What you need to know about Magnetic Resonance Elastography (MRE)

Preparing for your procedure.

Your wellness is our priority.

St. Paul Radiology takes great pride by providing you with the best care and service experience in the East Metro area.

We want to ensure you a positive experience at one of St. Paul Radiology locations by offering information on MRE examinations.

This MRE exam is a noninvasive alternative to taking a sample of liver tissue. A MRE exam combines MRI imaging with sound waves to create a visual map, or elastogram, showing the stiffness or hardening of the liver.

What is Magnetic Resonance Elastography (MRE)?

Your physician has ordered a diagnostic procedure known as Magnetic Resonance Elastography of the Liver or MRE. MRE uses a magnetic field, radio waves and acoustic driver to create shear waves in a liver, which is harmless, similar to liver palpation by a physician.

Before your procedure begins MRI technologist will explain the imaging procedure and will ask you to sign a consent form, because the MRE is a procedure developed at Mayo Clinic - Rochester by Dr. Ehman and his group. During MRE mechanical waves are generated in tissue and a remarkably sensitive phase-contrast MRI technique, using synchronous motion-sensitizing gradients, is used to directly image the pattern of wave propagation. Specially developed mathematical algorithms are used to analyze the wave images and to generate quantitative images depicting the stiffness and other mechanical properties of tissue. The MRE technology high sensitivity for liver disease has allowed physicians to spare many patients from having a painful, unnecessary - and more expensive - liver biopsy.

Is there any preparation on my part prior to MRE?

Most MRE examinations require no preparation. However, for exams that do require preparation, information will be provided to you by your physician’s office.

Is an MRE painful?

The procedure is painless. You will hear a knocking sound as images taken and vibration around the liver area only during elastography series, MRI technologist will notify when the series will start.

Can I eat or drink before my exam?

Please do not eat or drink anything before your exam. You are allowed to drink water up to 8 hours prior to your procedure, and preferably beginning at 12 am (midnight) the night before your procedure.

What should I wear to my examination?

Please wear comfortable clothing that do not have zippers or any metal fasteners. All metal and jewelry will need to be removed before the examination.

What information will I need to provide prior to my MRE examination?

IMPORTANT: Please make sure your physician and the technologist performing your exam know if you have a pacemaker, prosthesis, aneurysm clips, metal implants or other metal objects in your body. If you are, or think you may be pregnant, tell your physician.

What should I bring to my procedure?

Please bring your insurance card. Your insurance company will be billed for the procedure.

What will I experience during my MRE exam?

Before your exam, we will give you a special barium solution to drink at 15 to 20 minute intervals to help us better evaluate your stomach and bowel.

May I move during the examination?

It is important to remain as still as possible. Your technologist may ask you to hold your breath. If you have special needs, please let your technologist know.

How long with my exam last?

Most MRE exams last less than 45 minutes.

How will I receive my CT scan results?

A Board Certified Radiologist (a physician who specializes in interpreting diagnostic images) will study the images from your examination and send a report to your physician.