

What Medical and Clinical Laboratory Technologists and Technicians Do?



Protective masks, gloves, and goggles often are necessary to ensure the safety of laboratory personnel.

Medical laboratory technologists (commonly known as medical laboratory scientists) and medical laboratory technicians collect samples and perform tests to analyze body fluids, tissue, and other substances. Medical laboratory technologists perform complex medical laboratory tests; medical laboratory technicians perform routine medical laboratory tests.

Duties

Medical laboratory technologists and technicians typically do the following:

- Analyze body fluids, such as blood, urine, and tissue samples, and record normal or abnormal findings
- Study blood samples for use in transfusions by identifying the number of cells, the cell morphology or the blood group, blood type, and compatibility with other blood types
- Operate sophisticated laboratory equipment, such as microscopes and cell counters
- Use automated equipment and computerized instruments capable of performing a number of tests at the same time
- Log data from medical tests and enter results into a patient's medical record
- Discuss results and findings of laboratory tests and procedures with physicians
- Supervise or train medical laboratory technicians

Both technicians and technologists perform tests and procedures that [physicians and surgeons](#) or other healthcare personnel order. However, technologists perform more complex tests and laboratory procedures than technicians do. For example, technologists may prepare specimens and perform manual tests that are based on detailed instructions, whereas technicians perform routine tests that may be more automated. Medical laboratory technicians usually work under the general supervision of medical laboratory technologists or laboratory managers.

Technologists in small laboratories perform many types of tests; in large laboratories, they generally specialize. The following are examples of types of specialized medical laboratory technologists:

Blood bank technologists, or **immunohematology technologists**, collect blood, classify it by type, and prepare blood and its components for transfusions.

Clinical chemistry technologists prepare specimens and analyze the chemical and hormonal contents of body fluids.

Cytotechnologists prepare slides of body cells and examine these cells with a microscope for abnormalities that may signal the beginning of a cancerous growth.

Immunology technologists examine elements of the human immune system and its response to foreign bodies.

Microbiology technologists examine and identify bacteria and other microorganisms.

Molecular biology technologists perform complex protein and nucleic acid tests on cell samples.

Like technologists, medical laboratory technicians may work in several areas of the laboratory or specialize in one particular area. For example, histotechnicians cut and stain tissue specimens for pathologists, who are doctors who study the cause and development of diseases at a microscopic level.

Technologists and technicians often specialize after they have worked in a particular area for a long time or have received advanced education or training in that area.

Work Environment

Medical laboratory technologists operate sophisticated laboratory equipment such as microscopes and cell counters.

Medical laboratory technologists held about 164,300 jobs in 2012. Medical laboratory technicians held about 161,500 jobs in 2012.

The industries that employed the most medical laboratory technologists and technicians in 2012 were as follows:

General medical and surgical hospitals; state, local, and private	50%
Medical and diagnostic laboratories	17
Offices of physicians	10
Colleges, universities, and professional schools; state, local, and private	5

Work Schedules

Most medical laboratory technologists and technicians work full time. Technologists and technicians who work in facilities that operate around the clock, such as hospitals and some independent laboratories, may work evening, weekend, or overnight hours.

Medical laboratory personnel are trained to work with infectious specimens or with materials that produce fumes. When they follow proper methods to control infection and sterilize equipment, few hazards exist. They wear protective masks, gloves, and goggles for their safety and protection.

Technologists and technicians can be on their feet for long periods, and they may need to lift or turn disabled patients to collect samples.

<http://www.bls.gov/ooh/healthcare/medical-and-clinical-laboratory-technologists-and-technicians.htm>

Medical Laboratory Technicians

Potential career opportunities after graduation:

- Clinical and hospital laboratories
- Medical laboratory management
- Crime/Forensic laboratories
- Cosmetic/Food industry
- Pharmaceutical industry
- Laboratory information system (LIS)
- Research laboratories
- Public health centers
- Veterinary offices
- Physician's offices
- Education

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