MAGNETIC RESONANCE IMAGING

PREPARING FOR THE EXAM

Magnetic resonance imaging (MRI) uses radio-frequency waves and a strong magnetic field rather than x-rays to provide remarkably clear and detailed pictures of internal organs and tissues.

Because the strong magnetic field used for MRI will pull on any ferromagnetic metal object implanted in the body, MRI staff will ask whether you have a prosthetic hip, heart pacemaker (or artificial heart valve), implanted port, infusion catheter (brand names Port-o-cath, Infusaport, Lifeport), intrauterine device (IUD), or any metal plates, pins, screws, or surgical staples in your body.

Tattoos and permanent eyeliner may also create a problem. You will be asked if you have ever had a bullet or shrapnel in your body, or ever worked with metal.

You will be asked to remove anything that might degrade MRI images of the head, including hairpins, jewelry, eyeglasses, hearing aids, and any removable dental work. Please mention if you might be pregnant.

Some patients who undergo MRI in an enclosed unit may feel confined or claustrophobic. If you are not easily reassured, a sedative may be administered.

Typically an MRI will take between 15 and 45 minutes, although more detailed studies will take longer.

48 HR **We will have your results back to your doctor within 48 hours.**

Humboldt General Hospital provides state-of-the-art radiology services to men, women and children of all ages. Ensuring the most accurate diagnostic results is our goal. Services are performed in a timely and compassionate manner; meeting our patients' needs is our top priority.

Every member of Humboldt General Hospital's radiology team has achieved his or her registry through the American Registry of Radiologic Technologists (ARRT). Registration is the one-time process of initially recognizing individuals who have satisfied certain standards within a profession. A person is certified by the ARRT after meeting educational preparation standards, complying with ethics standards, and passing a comprehensive exam.

Clinical excellence is just one part of the department's three-pronged "Promise to the Community." Humboldt General Hospital's Radiology Department also is committed to premium customer service, offering extended evening and weekend hours, as well as the most advanced technology possible for its nine modalities: MRI, CT Scan, X-Ray, Fluoroscopy, Vascular Ultrasound, Obstetrical Ultrasound, Cardiac Ultrasound, Mammography and Bone Densitometry.

We look forward to serving you. Please call Humboldt General Hospital's Radiology Department at (775) 623-5222, ext. 133, with any questions or concerns you may have, or to schedule an appointment.

"Our Promise to You"

- ✓ Clinical Excellence
- ✓ Premium Customer Service
- ✓ Advanced Technology

HGH Radiology

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RD/09.07

MRI

HGH Radiology

MAGNETIC RESONANCE IMAGING

MAGNETIC RESONANCE IMAGING

at Humboldt General Hospital

WHY HAVE AN MRI EXAM?

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, non-invasive 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 with MRI, 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 diagnosis of breast cancer. 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 IS MRI PERFORMED?

The patient is placed on a sliding table and positioned comfortably for the MRI examination. Then the radiologist and technologist leave the room and the individual MRI sequences are performed. The patient is able to communicate with the radiologist or technologist at any time using an intercom.

You will be asked not to move during the actual imaging process, although some movement is allowed between sequences. Patients are generally required to remain still for only a few seconds to a few minutes at a time.

HGH Radiology

Depending on the part of the body being examined, a contrast material may be used to enhance the visibility of certain tissues or blood vessels. A small needle connected to an intravenous line is placed in an arm or hand vein. A saline solution will drip through the intravenous line to prevent clotting until the contrast material is injected, about two-thirds of the way through the exam.

When the exam is over the patient is asked to wait until the images are examined to determine if more images are needed. A radiologist experienced in MRI will analyze the images and send a report with his or her interpretation to the patient's personal physician. This should take only a few days or less.

WHAT WILL I EXPERIENCE?

MRI causes no pain, but some patients can find it uncomfortable to remain still during the examination. Others experience a sense of being "closed in," though the more open construction of newer MRI systems has done much to reduce that reaction.

You may notice a warm feeling in the area under examination; this is normal, but if it bothers you the radiologist or technologist should be notified.

If a contrast injection is needed, there may be discomfort at the injection site, and you may have a cool sensation at the site during the injection. Most bothersome to many patients are the loud tapping or knocking noises heard at certain phases of imaging. Ear plugs may help. Please let your technologist know if you need assistance.