Clinical Laboratory Technologist/Technician

Overview

Clinical Laboratory Science professionals (also sometimes called Medical Laboratory Technologists or Medical Technologists) are highly skilled scientists who discover the presence or absence of disease and provide data that helps physicians determine the best treatment for the patient.

Although they are not often personally involved with patients, laboratory technologists and technicians play a crucial role in the process of providing personalized care. They generate vitally important data for identifying and treating cancer, heart disease, diabetes, and many other health conditions.

Using sophisticated biomedical instrumentation and technology, as well as highly skilled manual techniques, clinical laboratory professionals examine and analyze body fluids, tissues, and cells to identify bacteria, parasites, and other microorganisms. They analyze the chemical constituents of body fluids, crossmatch donor blood for transfusions, and test blood for drug levels to measure the efficacy of particular treatments. They also evaluate test results for accuracy and help interpret them for the physician.

Clinical laboratory technicians (CLT) or medical laboratory technicians (MLT) are associate-degreed professionals, while clinical Laboratory scientists (CLS) or medical technologists (MT) are baccalaureate-degreed professionals. Much of the laboratory work performed by these professionals is the same, but CLTs focus on collecting, processing, and analyzing biological specimens, performing laboratory procedures, maintaining instruments, and relating findings to common diseases or conditions.

CLS/MTs have many similar responsibilities, but because they have a more extensive theoretical knowledge base they conduct more advanced testing, such as molecular diagnostics and highly involved microbiological and cross-matching blood tests. They also evaluate and interpret laboratory results, integrate data, solve problems, consult with physicians, conduct research, and evaluate new test methods. CLS/MTs also are more likely to advance to management positions.

Every day, new advances in genetic testing, biomarkers, and PCR (polymerase chain reaction) technology are creating more challenges and job opportunities for clinical laboratory science professionals. It is a fast-growing field, and there will be great demand for clinical laboratory professionals in the future. Typically clinical laboratory science professionals earn an average salary of $32,000 to $62,400 per year.

For more information about pursuing a health career in this field, see the American Society for Clinical Laboratory Science Website.

Working Conditions

Although the likelihood of finding a position in a clinical laboratory varies, depending on the geographic region, professionals in this field can find challenging employment in a wide range of arenas.

For instance, among other settings, clinical laboratory professionals can work in:

- Hospital clinical laboratories
- Commercial or reference laboratories
- Public health laboratories
- Pharmaceutical or chemical industries
Biotechnology companies  
Forensic and law enforcement laboratories  
Veterinary clinics  
Research and teaching institutions  
Transplant and blood donor centers  
Fertility clinics  
Cosmetic and food industry

Work hours may vary, depending on the work setting, but most hospital and reference laboratories operate 24 hours/7 days a week. This lends itself to great flexibility in scheduling work shifts, which can be especially helpful for working parents.

**Academic Requirements**

There is a career ladder for laboratory professionals. To become a Clinical Laboratory Technician (CLT), or Medical Laboratory Technician (MLT), you must earn a two-year associate’s degree from an approved program [here](http://www.naaccls.org/search/programs.asp) and pass a certification exam, which you can take through one of three agencies:

- **National Credentialing Agency for Laboratory Personnel** (NCA) [here](http://www.nca-info.org/)
- **American Society for Clinical Pathology** (ASCP) [here](http://www.ascp.org/bor/application/index.asp)
- **American Medical Technologists** (AMT) [here](http://www.amt1.com/site/epage/9359_315.htm)

Clinical Laboratory Scientists (CLS) or Medical Technologists (MT) have a baccalaureate degree and have completed an accredited Clinical Laboratory Science or Medical Technology program. These accredited programs may be located within a hospital system or a university. After graduating, a CLS/MT also must pass a certification exam.

Higher levels of training also are available for those who want to pursue a particular field of specialization.

**Professional Associations**

- American Society for Clinical Pathology [here](http://www.ascp.org/)
- American Society for Clinical Laboratory Science

**Funding Opportunities**

Search for funding opportunities in this field [here](http://www.explorehealthcareers.org)

**Enrichment Programs**

Search for enrichment programs in this field [here](http://www.explorehealthcareers.org)

**Source**

[www.ascls.org](http://www.ascls.org)

**Learn more about this field:**

[Allied Health Professions](http://www.explorehealthcareers.org/en/Field.1.aspx)

- **Salary:** $32,000 - $62,400
- **Years in school:** 2 - 4 * 
- **Job outlook:** Excellent

* after high school graduation

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