

National Research Tomsk Polytechnic University

# Electromyography

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# *What is electromyography?*

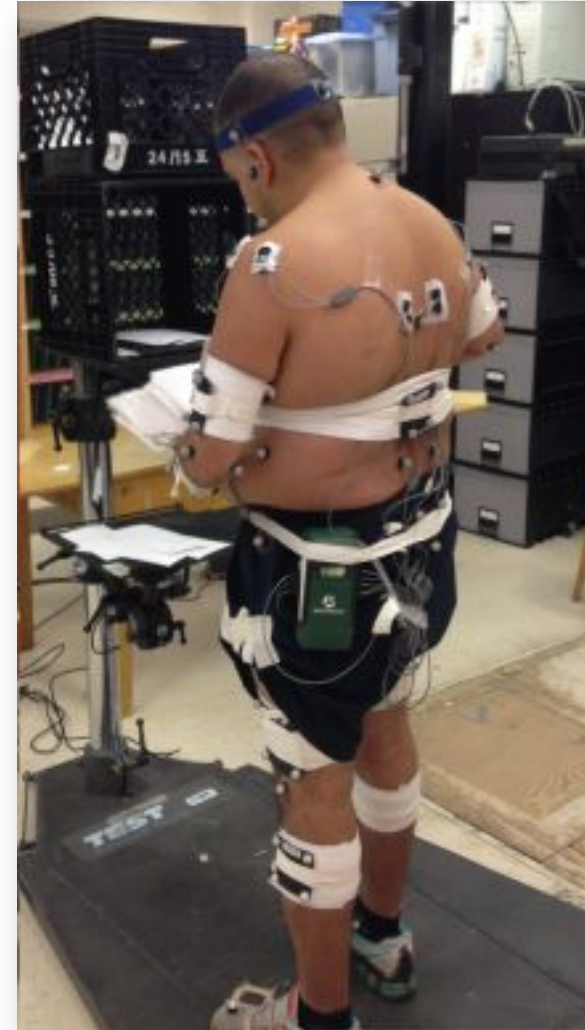


Electromyography (EMG) is a diagnostic procedure that evaluates the health condition of muscles and the nerve cells that control them.

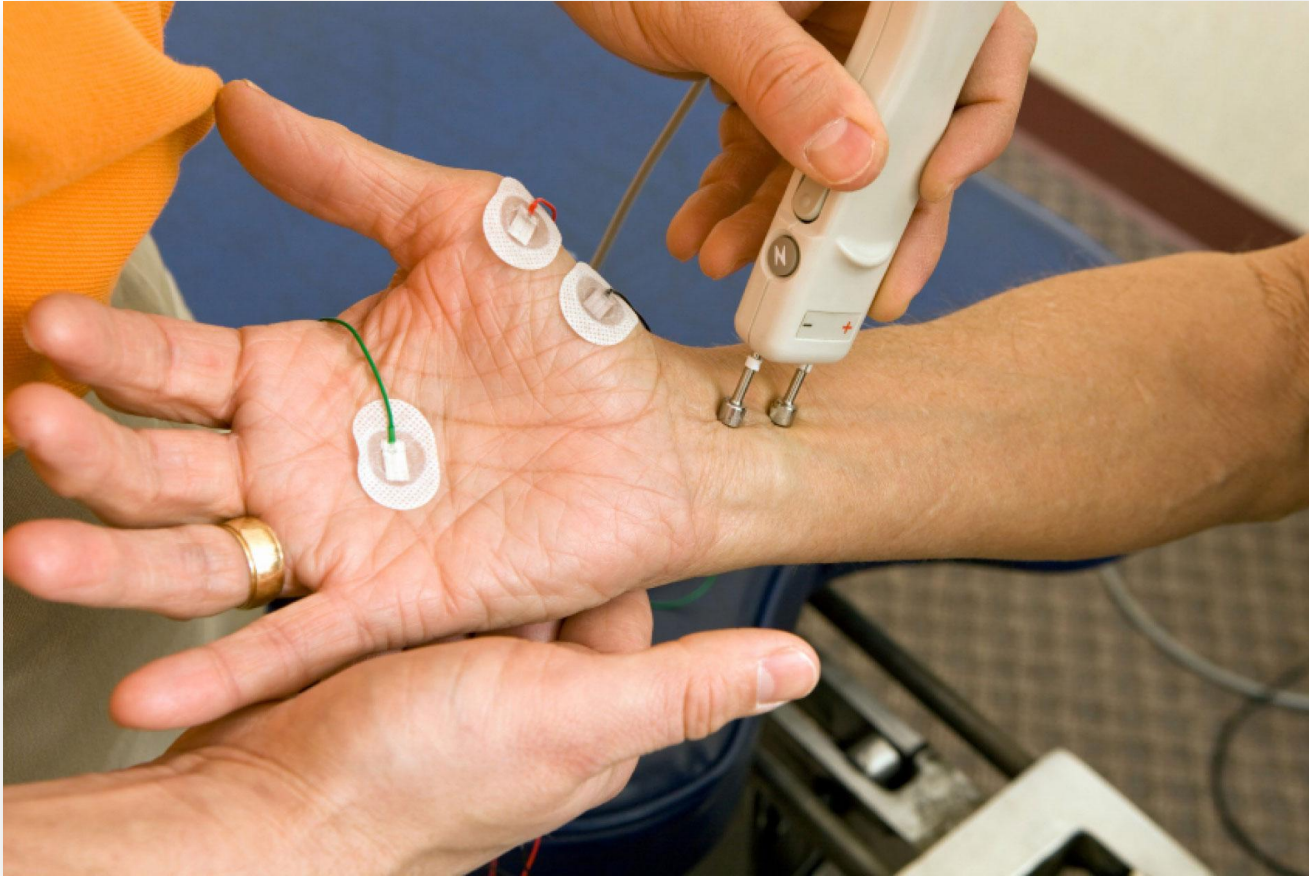
# *Why is electromyography performed?*

Your doctor may perform an EMG if you're experiencing symptoms that may indicate a muscle or nerve disorder. Some symptoms that may call for an EMG include:

- tingling
- numbness
- muscle weakness
- muscle pain or cramping
- paralysis
- involuntary muscle twitching (or tics)



# *What happens during an electromyography?*



There are two components to an EMG test: the nerve conduction study and needle EMG. The nerve conduction study is the first part of the procedure. It involves placing small sensors called surface electrodes on the skin to assess the ability of the motor neurons to send electrical signals. The second part of the EMG procedure, known as needle EMG, also uses sensors to evaluate electrical signals. The sensors are called needle electrodes, and they're directly inserted into muscle tissue to evaluate muscle activity when at rest and when contracted.

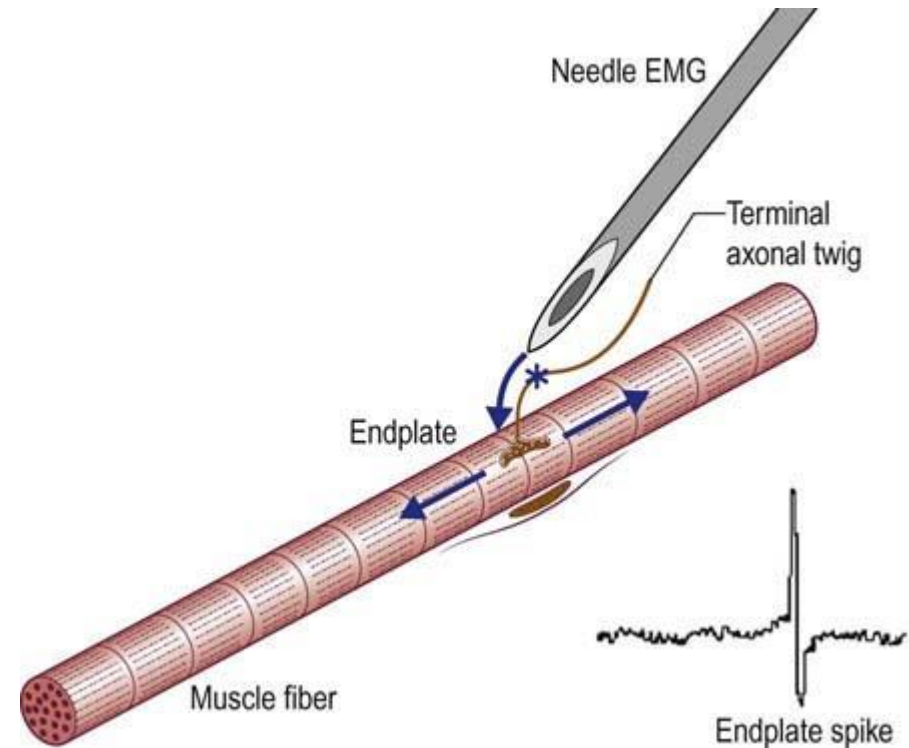
# *What do my electromyography results mean?*

If your EMG shows any electrical activity in a resting muscle, then you may have:

- a muscle disorder
- a disorder affecting the nerves that connect to the muscle
- inflammation caused by an injury

If your EMG shows abnormal electrical activity when a muscle contracts, then you may have a herniated disc or a nerve disorder, such as ALS or carpal tunnel syndrome.

Depending on your results, your doctor will talk to you about any additional tests or treatments that might be needed.



Thank you for attention