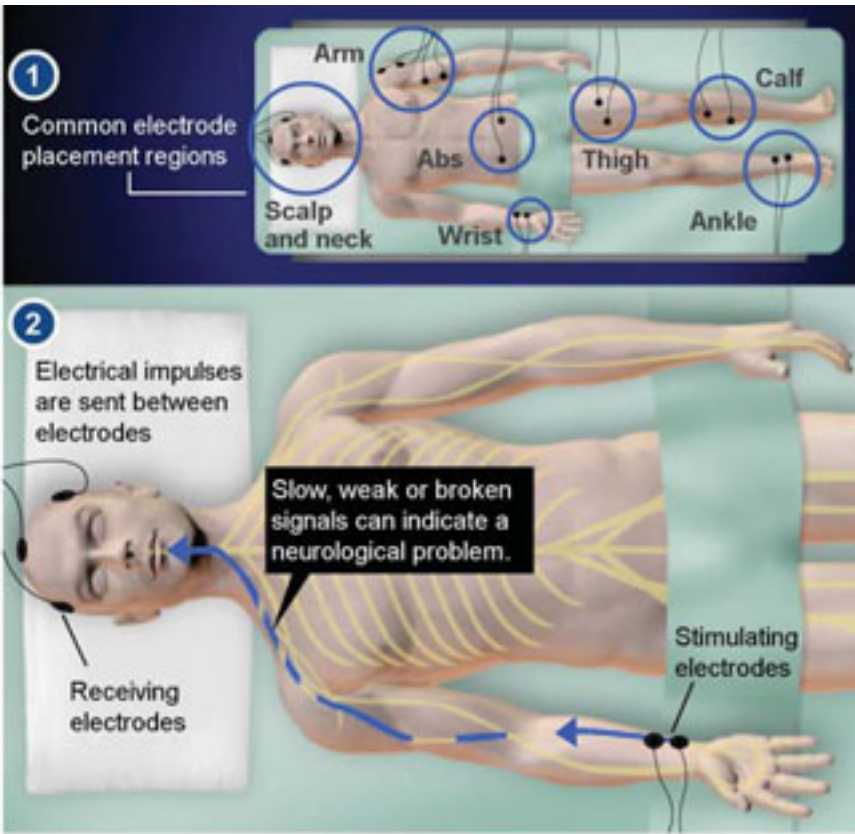


INTRAOPERATIVE MONITORING (IOM) OF THE NERVES



Overview

This technique is used during complex surgical procedures, especially those that involve manipulation of the spinal cord. IOM allows a neurotechnologist to monitor the health of the nervous system in real time during surgery. This greatly reduces the risk of surgery-related nerve damage.

The Electrode Array

A series of electrodes, both surface and subdermal, are attached to the body. Each patient may have different electrodes and arrangements based upon the individual's surgery and condition.

Monitoring Pathways

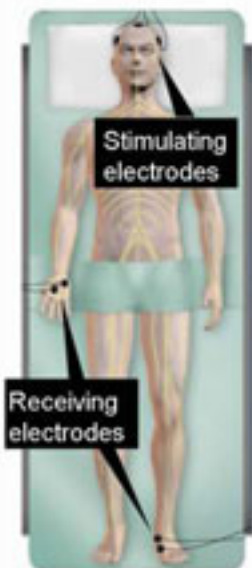
Nerve pathways are monitored by sending electrical impulses between stimulating and receiving electrodes and measuring the speed and intensity of the signals.

Identifying the Problem

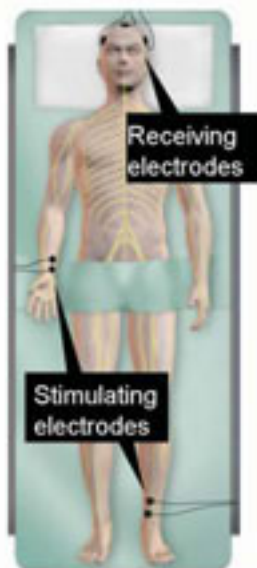
If signal responses differ from established standards, the surgeon can quickly identify the problem (such as a compressed or stretched nerve). If needed, a correction can be made before damage becomes permanent.

3 TYPES OF INTRAOPERATIVE MONITORING

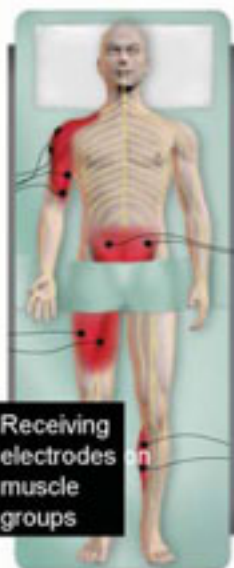
MEPS
(Motor Evoked Potentials) Monitor signals sent from brain to specific muscle groups.



SSEP/DEPS
(Somatosensory Evoked Potentials/ Dermatome Evoked Potentials) Monitor signals from sensory areas to brain.



EMG
(Electromyography) Monitor signals within specific muscle groups during surgery to parts of the spine.



MEP Technique

The neurotechnologist uses the MEP technique to monitor signals traveling from the brain to certain muscle groups.

SSEP and DEP Techniques

The neurotechnologist uses the SSEP and DEP techniques to monitor signals traveling from specific sensory areas to the brain.

EMG Technique

The neurotechnologist uses the EMG technique to monitor signals within specific muscle groups during surgeries to parts of the spine that serve those muscles.