

## What is Abdominal Ultrasound Scanning?

Ultrasound scanning, also called ultrasound imaging or sonography, is a method of obtaining images from inside the human body through the use of high-frequency sound waves. The sound waves are recorded and displayed as a real-time image. No ionizing radiation is involved in ultrasound imaging. Because ultrasound images are captured in real time, they can show movement of internal tissues and organs, and enable physicians to see blood flow.

## What are Common Uses of the Procedure?

Ultrasound imaging is used extensively for evaluating the kidneys, liver, gallbladder, pancreas, spleen and blood vessels of the abdomen. Because it provides real-time images, it can also be used to:

- guide procedures such as needle biopsies, in which a needle is used to sample cells from an organ for laboratory testing;
- help a physician determine the source of abdominal pain, such as stones in the gallbladder or kidney, or an inflamed appendix;
- help identify the cause for enlargement of an abdominal organ.

Doppler ultrasound is a special type of ultrasound study that is used in the examination of major blood vessels. These images can help the physician to see and evaluate:

- blockages to blood flow, such as clots;
- build-up of plaque inside the vessel;
- congenital malformations.

With knowledge about the speed and volume of blood flow gained from ultrasound imaging, the physician often can determine whether you are a good candidate for a procedure such as angioplasty.

## How Should I Prepare for the Procedure?

You should wear comfortable, loose-fitting clothing for your ultrasound exam. Other preparation depends on the type of examination you will have. For some scans, your doctor may instruct you not to eat or drink for as many as 12 hours before your appointment. For others, you may be asked to drink several glasses of water two hours prior to your exam and avoid urinating, so that your bladder is full when scanning begins.

## How is the Procedure Performed?

You will be positioned on an examination table, and a clear gel will be applied to your abdomen to help the transducer make secure contact with the skin. The sound waves produced by the transducer cannot penetrate air, so the gel helps to eliminate air pockets between the transducer and the skin. The radiologist or sonographer then presses the transducer firmly against the skin and sweeps it back and forth to image the area of interest.

When the examination is complete, you may be asked to dress and wait while the ultrasound images are reviewed, either on film or on a TV monitor. Frequently, however, the radiologist or sonographer is able to review the ultrasound images in real time as they are acquired, and you can be released immediately.

## What Will I Experience During the Procedure?

Ultrasound imaging of the abdomen is fast, easy and painless. There may be varying degrees of discomfort from pressure as the radiologist or sonographer guides the transducer over your abdomen, especially if you are required to have a full bladder. The examination usually takes less than 30 minutes.

## Who Interprets the Results and How Do I Get Them?

A *radiologist*, who is a physician experienced in ultrasound and other imaging examinations, will analyze the images and send a signed report with his or her interpretation to your primary care physician. Your physician's office will inform you about how to obtain your results. At some facilities, new technology also allows for distribution of diagnostic reports and referral images over the Internet.

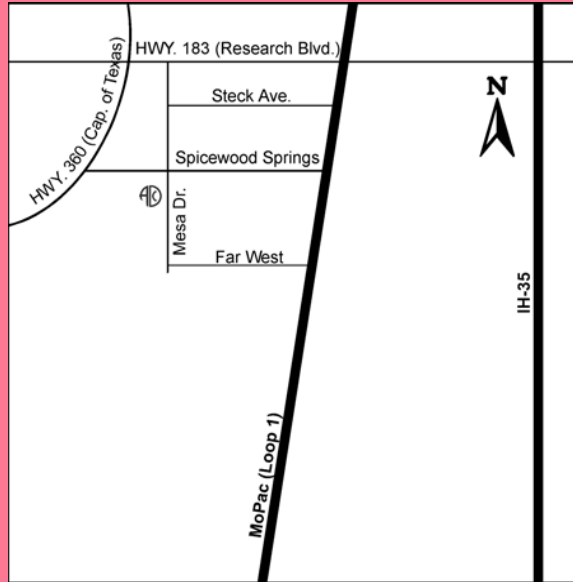
Like other physicians, a radiologist must have graduated from an accredited medical school, passed a licensing examination, and completed at least four years of residency. Radiologists are usually board certified by either the American Board of Radiology or the American Osteopathic Board of Radiology.

A *radiologic technologist*, including sonographers, has undergone one to four years of formal training, leading to a certificate, associate's degree, or bachelor's degree. With additional training, a technologist can specialize and work almost exclusively with specialized radiographic equipment. The American Registry of Radiologic Technologists certifies radiologic technologists.

*For additional details about abdominal ultrasound scanning and other radiological procedures, please visit [www.radiologyinfo.org](http://www.radiologyinfo.org) or consult your physician.*



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