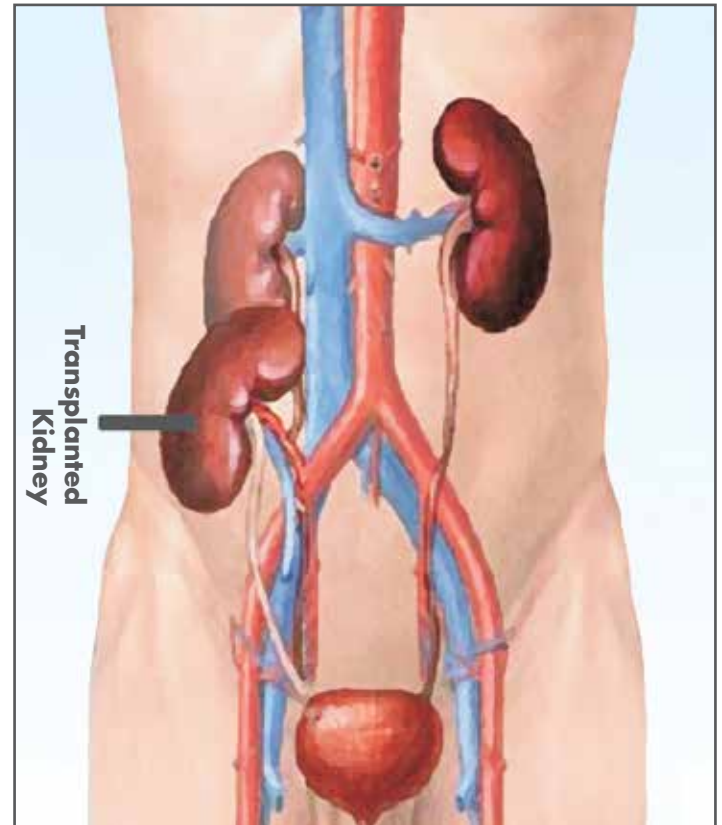
TRANSPLANT

The Kidney Center Post Graduate Training Institute is pleased to provide you with this booklet. The information provided in this booklet is general information. It in no way replaces the discussion about your illness with your doctor. If you have any questions, don't hesitate to consult your healthcare team for help.

We greatly appreciate the input and effort of

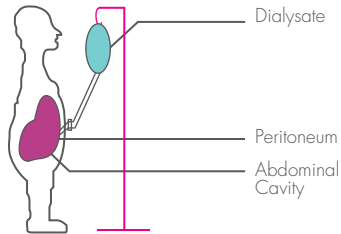
Ms. Arusa Lakhani

Senior Instructor School of Nursing,
Aga Khan University, Karachi.



PERITONEAL DIALYSIS (PD)

Peritoneal dialysis uses the space in your belly called the peritoneal cavity to clean your blood. This space is lined with a membrane called the peritoneum. The membrane has many tiny pores that can be used to filter waste out of your blood. A cleansing solution, called dialysate, travels through a special tube into your belly. Fluid, wastes and chemicals pass from tiny blood vessels in the peritoneal membrane into the dialysate.

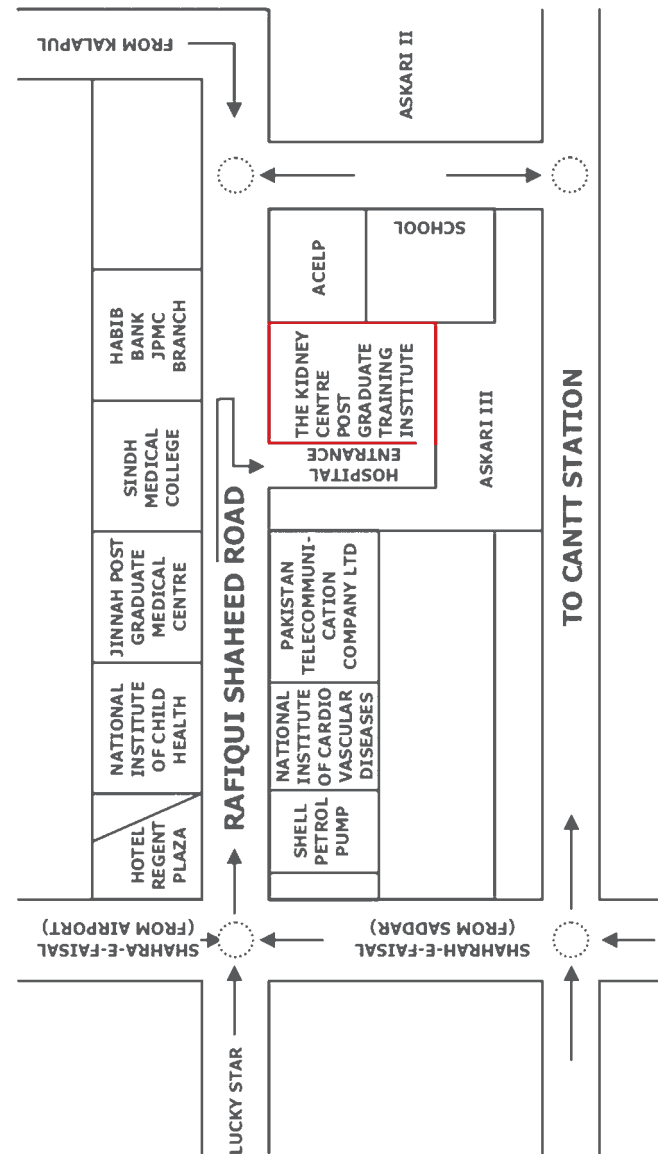


After several hours, the dialysate gets drained from your abdomen taking the wastes from your blood with it. Then you fill your abdomen with fresh dialysate and the cleaning process begins again. Before your first treatment, a surgeon places a small, soft tube called a catheter into your abdomen. This catheter always stays there. It helps transport the dialysate to and from your peritoneal membrane. Your kidney doctor will tell you how many exchanges you should have and for how long the dialysate should stay in your belly for it to work.

TRANSPLANT

A transplant is another treatment option that you should talk to your doctor about. With a transplant, you no longer need dialysis. A transplant is when you get a kidney from someone else, and the kidney is put into your body with surgery. A kidney transplant isn't the right treatment for everyone, but everyone should be evaluated. Talk to your doctor to find out if a kidney transplant is right for you. The person who gives you the kidney is called a donor. The donor's blood type and tissue must match yours. The new kidney is put into your body through surgery in the lower part of your belly (see diagram on page 10). Your old kidneys are usually not taken out. With a transplant, you will always need to take special medicines. Some of these medicines are called anti-rejection or immunosuppressive drugs which need to be taken for the rest of your life.

WE ARE LOCATED HERE



FOR APPOINTMENTS, PLEASE CALL:

Nephrology Clinic	Tel: 35661000	Ext. 255 / 355
Urology Clinic	Tel: 35661000	Ext. 253
Nutrition Clinic	Tel: 35661000	Ext. 266 / 236

LOCATION AND FUNCTIONS OF THE KIDNEY

Your kidneys are just below your rib cage on the back on each side of the backbone. Most of us have two kidneys that are bean shaped.

Healthy kidneys work all day to clean the blood and make urine that flows into the bladder. Kidneys also help control blood pressure and help in making hemoglobin. Moreover, they also aid in balancing the levels of many minerals and chemicals in your body, including calcium (to keep bones healthy and strong).

CHRONIC KIDNEY DISEASE (CKD)

Kidney disease occurs when the kidneys are no longer able to clean toxins and waste products from the blood, or they are unable to perform their functions to full capacity. When this deterioration happens gradually over time, it is called Chronic Kidney Disease (CKD). CKD is not only harmful because it can progress to End Stage Renal Disease (ESRD), when kidney function has to be replaced by dialysis or by a kidney transplant (both very expensive options), but also because people with CKD are more likely to have heart attacks and strokes (paralysis).

WHO IS AT RISK?

People who have:

1. Diabetes
2. High blood pressure
3. Previous history of heart attacks and strokes
4. Family history of CKD
5. Kidney stones

If you use tobacco or if you are obese, then the rate of kidney function deterioration is more rapid.

that builds up when your kidneys are not working. Each dialysis session is for four hours and should be done at least three times a week. During a hemodialysis treatment, your blood is carried through plastic tubes to the dialyzer to be cleaned. Once your blood is cleaned, it is returned from the dialyzer to your body through another plastic tube.

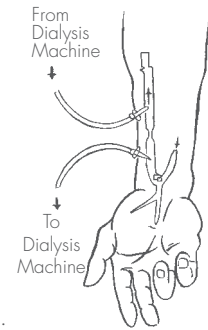
ARTERIO-VEIN FISTULA (AVF)

Most veins are not strong or big enough to carry blood to and from the dialysis machine. To do this, you need surgery to create a pathway called an Arterio-Venous Fistula.

It is the connection created between an artery and a vein, so that when arterial blood flows through the vein they become large and strong. Usually the AVF is made in the forearm or the arm; rarely the legs may be used.

An AVF needs 6-8 weeks to heal and "mature" before it can be used. When an AVF matures, it becomes larger and stronger and better for dialysis. It's considered the best access because it lasts longer, has fewer problems, gives better hemodialysis results and can lower the risk of infection. As AVF takes time to mature, it is best to get an AVF made before you actually need dialysis.

For each hemodialysis treatment, two needles are put into your fistula. The staff in the hemodialysis hall will teach you how to take care of your fistula. When you wake up every morning, check for a strong pulse and a rushing feeling in the fistula; this is called a 'Thrill' and is a sign of good blood flow. Also check your access for early signs of infection. Signs can be redness, swelling or feeling warm to the touch. Keep your access clean and dry between treatments.



REMEMBER THAT YOUR FISTULA IS YOUR LIFELINE

- Don't let anyone take your blood pressure, draw blood, or put an IV on the fistula arm
- Don't wear jewelry or tight clothes on that arm, and also avoid sleeping on the same arm

examples are Ponstan, Voltran, Brufen, etc. It may be easier to remember that in case of fever or pain you may only use Paracetamol which comes by the brand names of Calpol, Panadol, etc.

FAMILY SCREENING

Your family should also get checked for signs of kidney disease, especially if they have high blood pressure or diabetes. Kidney failure can run in families and, if found early, can be slowed or prevented. Your family members should see a physician who will usually check how well their kidneys are working with the following:

- Blood pressure and sugar check
- Blood tests for urea and creatinine
- Urine for blood and protein

END STAGE RENAL DISEASE (ESRD)

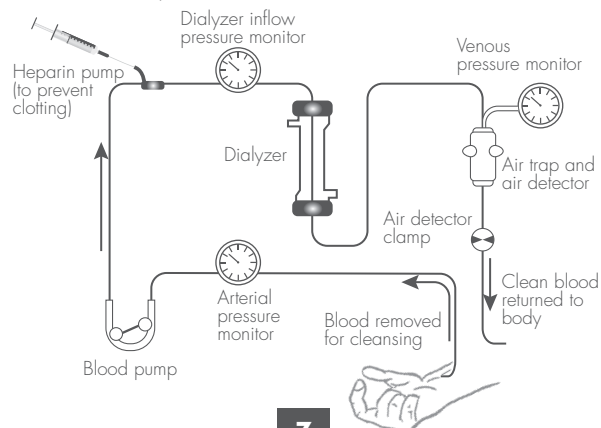
When ESRD occurs, it must be treated for the rest of your life. To treat ESRD, you may require dialysis or need to have a kidney transplant.

DIALYSIS

Dialysis means to clean the blood by artificial means, like using an artificial kidney. There are two kinds of dialysis: Hemodialysis and Peritoneal dialysis.

HEMODIALYSIS

Hemodialysis uses a machine to clean the blood. The dialysis machine has a filter called a dialyzer. The dialyzer works like an artificial kidney and removes the waste and extra fluid



SIGNS AND SYMPTOMS OF CKD

Early loss of function has no symptoms (silent disease) and often goes unnoticed because it may not be felt.

AS MANY PEOPLE WITH CHRONIC KIDNEY DISEASE HAVE NO SYMPTOMS, IT IS OFTEN ONLY DIAGNOSED ON TESTING THE BLOOD FOR UREA OR CREATININE OR TESTING URINE FOR PROTEINS.

Following are the signs and symptoms you may develop over time:

1. Poor appetite
2. Nausea, vomiting and unintended weight loss
3. Tiredness, cramps and restless legs
4. Fluid retention (swollen ankles or face or shortness of breath)
5. Itching
6. Decrease in the quantity of urine (depending on the function of the kidney)
7. Blood in urine
8. Pain in the back, just below the rib cage

TREATMENT OPTIONS

There are many ways to help delay or prevent kidney damage which may lead to ESRD. It is essential that you keep in touch with your physician and discuss your issues and concerns with him/her. You play a central role in slowing the progress of CKD to ESRD. Early detection of CKD helps not only in decreasing the rate of worsening of kidney function, but also reduce the chances of having heart attacks and strokes.

Some of the key steps for preventing rapid deterioration of chronic kidney disease are:

1. Lifestyle changes:

A. Weight: Reduce weight if overweight

B. Exercise: You should do as much exercise as you feel comfortable with, and also take advice from your physician. Keep yourself active in your daily life. This will encourage you to eat, will give strength to your muscles and bones, make you relax and keep your heart and lungs strong.

C. Diet: When your kidneys slow down, water & waste that normally leave the body in your urine remain in your blood. Fluid restriction & eating the right types and amount of food helps control this water & waste build-up. Your diet depends on how well your kidneys work and your body size. If either of these changes, your diet will probably need to change too. You may be asked to follow a special diet in which there may be controlled amounts of protein, salt, phosphate and potassium.

YOU MAY NEED TO RESTRICT ALL OR SOME OF THESE, AND RECOMMENDATIONS ARE LIKELY TO CHANGE WITH TIME. IT IS ALSO IMPORTANT TO AVOID UNDER-FEEDING.

- **FLUIDS:** You may require fluid restriction, especially if you have swelling of the feet or face.
- **PROTEIN:** Chronic Kidney Disease patients have to restrict the protein in their diet. The degree of restriction varies amongst patients. If proteins are restricted, it would be wise to avoid poor quality protein (usually plant sources like daals, beans, etc.) and take small amounts of high-quality proteins (usually animal sources like meat, milk, eggs, etc.). The protein should be evenly spread through the day, i.e. small amounts in each meal.
- **SALT:** A high salt intake will make you thirsty and will make you more likely to retain fluid and will also raise your blood pressure. So avoid taking too much salt in your meal and cut back on eating salty foods, like salted snacks and nimco.
- **POTASSIUM:** It is maintained in the blood by the kidneys. In Chronic Kidney Disease, potassium stays in the blood and its levels tend to rise. Fruits are rich in source of potassium (especially citrus fruits, banana, mangoes, dates, etc.) so don't take more than two portions of fruit each day, don't drink fruit juices and also avoid yakhni.
- **PHOSPHOROUS:** It is only excreted by the kidneys, therefore in CKD, it tends to accumulate. A diet rich in phosphorous, like dairy products, may need to be restricted.
- **FIBER:** Helps prevent constipation and maintain

cholesterol and sugar levels. So take cereals, vegetables and whole wheat bread and, if required, you may also use ispaghul husk.

For more information and individual consultation, you can contact your Kidney doctor or Renal Nutritionist/Dietician.

D. TOBACCO: Using tobacco can make kidney disease worse. In addition with kidney failure, the risk of getting heart disease, stroke and lung cancer also increases. So if you are a tobacco user, it is essential that you quit using tobacco.

2. Blood Pressure: Excellent control of your blood pressure slows down the progression of chronic kidney disease. It is important that you regularly check and record your blood pressure. Eighty percent of your blood pressure readings should be below 130/84 mmHg. Your doctor will advise you regarding the medication that is best for you to control your blood pressure.

3. Medication: Medicines are an important part of your treatment. You need to take medication as prescribed by your doctor. Some of the important medications you need to take are to control blood pressure, those that help your body make red blood cells, vitamin replacements and minerals, keep your bones strong, get rid of phosphorus, etc.

- If you develop anemia (low hemoglobin), which is mainly due to a deficiency of a hormone called erythropoietin produced by the kidney to stimulate red blood cell production, you may be prescribed an injection of erythropoietin and/or iron and folic acid supplements.
- In addition to having fluid and salt restriction you may be prescribed 'water tablets' (diuretics, for example Lasix). This is to prevent fluid overload, which can cause swollen ankles and progresses to cause shortness of breath.
- Sometimes you may have bone aches and pains which are due to low calcium and high phosphorus in the body. Apart from dietary modifications you may have to take a combination of drugs like Vitamin D and phosphate lowering medications.
- **4.** Avoid pain killers, especially belonging to the class of Non-Steroidal Anti-inflammatory Drugs (NSAIDs). Some