

What is sonography?

Sonography is a diagnostic medical procedure that uses high frequency sound waves to produce dynamic visual images of organs, tissues, or blood flow inside the body. This type of procedure is called a **sonogram**. There are several areas of specialization in the field of sonography:

Abdomen - evaluation of all the soft tissues, blood vessels and organs of the abdomen

Breast - frequently used to evaluate breast lumps and other abnormalities that are found with screening or mammography

Obstetrics/Gynecology - evaluation of the developing fetus and the female reproductive system

Cardiac - evaluation of the anatomy and function of the heart and related blood vessels

Vascular - evaluation of the blood flow through blood vessels

Neurosonology - evaluation of the brain and spinal cord in infants

Sonography is increasingly being used in the detection and treatment of heart disease, heart attack, and vascular disease that can lead to stroke. It is also used to guide needles for tissue biopsies taken for testing under a microscope.

The professionals who perform these procedures are known as **sonographers**.



What does a diagnostic medical sonographer do?

A diagnostic medical sonographer is a highly-skilled professional who uses specialized equipment to create images of structures inside the human body that are used by physicians to make a medical diagnosis. The professional responsibilities include, but are not limited to:

- talking with the patients to identify their symptoms
- performing the sonogram and obtaining diagnostic images
- analyzing images and patient information
- using independent judgement in recognizing the need to make adjustments to the sonogram
- providing an oral or written summary of the technical findings to the physician for medical diagnosis
- working with physicians and other health care providers
- providing quality patient care

Many sonographers also assist in electronic record keeping, and computerized image storage. Sonographers may also have managerial or supervisory responsibilities.

What are the career opportunities?

With rapidly changing computer enhanced technologies, miniaturization, and increased use of diagnostic medical sonography, growth is projected to continue in the future with employment opportunities for qualified sonographers in both urban and rural areas.

Sonographers can choose to work in clinics, hospitals, private practice physician offices, public health facilities, laboratories, and other medical settings performing examinations in their areas of specialization.

Career advancement opportunities exist in education, administration, research, and in commercial companies as education/application specialists, sales representatives, and technical advisors.



How does it work?



A small device called a transducer is placed against the patient's skin near the body area to be imaged. The transducer works like a loudspeaker and microphone because it can transmit *and* receive sound.



The transducer sends a stream of high frequency sound waves into the body that bounce off the structures inside. The transducer detects sound waves as they bounce off the internal structures.



These sounds are analyzed by a computer to make an image of the structure(s) on a computer screen or that can be recorded on videotape, CD, or DVD.

Unlike X-rays, sonography does not use ionizing radiation.

Nature's Sonographer by Chris Alcott



How long does it take?

Comprehensive Diagnostic Medical Sonography programs vary in length from one to four years depending on the degree or certificate awarded. Prerequisites also vary among programs from high school diploma or GED to specific qualifications in a related allied health profession.



When seeking a reputable program, candidates should consult the Commission on Accreditation of Allied Health Education Programs (CAAHEP), which accredits diagnostic medical sonography programs in the United States. A list of accredited programs is available on CAAHEP's web site, www.caahep.org.

Once a sonography education program is completed, the sonographer takes the national credentialing/certification exams before beginning their career as a sonographer.

How much does it pay?

In addition to excellent career opportunities, salaries for sonographers are competitive with or higher than other professionals with similar levels of education. According to the *SDMS Salary and Benefits Survey* report (2008), the median salary for sonographers is \$66,678.

Salaries vary depending on years of experience, credentials/certifications held, number of specialties practiced, as well as geographic location. There are opportunities for full-time and part-time employment.



Make a sound career decision!

Find out more about
Diagnostic Medical Sonography
by visiting
www.sdms.org/career



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Diagnostic Medical Sonography



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