



Health Career Directory

Medical Laboratory Technologist

Overview

Medical laboratory technologists perform a variety of laboratory tests and procedures to help doctors in diagnosing, monitoring, treating, and preventing disease.

Medical laboratory technologists conduct medical laboratory tests, experiments, and analyses to help in the diagnosis, treatment, and prevention of disease. Medical laboratory technologists who are also supervisors are included in this group.

Main Roles

In general, medical laboratory technologists:

- examine body fluids and tissues for abnormal chemical levels, cells or bacteria
- prepare tissue for microscopic examination by pathologists
- determine blood type for transfusions
- conduct medical research and analyses
- participate in quality assurance and quality control activities.

Medical laboratory technologists may specialize in the following areas:

- clinical chemistry: chemically analysing blood and other body fluids
- clinical microbiology: culturing and identifying micro-organisms and determining antibiotic sensitivities
- hematology: studying blood cells and their formation in health and disease, and investigating coagulation factors and disorders
- histotechnology: preparing tissue specimens for microscopic examination
- transfusion medicine: taking and testing blood to determine its suitability for transfusions and preparing blood products
- cytotechnology: microscopically examining prepared cellular slides for evidence of abnormality or disease
- clinical genetics: analysing patient tissue to determine the presence of a pre-existing or neoplastic genetic condition.

Who is suited to become a medical laboratory technologist?

Medical laboratory technologists are most effective when they have the following skills and characteristics:

- detailed-oriented and be able to follow strict procedures
- good social and communication skills

- honesty and a professional attitude
- good at math and science and interested in scientific work
- the ability to do detailed work and maintain a high level of accuracy
- good colour and form perception (to study blood cells, etc.)
- good communication and social skills
- the ability to adapt easily and quickly to change.

They should enjoy taking methodical approach to their work, analyzing results, establishing procedures, and using computers and specialized instruments for accurate testing.

Medical laboratory technologists may specialize in particular areas. These areas of specialization might be:

- clinical chemistry
- clinical microbiology
- hematology
- histotechnology
- transfusion science
- diagnostic cytology and clinical genetics.

Workers in this occupational group perform varying duties. These are described below.

Special Duties

Medical laboratory technologists:

- do chemical analyses of blood, urine, cerebral-spinal fluid or other body fluids
- study blood cells and other tissues to determine their relation to various physiological and pathological conditions
- prepare tissue sections to demonstrate special cellular tissue elements or other characteristics for microscopic examination.

Medical laboratory technologists may also create procedures for the analysis of specimens and for medical laboratory experiments. In addition, they may perform blood group, type and compatibility tests for transfusion purposes.

These workers may also supervise and train other medical laboratory technical staff, students, and helpers. They may also perform the duties of a pathologist's assistant in some hospitals.

Who employs medical laboratory technologists?

Graduates of technical and degree programs work in:

- hospital laboratories
- public health departments
- pharmaceutical laboratories
- veterinary research clinics
- agricultural, industrial, government or private laboratories
- post-secondary institutions
- scientific supply companies.

In smaller clinical labs, technologists perform general duties in all sections of the lab. In large labs, they may perform general duties or specialize in a particular area.

Advancement opportunities depend on ability and qualifications (experience and education).

Most medical technologists typically work 35 to 40 hours per week. Working hours vary depending on the type of laboratory in which they work. Those working in diagnostic clinical laboratories or hospitals may work rotating shifts of days, evenings and nights (including weekends and holidays). Medical technologists and pathologists' assistants who work in research laboratories are typically only required to work regular weekday hours.

Workers in this occupational group work in bright, well-ventilated labs. During their workday, they may perform a variety of tests or they may repeat the same tests throughout the day. They use solutions and reagents for their work, which may have unpleasant smells. These workers may also be required to work with infectious patients, samples or hazardous chemicals. Safety protections are taken to avoid infection.

Salary

\$26.16/hour – \$36.10/hour

Required Training and Education

Medical laboratory technologists must complete an accredited medical laboratory education program.

Certification by the Canadian Society for Medical Laboratory Science (CSMLS) is available for medical laboratory technologists and is usually requested by employers in BC, although it is not required at this time. CSMLS certification is required in Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick and Nova Scotia.

Career Advancement

With education and experience, workers may advance to supervisory or senior management positions or they may choose to teach or work in private industry.

Resources

Education Programs

British Columbia Institute of Technology
<http://www.bcit.ca/study/programs/6580diplt>

College of New Caledonia
http://www.cnc.bc.ca/CNC_Programs/medlab.htm

Financial assistance and bursaries

For information about Canada student loans and grants, please visit:
http://www.hrsdc.gc.ca/eng/learning/canada_student_loan/index.shtml

Associations

British Columbia Society of Laboratory Science
<http://www.bcsls.net/>

Canadian Medical Association (CMA) Accreditation
http://www.cma.ca/index.php/ci_id/19316/la_id/1.htm

Canadian Society for Medical Laboratory Science
<http://www.csmls.org/>