



### **What Is Nuclear Medicine?**

Nuclear Medicine began approximately 50 years ago and is an excellent diagnostic tool that shows not only the anatomy of an organ or body part, but the function of the organ

as well. This exam is used mainly to allow evaluation of organs and regions within organs that cannot be seen or tested on conventional x-ray images. A trace amount of radioactive material is introduced into the patient and is then detected by a machine called a gamma camera.

### **Why Is Nuclear Medicine Ordered?**

Nuclear Medicine is an integral part of patient care and is extremely valuable in the early diagnosis of numerous medical conditions. The functional information provided by Nuclear Medicine examinations is very unique and for many diseases, Nuclear Medicine studies yield the most useful information needed to make a diagnosis.

### **Preparing for Your Nuclear Medicine Study**

Usually there is no special preparation required for a Nuclear Medicine study. Our scheduling department will advise you if an empty stomach may be necessary for your exam. Once the radioactive substance is given, (either by IV or orally), the imaging portion of the study may be performed immediately, a few hours later or even several days after the isotope is administered.

***If You Have Questions/Concerns, Please Call PENRAD Imaging at (719) 785-9001***

**Sites of Possible Nuclear Medicine Studies:**

With the aid of a computer, images are captured based on the detection of energy emitted from a radioactive substance previously given to the patient orally or intravenously.

**Possible sites/reasons for a Nuclear Medicine procedure may be:**

- Evaluate bones for tumor or trauma/fractures
- Determine the presence or spread of cancer
- Evaluate thyroid nodules
- Evaluate thyroid function
- Analyze kidney function
- Image blood flow and function of various organs
- Evaluate function of liver and gallbladder
- Test for various blood disorders
- Test blood flow to the lungs, specifically to identify blockage of flow from blood clots
- Evaluate blood flow and function of the heart
- Measure emptying of the stomach

**During the Exam**

Most Nuclear Medicine procedures require you to lie on a scanning table and remain as still as possible while the images are being obtained. The technologist will raise, lower and move the exam table in and out of the scanner opening in order to take pictures of the body, although it does not touch the patient. The camera detects gamma rays emitted from the patient and sends the digitized images to a computer for reconstruction.

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**After the Exam**

A Board Certified Radiologist will interpret your Nuclear Medicine scan and provide a formal report as your permanent record. The formal exam results will be sent to your referring healthcare provider, who will in turn discuss the results with you. At this time, your healthcare provider may recommend further testing, or suggest a treatment plan for your condition. Patients usually resume normal diet and activities immediately after the exam. Most of the low-level radiopharmaceutical passes out of your body through the natural process involving urine or stool.

Feel free to call our facility or check with your healthcare provider for additional information.

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