



## Health Career Directory

### Electromyography (EMG) Technologist

#### Overview

Electromyography (EMG) is a widely used diagnostic technique for disorders of the brain. The term electromyography generally describes the measuring of electrical activity in the brain sent out by muscles through the insertion of a needle electrode. By inserting thin needle electrodes into various muscles, EMG technologists can map out normal and abnormal signals. They can then determine whether there has been slight nerve damage or paralysis. Doctors use the knowledge of an EMG Technologist to understand the electrical activity of the muscles and nervous system.

Today, EMG technology involves more methods for stimulating and recording the nervous system, besides the use of needles. Examples of such techniques are:

- standard motor and sensory nerve conduction studies
- repetitive nerve stimulation
- needle EMG of skeletal muscles
- blink reflexes; and
- skin responses.

When the patient is ready, the technologist briefs them about the procedure to help reassure them and to discuss any questions or concerns. The patient must give consent in order to begin the testing, and then the EMG technologist records their medical history. The EMG technologist may help position the patient correctly and help them relax or cooperate for the needle EMG examination.

This profession is exciting and the employment opportunities are growing throughout the health care industry. This occupation pays well. It is also highly stimulating and interesting since no two days are ever the same.

#### Who is suited to become an Electromyography Technologist?

Electromyography (EMG) Technologists are most effective when they have the following skills and characteristics:

- ability to be precise and accurate
- good problem-solving and communication skills, both orally and written
- good critical thinking skills, sound judgement, and patience
- ability to work under pressure
- compassionate, dependable, ethical, and mature

- ability to organize and arrange workload priorities in collaboration with others
- strong social skills and leadership ability
- ability to deal with high levels of stress associated with life threatening situations and medical conditions
- self-disciplined and self-directed
- ability to multi-task in a complex and face-paced environment; and
- a clean record, no prior criminal background.

They should:

- enjoy working in a fast paced health care environment
- have a genuine interest in caring for people
- enjoy working one on one with people who are unwell
- enjoy working collaboratively with others in a team environment; and
- be capable of using standard and specialized equipment to gather assessments to provide proper care, and the performance of components, assemblies, and systems.

### **Who employs Electromyography Technologists?**

Electromyography Technologists work as part of an interdisciplinary team. They work mostly in hospitals in small laboratory and musculoskeletal units, in both rural and urban settings. Some work in doctor's offices or imaging clinics.

In BC, they are employed by one of the six health authorities/employers. They work shift hours, alternating weekends, and are often on call for emergency procedures.

Electromyography Technologists are very highly sought after health care professionals. In other words, they have no trouble finding work in their field.

### **Salary**

Salary Range - \$27.23 - \$33.98 per hour/\$52,460 - \$66,000 annually plus shift premiums for evenings nights and weekends.

### **Required Training and Education to Become an Electromyography (EMG) Technologist**

The program provides a combination of labs and lectures at BCIT. It also involves clinical experience in the diagnostic neurophysiology departments of major hospitals.

The program draws from a variety of subject areas. Students will learn:

- the mathematics needed to do their job
- basic physics principles and their application to Electroneurophysiology Technology
- engineering, this provides a context for discussing electronics, electrical signals, and electrical safety, etc.
- basic health sciences, which describes human physiology and the biological signals to be measured
- social sciences, which prepares students for social relationships within the clinical environment
- extensive clinical experience, which helps students develop the necessary practical skills for the workplace.

Most programs run every two years. Available seats into this program are limited. Go to the institution of your interest for a complete list of all entry requirements and intake application dates.

Source: <http://www.bcit.ca/study/programs/5750dipma>

## **Career Advancement**

Electromyography Technology can be a very rewarding profession. Most Electromyography (EMG) Technologists stay in clinical practice for a long time as they enjoy providing one on one care to their patients, and working in a team environment.

## **Resources**

### **Education Program**

British Columbia Institute of Technology  
<http://www.bcit.ca/study/programs/5750dipma>

### **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.shtm](http://www.hrsdc.gc.ca/eng/learning/canada_student_loan/index.shtm)

## **Associations**

Association of Electromyography Technologists of Canada  
<http://aetc.ca/>

Canadian Association of Electroneurophysiology Technologists  
<http://www.caet.org>