

Radiologic Technologist

Job Description:

Radiologic technologists perform diagnostic imaging. The oldest, and perhaps best known form of imaging is the traditional X-ray. Although X-rays are still used extensively as both a diagnostic and treatment tool, a number of new methods of imaging the interior of the body have been developed, leading to a variety of specialties for which radiologic technologists can be trained:

- Magnetic resonance imaging (MRI): a large magnet, radiofrequencies, and a computer work together to produce detailed images of the structures inside the body
- Computed tomography (CT scan): X-rays are combined with computer technology to produce cross-sectional images of any selected part of the body
- Bone densitometry: special X-ray equipment is used to measure how thick and compact bone is at various sites in the body
- Mammography: X-rays are used to detect breast disease

In addition to taking images, radiologic technologists may inject materials into the patient's bloodstream or have them drink special liquids so that certain parts of the body show up better during imaging procedures.

Most radiologic technologists work in hospitals, but an increasing number are employed by physicians' offices, clinics, and diagnostic imaging centers.

Note: Radiologic technologists are also referred to as radiographers. Some sources refer to them as radiologic technicians, but this term actually refers to limited X-ray machine operators. Limited operators receive the same training in the fundamentals of radiography as technologists, but they learn to take X-rays of only one part of the body.

Duties and Responsibilities:

- Explain diagnostic procedures to patients.
- Position patients.
- Position film under the body part to be X-rayed.
- Provide protection against unnecessary exposure to X-rays.
- Position X-ray equipment.
- Set controls on the X-ray machine.
- Take X-rays.
- Remove and develop film.
- Maintain patients' files.
- Monitor equipment and adjust as necessary.
- Use specialty equipment, for which they are trained, to perform procedures such as MRIs and mammograms.

Personal Qualities:

Radiologic technologists must be accurate, attentive to detail, and able to follow directions. They must be willing to work conscientiously to avoid exposing their patients or themselves to excessive radiation. Because patients may be anxious about diagnostic procedures, and physicians may be in a hurry to receive the results, technologists must have good interpersonal and communication skills and be able to work calmly and accurately under pressure.

Physical Requirements:

Radiologic technologists are on their feet during much of the workday and need the strength to lift and turn patients. Operating imaging machinery requires manual dexterity and some mechanical ability.

Educational Requirements:

Radiologic technologists complete educational programs that are at least two years in length, earning a certificate or associate's degree. There are also four-year bachelor degree programs available. Programs are offered by universities, community and technical colleges, and hospitals and are accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). In addition to learning radiation physics and protection, patient positioning, and imaging techniques, students study anatomy, physiology, pathology, and medical terminology.

Certification Requirements:

All but 15 states license radiologic technologists. Voluntary certification is available from the American Registry of Radiologic Technologists (ARRT) for candidates who fulfill educational requirements and pass an examination. Some states accept the ARRT examination for licensure. Individuals interested in this career should check with any states they want to work in.

Projected Outlook for this Career:

Employment for radiologic technologists should grow faster than average for all occupations because of the growing population of older Americans who receive the majority of diagnostic procedures. The degree to which insurance companies are willing to pay for new imaging procedures will influence the rate of growth. Radiologic technologists who are trained in specialties will have the best employment prospects.

Salary Information:

In 2002, the median annual income for radiologic technologists was \$38,970, with the middle 50% earning between \$32,370 and \$46,510.

Career Ladders:

Radiologic technologists can advance by acquiring education and certification in additional specialties. With experience, they can receive promotions to supervisory and managerial positions, including becoming the director of imaging departments and facilities. Radiologic technologists may also choose to teach or take jobs with equipment manufacturers.

To Learn More and Prepare:

- Obtain information from the American Society of Radiologic Technologists.
- Explore the Web Links provided in this profile.
- Review professional journals such as Radiologic Technology.
- Conduct an informational interview or job shadow a radiologic technologist.
- Explore the variety of subspecialties in radiation science.
- Obtain employment or a volunteer position in a health care facility.
- Investigate scholarship and grant programs for students interested in radiologic technology.
- In high school, take courses in mathematics, physics, chemistry, and biology.
- Contact educational programs for information about their admission requirements and courses of study.
- Learn more about the licensing requirements of state(s) in which you might want to work. Some require specific types of training and course work.

Professional Organizations:

American Society of Radiologic Technologists
15000 Central Ave. SE
Albuquerque, NM 87123-3917
<http://www.asrt.org>

Web Links:

American Society of Radiologic Technologists
Learn more about the profession by clicking on "Patients & the Public."
<http://www.asrt.org>

American Registry of Radiologic Technologists
Learn about certification for radiologic technologists and the differences between certification and registration.
<http://www.arrt.org>

Virtual Hospital - University of Iowa
Click on "Health Topics A-Z," "R," and then select from among the radiology topics.
<http://www.vh.org>