

Health Care: A Career For Life

SONOGRAPHER - DIAGNOSTIC MEDICAL SONOGRAPHY –ULTRASOUND

JOB DESCRIPTION

Ultrasonography, commonly called sonography, is a diagnostic medical procedure that uses high frequency sound waves (ultrasound) to produce dynamic visual images of organs, tissues, or blood flow inside the body. This type of procedure is often referred to as a sonogram or ultrasound scan. Sonography can be used to examine many parts of the body, such as the abdomen, breasts, female reproductive system, prostate, heart, and blood vessels. 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 fine needle, tissue biopsy to assist in taking a sample of cells from an organ for lab testing (for example, a test for cancer in breast tissue). Unlike X-rays, sonography is a radiation-free imaging modality.

The non-physician professionals who perform these procedures are known as sonographers and vascular technologists (who are sonographers specializing in imaging and tests of blood vessels).

There are several areas of specialization in the field of sonography. These specialty areas are:

Abdomen (AB) - evaluation of all the soft tissues, blood vessels and organs of the abdominal cavities (for example, liver, spleen, urinary tract, pancreas)

Breast (BR) - frequently used to evaluate breast abnormalities that are found with screening or diagnostic mammography

Cardiac (AE) - evaluation of the anatomy and hemodynamics (blood flow) of the heart, its valves and related blood vessels, including Pediatric (PE) and Fetal (FE) Cardiac

Musculoskeletal (MSK) - evaluation of joints and soft tissue

Neurosonology (NE) - evaluation of the brain and spinal cord

Obstetrics (OB)/Gynecology - evaluation of the female reproductive system

Vascular Technology (VT) - evaluation and analysis of the hemodynamics (blood flow) of peripheral and abdominal blood vessels

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 process involves placing a small device called a transducer against the patient's skin near the body area to be imaged. The transducer works like a loudspeaker and microphone because it can transmit sound 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. Different structures in the body reflect these sound waves *differently*. *These sounds* are analyzed by a computer to make an image of the structure(s) on a television screen or that can be recorded on videotape.

SALARY RANGE

\$67,000 - \$84,000

RECOMMENDED HIGH SCHOOL COURSES

Senior 4

English 40s

Physics 40S

Math 40S

Chemistry 40S

Biology 40S

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The professional responsibilities include, but are not limited, to:

- obtaining and recording an accurate patient history
- performing diagnostic procedures and obtaining diagnostic images
- analyzing technical information
- using independent judgement in recognizing the need to extend the scope of the procedure according to the diagnostic findings
- providing an oral or written summary of the technical findings to the physician for medical diagnosis
- providing quality patient care
- collaborating with physicians and other members of the health care team.

<http://www.sdms.org/career/career.asp>

LINKS TO MORE INFORMATION:

Sonography Canada <http://www.sonographycanada.ca/>

Society of Diagnostic Medical Sonography <http://www.sdms.org>

Careers in Sonography <http://www.sdms.org/career/default.asp>

DSM <http://dsmanitoba.ca/>

RED RIVER PROGRAM OVERVIEW

Evidence of up-to-date completed immunizations is required within 30 days of applying to this program. Some immunizations may take up to seven months to complete, therefore we recommend you start the immunization process early.

- Two-year diploma
- September entry date
- Application deadline: February 28
- Clinical work experience
- Notre Dame Campus
- This program is currently open to Manitoba residents only. Applications received from Non-Manitoban residents for this program, will be cancelled and the application fee will not be refunded.

EMPLOYMENT POTENTIAL

Ultrasound is practiced in major urban and rural hospitals. In Manitoba there is also mobile ultrasound, where the sonographer travels with a portable ultrasound machine to service smaller rural communities. In other provinces there are also private clinics.

Some graduates are working in related teaching, management, and research positions. Others are employed as application specialists, technical advisors, or representatives for diagnostic imaging equipment and supply manufacturers.

<http://me.rrc.mb.ca/Catalogue/ProgramInfo.aspx?ProgCode=ULTDF-DP&DescriptionType=19&RegionCode=WPG>

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