Exam will take place at:

Location: ***Brampton Nuclear Services***
40 Finchgate Blvd
Suite 101
Brampton, ON

Phone: ***905-791-3458***

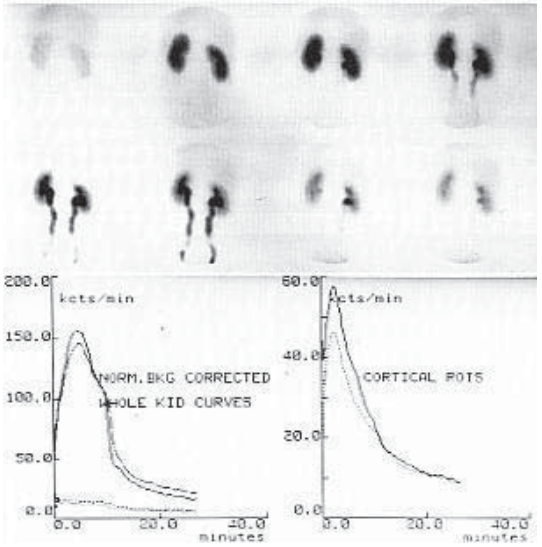
If you require further information about your test, or, wish to change your appointment, please call the phone number listed.

Brampton Nuclear Services
40 Finchgate Blvd. Suite 101
Brampton, Ontario L6T 3J1
905-791-3458

This pamphlet is not a substitute for an informed discussion between you and your physician. Consult your physician if you want more information on the procedures and medication described in this pamphlet.

RENAL SCAN

A PATIENT'S GUIDE



Appointment Date:

_____

Appointment Time:

_____

Alternative names

Renogram; Kidney scan

Definition A renal scan is a nuclear medicine examination that uses small amounts of radioactive materials (radioisotopes) to measure the function of the kidneys.

How the test is performed

A renal scan is similar to (and in fact, may be a continuation of) a renal perfusion scintiscan.

You will be asked to lie on the scanner table. Pressure (from a tourniquet or blood pressure cuff) is applied to the upper arm, which distends the veins of the arm. The inner elbow is scrubbed with antiseptic, and a small amount of radioisotope is injected into a vein (the radioisotope used may vary depending on the portion of kidney function that is of particular interest in the study).

The pressure on the upper arm is then released, which allows the isotope to travel through the bloodstream as a small, concentrated "package." A short time later, the kidneys are scanned. Several images are taken, each lasting 1 or 2 seconds, with the total scan time about 30 minutes to 1 hour. The images are analyzed by a computer after the scan is completed and can give detailed information about particular kidney functions (such as glomerular filtration rate, which reflects how much blood the kidney filters over time).

After the scan, no recovery time is required. You may be asked to drink plenty of fluids and urinate frequently to help excrete the radioactive material from the body.

How to prepare for the test

There is usually no need for fasting, special diets, or preliminary medications. Discuss with your health care professional of any nonsteroidal anti-inflammatory drugs (NSAIDs) or blood pressure medications you are currently taking to see if they will interfere with the exam. You may be asked to drink additional fluids before the scan.

Remove jewelry, dentures, and metallic objects before the scan.

Infants and children:
The physical and psychological preparation you can provide for this or any test or procedure depends on your child's age, interests, previous experiences, and level of trust. For specific information regarding how you can prepare your child, see the following topics as they correspond to your child's age:

- Infant test or procedure preparation (birth to 1 year)
- Toddler test or procedure preparation (1 to 3 years)
- Preschooler test or procedure preparation (3 to 6 years)
- Schoolage test or procedure preparation (6 to 12 years)
- Adolescent test or procedure preparation (12 to 18 years)

How the test will feel

There is a sharp prick when the isotope is injected into the vein. You do not feel the isotope. You do not feel the scan. You will need to lie still during the scan.

Why the test is performed

The test evaluates the size, position, shape, and function of the kidneys. A renal scan is particularly useful when there is a known sensitivity to the contrast media used in an IVP or other X-rays, or when there is underlying kidney insufficiency (reduced kidney function). Renal scan is commonly used after a kidney transplant to evaluate kidney function and to look for signs of transplant rejection. A renal scan may be used to evaluate kidney function in people with hypertension.

What abnormal results mean

Abnormal results indicate reduced kidney function(s). This may occur with acute or chronic renal failure, as complications of a renal transplant (both surgical complications and transplant rejection), glomerulonephritis, or other kidney disorders.

Additional conditions under which the test may be performed:

- Acute arterial occlusion of the kidney
- Acute bilateral obstructive uropathy
- Bilateral hydronephrosis
- Carcinoma of the renal pelvis or ureter
- Chronic bilateral obstructive uropathy
- Complicated UTI (pyelonephritis)
- Injury of the kidney and ureter
- Pyelonephritis; acute
- Renovascular hypertension

What the risks are

The risks are essentially the same as for X-rays (radiation) and for needle pricks.

There is a slight amount of radiation from the radioisotope. Most of this radiation exposure occurs to the kidneys and bladder as the isotope is excreted. Virtually all radiation is gone from the body in 24-hours. However, because of the slight exposure to radiation, caution is advised if you are pregnant or breast feeding.

Any time the body is penetrated (such as by a needle prick) there is a risk for infection. Injection into a vein also carries a slight risk for bleeding. The risk is no greater for renal perfusion scan than for intravenous injection of any sort.

Extremely rarely, a person will exhibit an allergic reaction to the radioisotope, which may include severe anaphylaxis.

Special considerations

Findings of reduced function may be nonspecific in identifying the cause of the dysfunction. Congenital (or other) abnormalities of kidney shape or size may contribute to an error in interpreting results of a renal scan, because glomerular filtration rate and other functions are calculated based on the presumption of normal anatomic size and shape. Tests of some functions may require delayed images (1 to 4 hours later).

Advantages include the ability to determine kidney function without exposure to contrast agents and the ability to obtain quantitative information that may not be obtainable by other procedures.