جامعة المستقبل

AL-MUSTAQBAL
UNIVERSITY

College of Engineering and Engineering Technologies - Medical Device Technology Engineering

M.A.

AHMED HELMI KADHIM

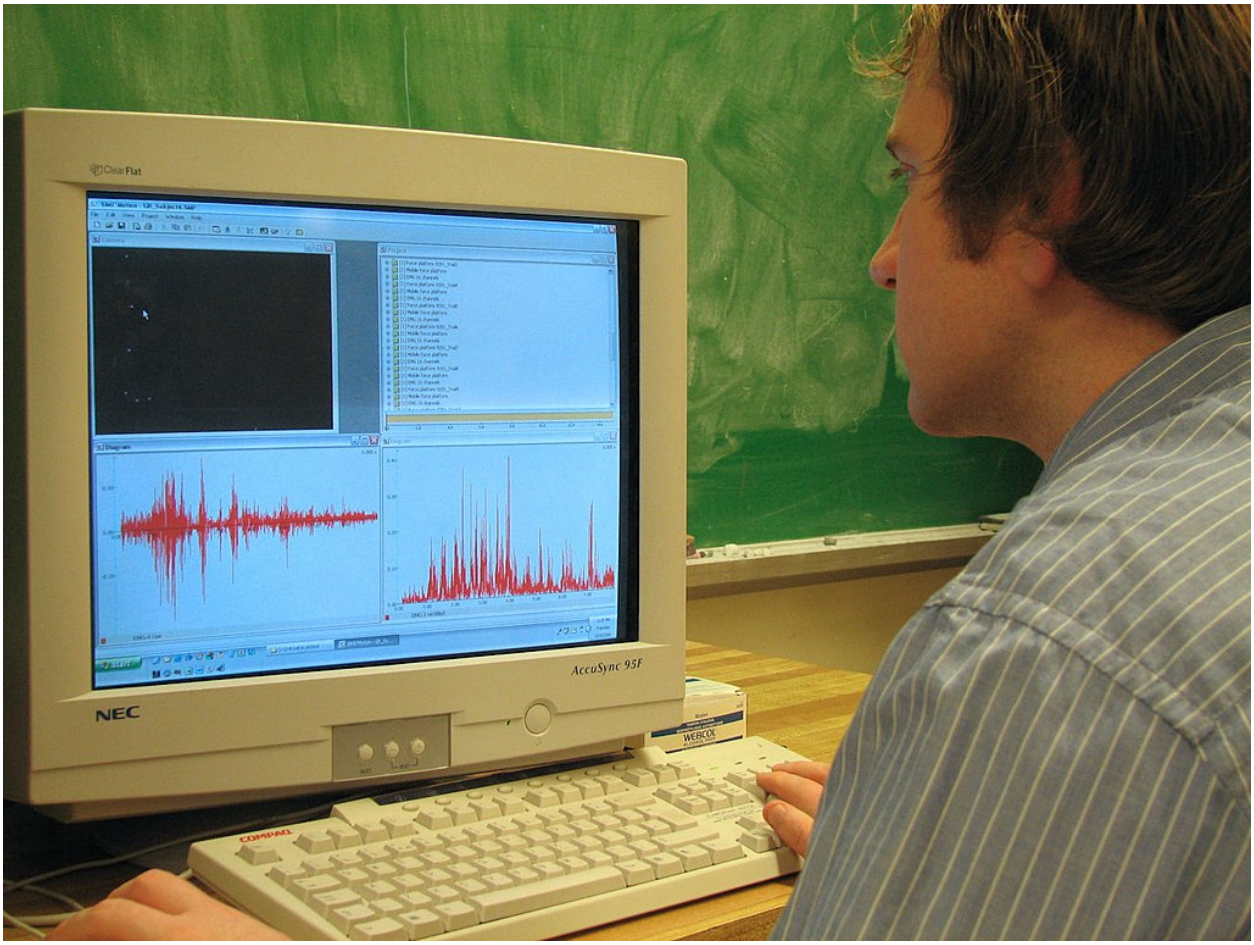
The third stage

First semester experiences

ECG, EMG, EEG & ERG

Electromyography

EMG



Electromyography: EMG What it means

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Why it is done

Your doctor may order an EMG if you have signs or symptoms that could indicate a nerve or muscle disorder. These symptoms may include:

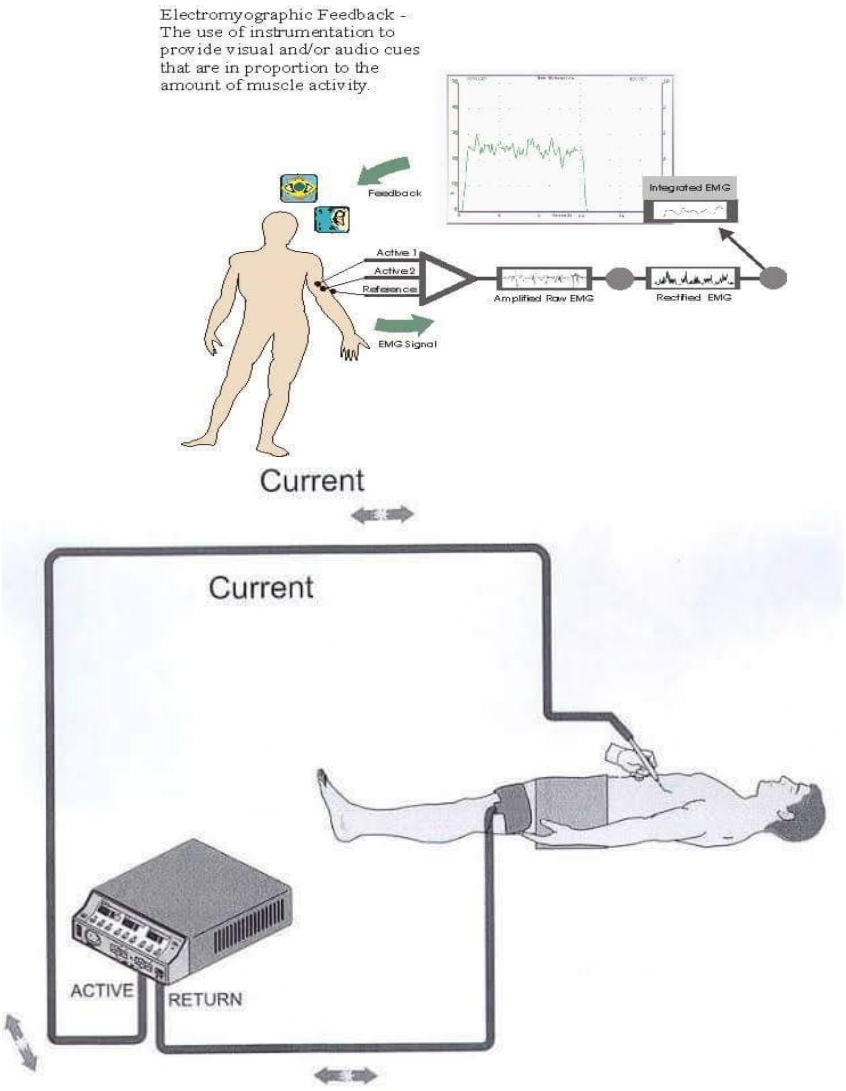
• Tingling

• Numbness

- **Muscle weakness**
- **Muscle pain or cramps**
- **Certain types of limb pain**

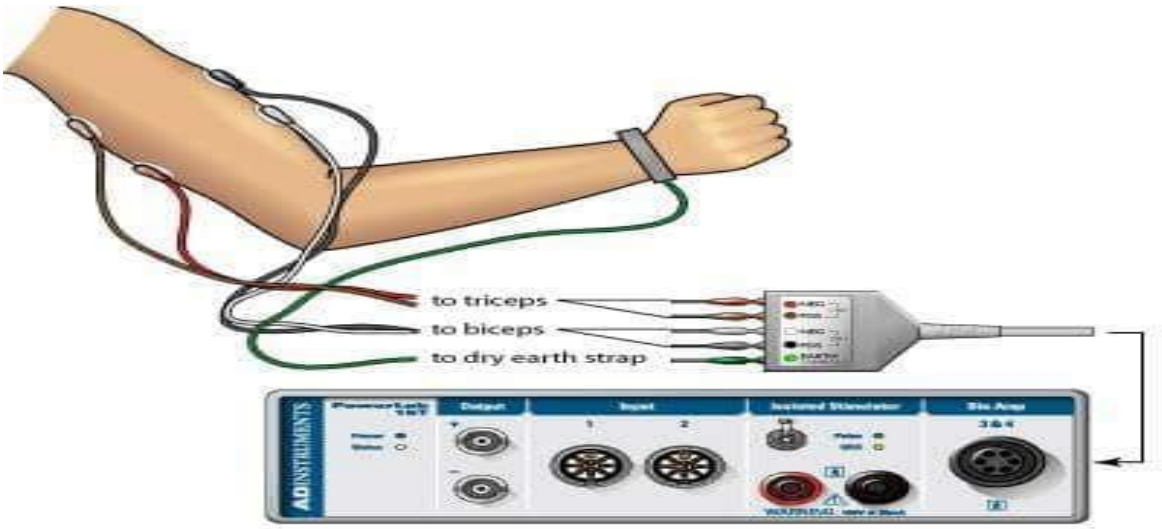
In most cases, EMG results are necessary to help diagnose or rule out a number of conditions, such as:

- **Muscle disorders, such as muscular dystrophy or polymyositis**
- **Diseases that affect the junction between nerves and muscles, such as myasthenia gravis**
- **Nerve disorders outside the spinal cord (peripheral nerves), such as carpal tunnel syndrome or peripheral neuropathy**
- **Disorders that affect the motor nerves in the brain or spinal cord, such as amyotrophic lateral sclerosis or polio**
- **Disorders that affect the nerve root, such as a herniated disc in the spine**



What is the principle of operation of the device?

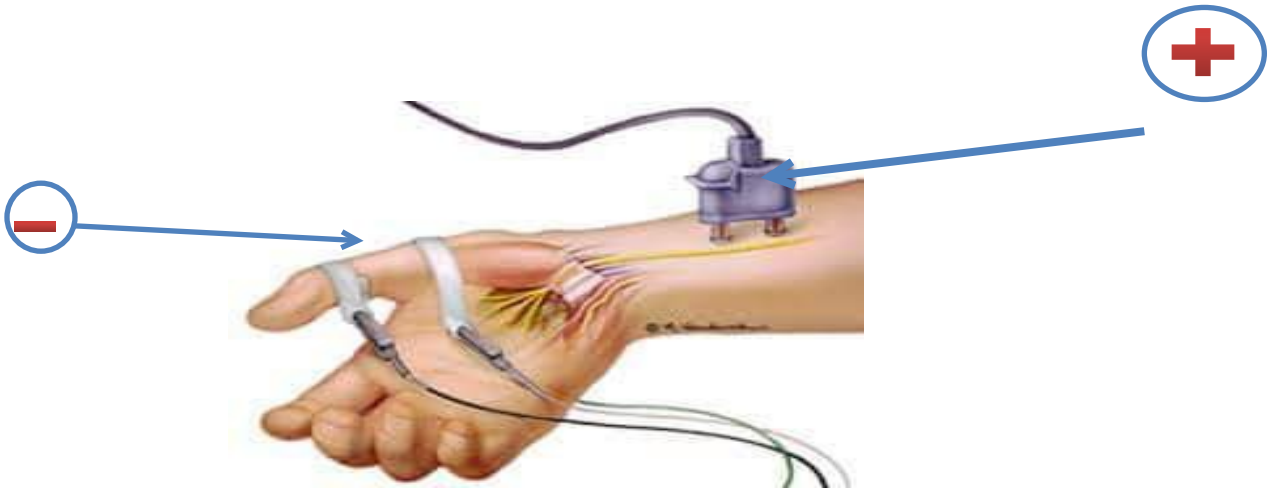
It works to stimulate the muscles by shocking the muscle with a certain amount of electrical energy in order to vibrate and tremble the muscle to stimulate and read the pathological condition to be detected.



What are the types of stimulating electrodes?

A bracelet-shaped electrode represents the negative electrode .

A needle-shaped electrode represents the positive electrode .



END OF THE SECOND LECTURE

I WISH YOU GOOD LUCK AND SUCCESS