The following are the most common Electroneurodiagnostic procedures:

Electroencephalography (EEG) is the spontaneous electrical activity of the brain. EEGs assist in the diagnosis of various brain disorders, it helps to evaluate the effects of head trauma or the consequences of severe infectious disease, and assists in determining level of consciousness or stages of sleep. EEG information can help determine that the brain is receives oxygen during various surgeries. The electroencephalogram (EEG) is the most known electroneurodiagnostic test.

Evoked Potential (EP) is a recording of electrical activity from the brain, brain stem, and peripheral nerves elicited by a specific stimulus to the visual, auditory or somatosensory pathways. The stimulus produces a characteristic wave pattern. Evoked Potentials may be monitored during surgery while the patient is unconscious, thus help prevent damage to the nervous system. Evoked Potentials can also be used to help with the diagnosis of neurological diseases.

Polysomnography (PSG) is a special Electroneurodiagnostic procedure that uses various physiologic monitors to monitor a person's sleep pattern, breathing, heart activity, and limb movements. It helps to evaluate sleep and various sleep disorders, most commonly sleep apnea. It also helps to assess the effectiveness of treatment of these disorders.

Nerve conduction studies (NCS) is a test, which can identify nerve damage. The test measures how fast an electrical impulse moves through the peripheral nerves in the extremities. Technologists stimulate the nerve with an electrical current and then record how long it takes the nerve impulse to reach the muscle.

Intraoperative Monitoring (IOM) is the use of various electroneurodiagnostic tests described above to monitor the functional integrity of different neural structures (brain, brain stem, spinal cord, peripheral nerves) during surgery. The types of surgeries include a wide range including orthopedic, neurosurgery, or vascular.

Long Term Monitoring (LTM) is a specific kind of monitoring utilizing EEG over long periods of time. This type of prolonged EEG recording is used primarily for Epilepsy monitoring, but is also widely used in the intensive care units, the operating room, or in the emergency department.