



Steinberg Diagnostic Medical Imaging Centers

"Where Imaging Revolves Around You"™

2950 S. Maryland Parkway
Las Vegas, NV 89109

2767 North Tenaya Way
Las Vegas, NV 89128

4 Sunset Way
Henderson, NV 89014

(702) 732-6000

MRI AND OPEN MRI

Patient information guide :

Thank you for choosing **Steinberg Diagnostic Medical Imaging Centers** to perform your **MRI** examination. We realize you may have questions regarding your upcoming exam and hope this information will help explain the procedure to you. If you have further questions, feel free to call our office At (702) 732 - 6000.

What is MRI?

Magnetic resonance imaging (MRI or MR) is one of the safest, most comfortable imaging techniques available. It combines a powerful magnet with an advanced computer system and radio waves to produce accurate, detailed pictures of organs and tissues in order to diagnose a variety of medical conditions.

SDMI offers two types of MRI exams: High-field MRI and low-field open MRI. High-field MRI produces the highest quality image in the shortest time allowing for the most accurate diagnosis to be made. Because of its superior quality, high-field MRI should be your first choice whenever possible. As an alternative for severely claustrophobic or large patients, SDMI offers open MRI as well.

Common uses of this procedure.

Because MRI can give such clear pictures of soft-tissue structures near and around bones, it is the most sensitive exam for spinal and joint problems. MRI is widely used to diagnose sports-related injuries, especially those affecting the knee, shoulder, hip, elbow, and wrist. The images allow the physician to see even very small tears and injuries to ligaments and muscles.

In addition, MRI of the heart, aorta, coronary arteries, and blood vessels is a fast, noninvasive tool for diagnosing coronary artery disease and heart problems. Physicians can examine the size and thickness of the chambers of the heart, and determine the extent of damage caused by a heart attack or progressive heart disease.

Organs of the chest and abdomen - including the lungs, liver, kidney, spleen, pancreas, and abdominal vessels - can also be examined in high detail in MRI images, enabling the diagnosis and evaluation of tumors and functional disorders. MRI is growing in popularity as an alternative to traditional x-ray mammography in the early detection of suspected implant rupture. Because no radiation exposure is involved, MRI is often the preferred diagnostic tool for examination of the male and female reproductive systems, pelvis and hips, and the bladder.

How does it work?

MRI is a unique imaging method because, unlike the usual radiographs (x-rays), radioisotope studies, and even CT scanning, it does not rely on ionizing radiation. Instead, radio waves are directed at protons, the nuclei of hydrogen atoms, in a strong magnetic field. The protons are first "excited" and then "relaxed," emitting radio signals, which can be computer-processed to form an image. In the body, protons are most abundant in the hydrogen atoms of water -- the "H" of H₂O - - so that an MRI image shows differences in the water content and distribution in various body tissues. Even different types of tissue within the same organ, such as the gray and white matter of the brain, can easily be distinguished. Typically an MRI exam consists of two to six imaging sequences, each lasting two to 15 minutes. Each sequence has its own degree of contrast and shows a cross section of the body in one of several planes (right to left, front to back, upper to lower).

Benefits VS risks of a MRI?

BENEFITS	RISKS
Images of the soft-tissue structures of the body - such as the heart, lungs, liver, and other organs - are clearer and more detailed than with other imaging methods.	An undetected metal implant may be affected by the strong magnetic field.
MRI images can help physicians evaluate the function as well as the structure of many organs.	MRI is generally avoided in the first 12 weeks of pregnancy. Doctors usually use other methods of imaging, such as ultrasound, on pregnant women, unless there is a strong medical reason.
The detail of MRI images makes MRI an invaluable tool in early diagnosis and evaluation of tumors.	
MRI contrast material is less likely to produce an allergic reaction than the iodine-based materials used for conventional x-rays and CT scanning.	
MRI enables the detection of abnormalities that might be obscured by bone with other imaging methods	
MRI provides a fast, noninvasive alternative to x-ray angiography for diagnosing problems of the heart and cardiovascular system.	
Exposure to radiation is avoided.	

Patient Comfort.

The MRI system we use was designed with patient comfort in mind. It's a scanner with an open style magnet that has no "tunnel effect". This gives us the added ability to accommodate large and claustrophobic patients who cannot be scanned in other systems. There is no weight limit with our scanner.

During the exam, the patient may be injected with an image enhancement agent, which in some conditions, helps to provide additional information.

Music is provided through headphones during the exam. Patients may choose one of their favorite radio stations to listen to.

The exam takes between 15 and 60 minutes depending on the type of information needed.

Preparation required.

There is no special preparation for an MRI exam. The patient should wear comfortable clothing such as a sweatsuit without metal snaps or zippers. Gowns are available if needed. Hairpins should not be worn. No jewelry or watches should be worn into the scan room. It is best to leave your jewelry at home.

A MRI exam is safe, simple, and painless. However, because some metal interferes with the MRI machine, a patient cannot be examined if they have:

- Brain aneurysm clips
- A pacemaker or pacing wires
- Metal fragments in one or both eyes
- Inner ear implants
- An implanted spinal cord stimulator or brain stimulator

After the test.

The patient may leave immediately following the exam because the MRI has no side effects.

Results of the test

At **SDMI**, we have a radiologist on site at all times so the test will be interpreted promptly. The results will be phoned, faxed, mailed, or delivered electronically to the referring physician. He/she will share the results with the patient.

I am ready to schedule an appointment (requirements for appointment)

To schedule a MRI with SDMI, please call 732 - 6000