

## Intraoperative Neuromonitoring (IONM)

Intraoperative neuromonitoring (IONM) is used to assess and observe the many functions of the brain, spinal cord and nerves during surgery. The surgeon will get instant feedback and warning before lasting nerve injury occurs. This helps to increase patient safety and improve outcomes during and after surgery. Surgeons can spend less time looking for neural structures since they will receive instant alerts about any issues.

### When IONM Is Used

Your surgeon will decide if IONM is right for your surgery. IONM is often used during surgery on the:

- Spine
- Brain
- Peripheral nerve (nerves outside the brain and spinal cord)

### Before Surgery

Before you go to the operating room (OR), you will be in a “pre-op” area. You will see the IONM tech here. They will explain how the IONM works. In some cases, they may take baseline readings at this time. Please feel free to ask any questions.

### During Surgery

In the OR, electrodes are placed on limbs that could be affected by the surgery. Once you are asleep, small needle electrodes may be placed in the scalp. This would be over the section of the brain where the impulse from the limb is received.

Other electrodes are placed in the muscle groups that link to the section where the surgeons will be working. Baseline readings are taken before surgery begins and are taken again during the procedure. Any major change alerts the surgeon and tech that the nerve could be at risk of damage. The surgeon can then take the proper action to prevent lasting damage.

### Risk of Infection

The risk is very low. The skin is cleaned before needles are placed. Needles are sterile and disposed of after single use.

### Questions

Call: **1-800-323-8942**

Ask for Neurodiagnostics.

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 6/2021 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#7753.