

# *Renal Replacement Therapy*



**SAFETY**

**HEALTH**

**SATISFACTION**

*The pillars defining our quality care*

*We Care Together!*



*St. Maarten Medical Center*

*This brochure is to educate you about renal replacement therapy. We assume that the treatment is new to you and that you have had a verbal dialogue about your treatment and whether this is going to start soon. Here you have all the details once more so you may read at your convenience.*

## Forms of Renal Replacement therapy

In consultation with your doctor, you can choose from two types of dialysis:

- ◆ Hemodialysis (artificial kidney treatment)
- ◆ Peritoneal dialysis (peritoneal lavage, in the near future)



Figure 1

In most cases, you can decide which treatment is best for you. However, in some cases you do not make the choice. The nephrologist will, based on your medical history, determine which treatment is best for you.

Apart from dialysis, there is the possibility of renal transplantation. You will read more about this later.

### Hemodialysis (artificial kidney treatment)

In this form of dialysis, the blood is purified by an artificial kidney. In addition to the purification of the blood, with the dialysis, the excess fluid can also be removed from the body.

Before starting hemodialysis, a dialysis access must be made.

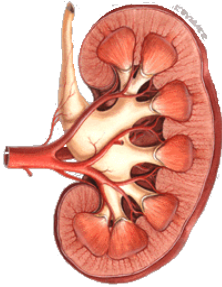
During the treatment, blood will be removed from the body, after which it is returned to you purified by the machine. To create a dialysis access you will need to undergo surgery at the hospital. In your forearm a 'shunt' is then created.

A shunt is a connection between a vein and an artery (Fig. 1).

For this operation, you will be admitted for a few days in the hospital. After surgery, the shunt cannot be used directly; it must first develop for 6-8 weeks. With development, we mean that the vein is wider and stronger. We call this the "maturing" of the shunt.

## Dialysis at the SMMC

The Dialysis Department is located in the main building next to the Emergency Room. The treatment you get here is an outpatient service, meaning; you return home after treatment, unless you were previously admitted on the ward.



The department is open:

Monday—Saturday from 7:00AM to 11:00PM

Closed on Sundays

### The employees

The dialysis team consists of a nephrologist, Certified Dialysis Nurses, Licensed Practical Nurses, Registered Nurses, Dialysis Technical Assistants, a Dietician, a Social Worker and a Care Assistant. The leadership of the department is the responsibility of the Supervisor, Assistant Supervisor and the Patient Care Coordinator.

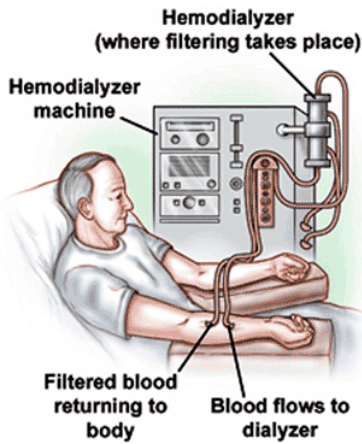
One dialysis nurse is specially entrusted with your care; as your care coordinator for six months. It does not mean that only this nurse will care for you, but he or she monitors and manages your overall treatment. If there are problems or if you want to go on a vacation, you can discuss this with your coach and the transient nurse. He or she will help you and prepare your documents.

### Before Dialysis

Hemodialysis first begins by connecting the patient to the equipment. The connection procedures takes about 20 minutes; each patient has a connection time and will be called in. Bare in mind that the connection time may vary.

Before connection, your weight and blood pressure is measured. If connecting to the shunt, your nurse will wear a mask over his or her nose and mouth, a plastic gown and sterile gloves. If connecting via a catheter, your nurse will also use a surgical cap and a different (yellow) gown. These procedures are followed by your nurse for good hygiene.

## During Hemodialysis



Hemodialysis is usually done three times a week for four hours. During hemodialysis, the blood pressure is regularly measured. In the course of a morning treatment, you will be offered something to drink and a light snack.

During treatment, you cannot use the toilet, so you will need a bedpan or urinal if necessary. We will then close the privacy screens around you.

During your treatment, there is always a certified dialysis nurse to assist you. Each day, a physician is available for the dialysis patient if needed. During the first dialysis of the week the nephrologist does his/her rounds by the patients and will have a discussion of any problems and/or changes to the treatment.

## Side effects of dialysis

Some people undergo treatment smoothly and have no complaints. Others feel less well. Because of the loss of fluid, one can acquire cramps in the calves, or in another part of the body. Also, when the blood pressure changes or drops, sometimes patients can get nausea, and dizziness or headache may occur.

## The end of dialysis

As connecting, disconnecting from the machine requires the same hygiene conditions. After the needle is removed, you will be given a special plaster, over which you must apply pressure for at least ten minutes to prevent leakage of blood. If using a catheter, at the end of the treatment the catheter will be flushed with a saline solution and a solution "Duralock" will be placed in it so that the catheter does not become clogged. Finally, your blood pressure and your weight is measured again.

## At Home

If at home and the puncture site starts bleeding, press on it firmly with your fingers. If the bleeding does not stop after half an hour, contact the Dialysis department or if the department is closed, contact the Emergency Room. You will receive advice on how to act.

## Dietary Measures

If you have opted for hemodialysis, then strict dietary measures will be applied. Most patients must take into account a protein restriction, a potassium limitation, a salt reduction and a fluid restriction. Dietary requirements are also applied during treatment with peritoneal dialysis but these restrictions are less than restrictions with hemodialysis. Our dietician will help you follow the necessary dietary measures for your treatment.

## Good to Know

- ◆ Smoking is banned at the SMMC. We ask you to respect the no-smoking policy of our hospital.
- ◆ During dialysis treatment, you may wish to make use of your personal belongings. However, we strongly advise you to leave valuables at home. The hospital is not liable for loss or theft.
- ◆ You are responsible for your own transportation. You may contact the Helping Hands Foundation for transportation, if needed. Their office number is 1-721-544-5866.
- ◆ If you drive, there is parking available directly in front of the dialysis department; only intended for patients who come for hemodialysis.
- ◆ Hemodialysis is a treatment that you cannot simply stop. Even during holidays, or if you are ill, you should continue with dialysis. In special cases or occasions, you may reschedule your treatment to another day, if our schedule permits. You can discuss this with the supervisor.
- ◆ Once a month, your blood will be taken before and after the dialysis and sent to the laboratory; the so-called "monthly labs". The results will be viewed and based on the results the doctor can make changes to your treatment or medication.

## Kidney Transplantation

There are two types of kidney transplants:

- ◆ Transplant with a kidney from a living donor
- ◆ Transplant with a kidney from a deceased donor

**Every dialysis patient may be eligible for a transplant.** It is, however, important to know the patient's general physical condition. A number of studies will take place in which there is special attention to your heart and blood vessels. There are also blood tests to look into your immune system. This is necessary to estimate if the kidney will be accepted in your body.

If these studies are completed successfully, you may be referred to the pre-transplant clinic of SMMC. **Based on your results, the transplant physician in Holland will decide if transplantation is possible.**

### Transplant with a kidney from a living donor

You will be asked if there are persons in your surroundings who want to donate a kidney to you. If that is the case, you and the potential donor (s) are invited to the pre-transplant clinic where you will receive information about the procedure. **If the potential donor agrees to the procedure, the physician and social worker checks whether he or she is a suitable donor.**

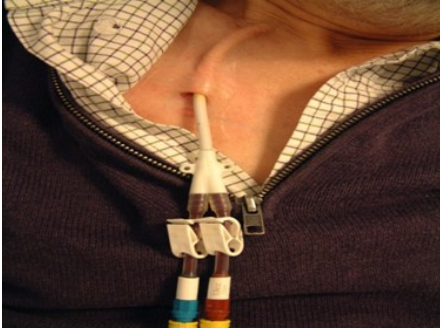
First, we will examine whether the blood type of the potential donor and yours is compatible. If they are, the potential donor undergoes a number of investigations to see if his condition is suited to withstand the operation. If you are approved, both of you will be placed on the waiting list for surgery in Holland. The operation can take place before you begin dialysis.

### Transplant with a kidney from a deceased donor

If there is no possibility for a transplant with a living donor, you will be placed on the waiting list for a kidney from a deceased donor. **You can get on the waiting list even before starting dialysis.** The waiting list is owned by the Dutch Transplant Foundation. If a kidney becomes available, the data of the donor will be compared with the data of persons on the waiting list to determine who are the most suitable recipients. Obviously, the length of time that you are on the waiting list is also a factor determining the possibility of a transplant. There is a possibility that you will have to move to Holland to be on the transplant list.

## Acute Hemodialysis

It may happen that you immediately need dialysis before you would have had shunt surgery. In this case, there is a temporary access made to undergo dialysis. Such temporary access is made by inserting a tube, catheter, which is brought in a jugular or the femoral vein. The catheter is inserted in the operation room under local anesthesia by the nephrologist or a surgeon. This catheter may be temporary, until you get a shunt.



## Peritoneal Dialysis

In this form of dialysis, the blood is purified by means of a permanent catheter in the abdomen. Via the catheter, dialysis fluid is inserted in the abdominal cavity. After more than four hours, you should change the fluid. Such a change is called an exchange. Through the peritoneum waste, salts and moisture are removed from the blood. The peritoneal dialysis is carried out independently by the patient at home.



This can happen during the day, taking care of the changes manually, or at night with the aid of a machine.

In order to be able to apply peritoneal dialysis, just as for the hemodialysis, an access has to be made. You will have to undergo surgery to insert a catheter into your abdomen. You will be admitted for a few days in the hospital. About 2 weeks after insertion of the catheter, you can start with the training program. This program teaches you how to deal with your catheter, how to carry out the changes and how to solve problems.

You can go through this training during an outpatient visit or as an inpatient; this all depends on the advice from your physician.

## Contact information

### St. Maarten Medical Center

#### Dialysis Department

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This brochure is a publication of the Dialysis Department of the St. Maarten Medical Center. In this brochure, you will learn about the different treatment methods offered at the Dialysis Department of the SMMC.

If you and your family have any questions after reading this brochure please do not hesitate to call or email us during working hours.



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