

## RENAL SCAN

### *Patient Education*

#### **What is the purpose of this test?**

A renal scan can be done for a number of conditions, including blockage of urine flow (hydronephrosis), abnormal kidney function, and high blood pressure (hypertension). A small amount of radioactive tracer is injected into a vein in your arm, and a scan is done to study the blood flow immediately after injection. The kidneys are then scanned for an additional 30 minutes.



#### **How should I prepare for this test?**

- You should be well-hydrated (drink plenty of water). If you are taking a diuretic (water pill), do not take it the morning of the test. You may eat a normal breakfast unless the test is done for hypertension (see below).
- If the scan is done for hypertension due to a possible renal artery stenosis, the radiologist will discuss with your doctor if you should take any of your medications before the test. In general, ACE inhibitors like Captopril or Vasotec should not be taken for one to two days before the scan, and diuretics should not be taken on the morning of the scan. On the day of your test, do not eat any solid foods for four hours prior to your appointment, only liquids.

#### **How is the test done?**

The basic procedure will be modified according to the particular condition being studied. If there is a question of a blockage of renal flow, you will be given an intravenous injection of a diuretic. The diuretic will cause your kidneys to make more urine than normal for a short period of time. If there is no blockage, the increase in urine flow will flush the tracer from the kidneys. If a blockage is present, there will be no significant change in urine drainage from the kidneys.

Sometimes a narrowed kidney artery, called renal artery stenosis, can cause high blood pressure. This is the cause of high blood pressure in only about 4% of people with high blood pressure, but this condition can be treated with balloon angioplasty and avoid a lifetime of daily blood pressure medicine. When we are testing for renal artery stenosis, you will be given a small amount of a blood pressure medicine, Captopril, by mouth, one hour before your scan begins. Your blood pressure will be checked every 15 minutes until the scan begins. If you have renal artery stenosis, one or both kidneys will show abnormal function on the scan. This decrease in function lasts only a few hours and is harmless. To be sure that the decrease in function was produced by the Captopril, you may be asked to return one to two days later for a baseline scan, performed without Captopril.

#### **How long does the test take?**

If your test is being done to evaluate urine flow or abnormal kidney function, it will take approximately 30 minutes. For evaluation of high blood pressure, the test will take 1 ½ hours. This is because the medication you receive has to have time to work.

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**Memorial Health Care System**

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**What about radiation?**

Only a small amount of radiation is used in this procedure. The dose for each patient is carefully selected to give the least possible exposure while still allowing for an accurate exam. The radiologist and technologists are trained in radiation safety. CAUTION: This test should not be done during pregnancy or breast-feeding.

**After the test...**

After the test, there are no restrictions on eating, drinking, or contact with other people. When the test is complete, the radiologist will review the images and prepare a written report for your doctor. When necessary, the radiologist will phone your doctor with the results.

***CONTACT YOUR PHYSICIAN FOR FURTHER QUESTIONS***