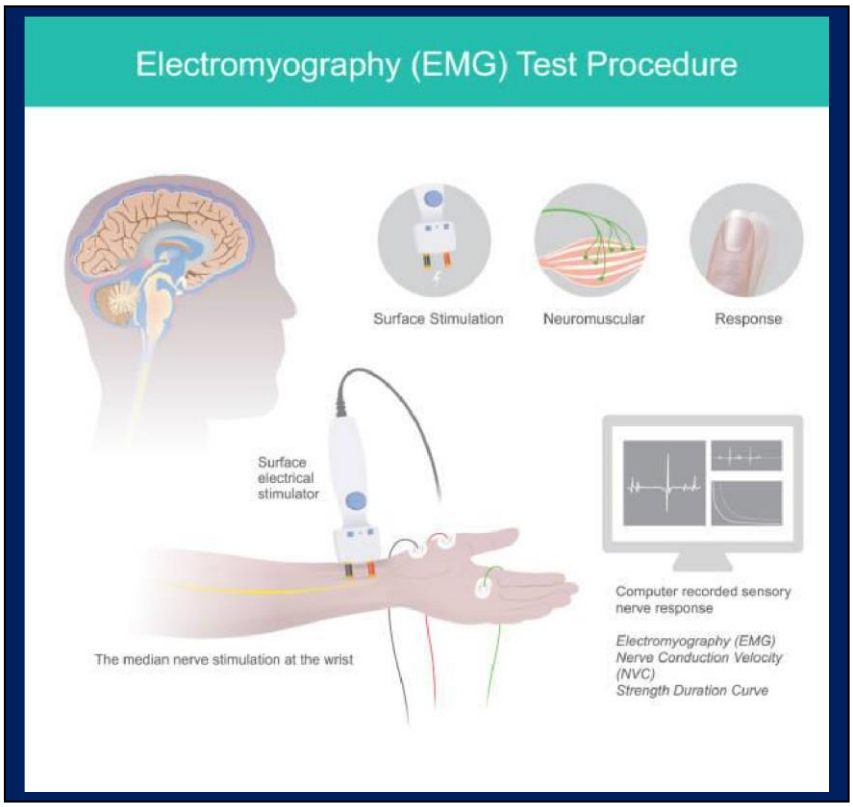
ELECTROMYOGRAM (EMG)

https://www.hopkinsmedicine.org/electromyography

FUNCTION: Measures muscle response or electrical activity in response to a nerve's stimulation of the muscle. The test is used to help monitor nerve activity or 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 a computer screen 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

- Computer Screen
- Electrodes
- Microcontrollers
- Amplifiers
- Sensors
- Bluetooth (communication protocol)

REFERENCE

- https://www.hopkinsmedicine.org/health/treatment-tests-and therapies/electromyography-emg#vm_A_cb2f0571