

Nuclear Imaging

NUCLEAR MEDICINE, BONE SCAN,
AND NUCLEAR CARDIAC STRESS TEST



Cayuga
MEDICAL CENTER

A Member of Cayuga Health System

Welcome to the Department of Imaging Services at Cayuga Medical Center

We are here to assist in the diagnosis of medical conditions and orthopedic injuries using various forms of radiography and imaging technology. We want to make you as comfortable as possible during your exam, while providing timely, thorough, and accurate diagnostic information to your doctor.

The information in this brochure will tell you about the imaging study for which you are scheduled. If you have additional questions, please feel free to call **(607) 274-4376** and ask for the diagnostic supervisor. This person will be able to help you.

About our Imaging Services



Cayuga Medical Center has a commitment to and reputation for staying abreast of changing technology and our imaging equipment is state-of-the-art. Our range of services is comprehensive and we offer all imaging modalities found in major medical centers. Radiologists are on site at all three of our locations, which also distinguishes the level of service we provide.

Imaging Services is staffed by six board certified radiologists, many of whom are sub-specialists in areas such as neuroradiology, abdominal CT, and interventional procedures. Assisting them are experienced radiologic technologists and sonographers, many of whom have completed advanced training and are certified in specialty modalities.

Nuclear Imaging

(Nuclear Medicine, Bone Scan, and Nuclear Cardiac Stress Test)

Nuclear Medicine

What is the test?

There are many nuclear imaging procedures used to identify abnormalities in every major organ system within the body. The major difference between nuclear medicine and many other radiological imaging techniques is that nuclear imaging provides information on how the organ functions while it is at work.

How do I prepare?

Your preparation depends on the specific nuclear study you are having performed. Most nuclear imaging procedures require no specific preparation, while others do. You can read more information about the test you are having later on in this brochure.

Plan to arrive at the Imaging Services department 15 minutes prior to your scheduled appointment. Be sure to alert the radiologist if you have any medicine or food allergies. You should also notify the Imaging Services department if you are pregnant or nursing.

What can I expect during the procedure?

Nuclear medicine uses radioactive materials to capture images of the body system or organ being studied. These materials are designed to be uniquely attracted to specific tissues, organs, or bones in the body. At the beginning of your nuclear study, a small amount of radiopharmaceutical will be introduced into your body. In most cases, this will be via intravenous injection. Imaging will be performed immediately, or within six hours of injection. *(In special studies, additional imaging may be performed for up to the next three days.)* As the radiopharmaceutical travels through your system, a special camera *(called a Gamma camera)* detects the material and creates an image of the organ or system in motion, while it is functioning. Nuclear imaging is safe and involves little or no discomfort to most people. The amount of radiation in a nuclear imaging procedure is comparable to that of a regular X-ray.

After the test?

After the exam, you may resume your normal activities as directed by your doctor, unless the radiologist gives you specific instructions to follow at home.

My Nuclear Imaging Test is:

_____ Gastric Empty

Preparation:

Nothing to eat or drink after midnight before the test. When you arrive you will have to ingest an oatmeal mixture. Scan time is about 2 hours. Bring with you a list of medications you are taking.

_____ GI Bleed

Preparation:

There is no special prep for this test, but prior to imaging ask your doctor about gastric indigestion medications you may be taking. Upon arrival, you will be administered an intravenous injection of a radioactive material. Scan time is 1.5 to 2.5 hours.

_____ HIDA Scan

Preparation:

Nothing to eat or drink for at least 3 hours before the test. Upon arrival, you will be administered an intravenous injection of a radioactive material. Scan time is about 2 hours but may vary (1 to 4 hours).

_____ Lung Scan

Preparation:

You must have a chest X-ray taken within 24 hours before you scan. The first part of the scan consists of breathing a radioactive gas. The second part consists of a radioactive injection. Scan time is 30 to 45 minutes.

_____ MUGA Scan

Preparation:

Upon arrival, you will be administered an intravenous injection of pyrophosphate. After a 20-minute wait, you will receive an injection of radioactive material tracer. Scan time is about 30 minutes.

_____ Parathyroid Scan

Preparation: None. Total time for procedure is 3 to 3.5 hours. Images acquired 15 minutes and 2 hours after initial injection.

Renal Scan

Preparation:

Upon arrival, you will be administered an intravenous injection of radioactive material. Scan time is 45 to 60 minutes. Bring with you a list of medication you are taking.

Renal Scan with Lasix

Preparation:

If you are taking Lasix, ask your doctor if you should discontinue the medication. Upon arrival, you will be administered an intravenous injection of a radioactive material. Scan time is about 90 minutes.

Thyroid Scan

Preparation:

Ask your doctor if you should continue or discontinue any thyroid medications before the scan. Upon arrival, you will be administered an intravenous injection of a radioactive material. Scan time is about 40 minutes. No thyroid medications should be taken before your test. Call Nuclear Medicine in Imaging Services at 274-4270 to learn when you should discontinue your medications. Bring with you a list of medications you are taking.

Thyroid Uptake Scan

Preparation: Bring with you a list of medications you are taking. Ask your doctor if you should continue or discontinue any thyroid medications before the scan. Medications that you should be off prior to your scan are: Antithyroid – 3 days prior; T3 Replacement – 10 days prior; T4 Replacement – 3 weeks prior; and Radiographic Contrast Agents – 3 weeks prior. You will be given a capsule to ingest. You should return in 6 hours for the uptake test. When you return, you will have a 3-minute uptake test. 24 hours later, you will return for part 2 of the uptake test.

Bone Scan

What is the test?

This test examines the activity of cells within your bones and skeletal system.

How do I prepare?

If you have any medicine or food allergies, be sure to let the technologist know ahead of time. It's best to leave jewelry at home.

What can I expect during the procedure?

You will make two appointments for the same day: the first for an injection and the second for the scan itself. Two hours before the actual bone scan is performed, a tiny amount of radioactive material will be introduced into your body by means of an intravenous injection. You may empty your bladder as often as you like. When an appropriate amount of time has passed, you will lie very still on a special table while the scanner slowly passes over your body. The scan takes about an hour and is painless. You may be asked to change positions on the table, enabling the technologist to take additional images.

After the test?

You should experience no after effects or discomfort from the bone scan. Return to your normal activities and diet.

My Bone Scan:

Bone Scan

Preparation:

You will be given an injection when you arrive. You must wait 2 hours. *(You may leave and come back, if you'd like.)* During your wait, you may eat and drink. Scan time is 30-45 minutes.

Nuclear Cardiac Stress Test

What is the test?

A nuclear cardiac stress test shows if your heart muscle is receiving adequate blood supply under stress and/or rest conditions. There will be two separate appointments on two different days.

How do I prepare?

Once you have been referred by your doctor, you may pre-register by phone one or two days prior to your test by calling the medical center at 274-4353. Avoid caffeine for 24 hours before your test, and don't eat or drink anything after midnight the night before. Bring all of your medications in their prescription bottles, to the medical center on the morning of the stress portion of your test. Wear walking shoes and a comfortable two-piece outfit, and plan to be at the medical center for two to three hours. Because there are waiting periods, you may want to bring something to read. Be sure to let the technologist know if you are diabetic,

have chronic lung disease suffer from hip or knee problems, or have had a stroke. Also, alert the technologist to any drug or food allergies you have.

What can I expect during the procedure?

Cardiac nuclear medicine uses radioactive materials to capture images of the heart functioning. To get the heart muscle working hard, you may be asked to exercise on a treadmill for several minutes. When you cannot exercise anymore, a tiny amount of tracer will be introduced into your body through an intravenous (IV) line in your arm. You will then be asked to lie very still for up to 30 minutes. As the tracer travels through your heart, a special camera (called a *Gamma camera*) detects the material and captures images of the blood flow in your heart muscle.

Physical exercise is the preferred method of evaluating cardiac performance, but not all patients will be able to perform the amount of exercise needed to achieve the desired heart rate for a valid study. A pharmacologic stress test will be an alternative to physical exercise.

After the test?

Most people can resume their normal activities after the test is completed. Talk with your doctor about when to take any medication you were asked to skip before the test.

How and when will I get my test results?

Typically, within 48 hours a written report of your test results will be sent to your referring doctor, who will review them with you. Additional time (3 to 5 days) may be required if we are comparing these test results to previous findings from other facilities.

My Nuclear Cardiac Stress Test:

Nuclear Cardiac Stress Test

Preparation:

No caffeine 24 hours prior to the test. Nothing to eat or drink after midnight before the test unless your doctor advises you differently. Bring with you a list of medications you are taking on the day of your stress portion. Ask your doctor what medicines you may not take. Wear comfortable clothing. You will exercise on a treadmill and receive injection through an IV. If you are unable to exercise, pharmacologic stress will be performed. Scans will be taken after the stress test. Total testing time is 2 to 3 hours.

Where is the test performed?

Your nuclear imaging test will be performed in the Imaging Services Department of Cayuga Medical Center.

Notes

NAME _____

APPOINTMENT DATE _____

TIME _____



Imaging Services Location:

Cayuga Medical Center
101 Dates Drive
Ithaca, New York 14850



(607) 274-4376

www.cayugamed.org

