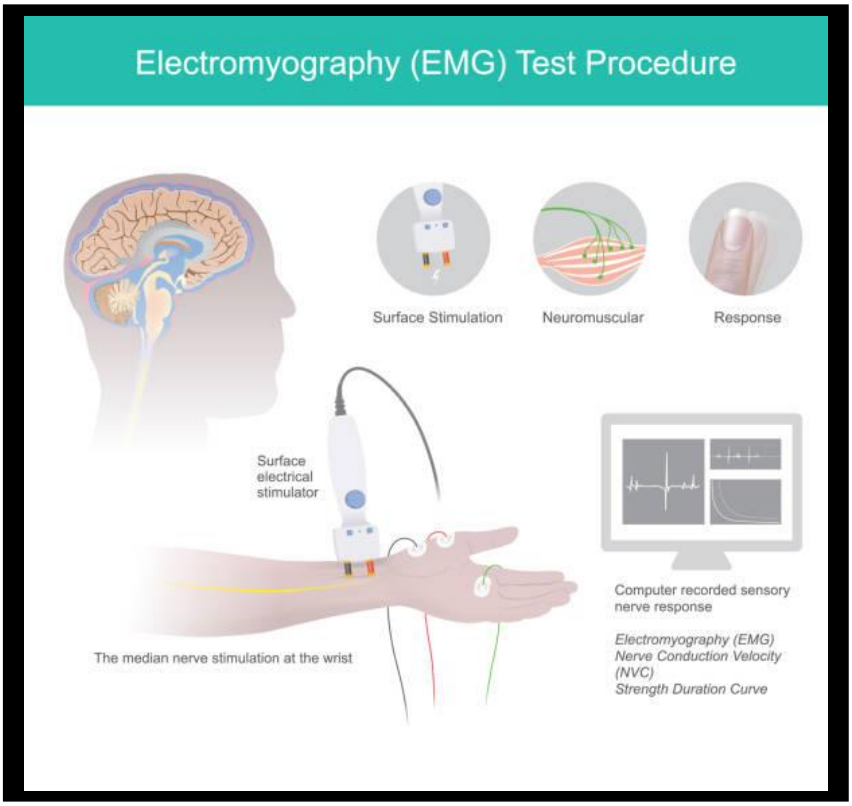
ELECTROMYOGRAM (EMG)

https://youtu.be/x_ktOhzPSh8

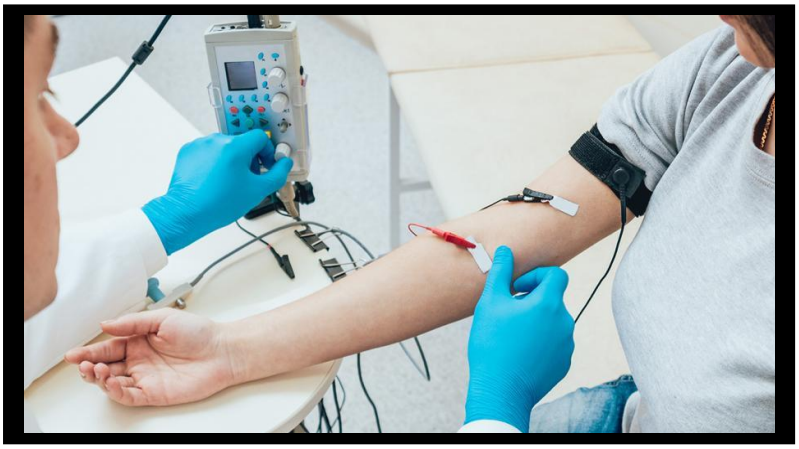
FUNCTION: Measures muscle response or electrical activity in response to a nerve's stimulation of the muscle. The test is used to help detect neuromuscular abnormalities.

TYPES of EMG

- Surface electrodes: They are used for nerve conduction velocity test, to detect true nerve disorders or conditions whereby muscles are affected by nerve injury.



- Needle electrodes: The electrical activity is detected by a needle which serves as an electrode. A needle is inserted through the skin into the muscle.



USER INTERFACE

The activity is displayed visually on an oscilloscope and may also be detected audibly with a speaker. The presence, size, and shape of the wave form produced on the oscilloscope provide information about the ability of the muscle to respond to nervous stimulation.

MAIN ELEMENTS

- Patients
- Doctors
- Specialists

COMPONENTS/DEVICES

- Oscilloscope
- Electrodes
- Microcontrollers
- Amplifiers
- Motors
- Sensors
- Bluetooth (communication protocol)

REFERENCE

- https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/electromyography