Electrophysiology

Electrophysiology (from Greek ἤλεκτρον, ēlektron, “amber” [see the etymology of “electron”]; φύσις, physis, “nature, origin”; and -λογία, -logia) is the study of the electrical properties of biological cells and tissues. It involves measurements of voltage change or electric current on a wide variety of scales from single ion channel proteins to whole organs like the heart. In neuroscience, it includes measurements of the electrical activity of neurons, and particularly action potential activity. Recordings of large-scale electric signals from the nervous system, such as electroencephalography, may also be referred to as electrophysiological recordings.

They are useful for electrodiagnosis and monitoring.

The role of electrophysiology in diagnosis of cervical myelopathy and radiculopathy is complex.

see electromyography