

IONM

INTRAOPERATIVE NEUROMONITORING



»» What is Intraoperative Neuromonitoring?

Intraoperative neuromonitoring tests the functional integrity of the patient during procedures which can potentially cause damage. Some of the functions monitored can include: vision, hearing, movement, sensation, speech, and incontinence.

»» So why might you need to have Intraoperative Neuromonitoring during your surgery?

Intraoperative neuromonitoring allows the surgeon to understand if your functions are stable throughout the procedure. This will help the surgeon to take appropriate measures to minimise or reverse potential permanent neurological injury.

»» How does Intraoperative Neuromonitoring work?

During the procedure you will be under general anaesthetic the whole time (unless you are having awake brain surgery). This means that all the intraoperative neuromonitoring shall happen whilst you are asleep. Once you have been put to sleep by the anaesthetist the intraoperative neurophysiologist (the person who does the monitoring) will place electrodes on your body to stimulate and record your functions during the operation.

All of these electrodes shall be removed by the time you are awake and aware.

»» Why is it important that you know about this?

There are a few risks associated with some intraoperative monitoring which you should be aware of before consenting for it.

Sometimes the electrodes must be placed in delicate areas such as around the eyeballs, in the anal sphincter, and the genitals. You will be asleep when these are placed and removed however after the surgery you may have needle marks and potentially some bruising where they were placed.

The body is full of many little blood vessels and sometimes when the electrodes are placed they can break these vessels causing bruises and swelling. When these are placed in delicate areas such as around the eye balls they can sometimes cause eye/vision damage.

Your surgeon will understand the risks associated with using intraoperative neuromonitoring and make the decision to use it or not.

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» Awake brain surgery

An awake brain surgery is usually performed to ensure that your speech, movement, and vision are preserved.

Intraoperative neuromonitoring is used during these surgeries to stimulate your brain and map the important areas for these functions to ensure these areas are preserved. This stimulation will be done whilst you are doing particular tasks and it may make you stop talking/moving, or make you see/feel strange things temporarily. Sometimes it can also make parts of your body have a small twitch.

All of this is normal and this is what we are looking for.

If you are having awake brain surgery it is possible that you may have a seizure, you might also feel the electrodes in your body but they should not be painful.

» Do you need to do anything?

As a patient you do not need to do anything, however please make your surgeon or intraoperative neurophysiologist aware if you have any metal, magnetic, or stimulating implants including cochlear implants or anything with batteries. It is also important to let us know if you're prone to seizures.