

Peripheral Nerve Catheter Anesthesia: Frequently-Asked Questions

The anesthesiologist has decided on peripheral nerve catheter anesthesia with you. This document presents an overview of important information you were given during the pre-anesthesia appointment.

What is peripheral nerve catheter anesthesia?

Peripheral nerve catheter anesthesia consists of the continuous infusion of anesthetics through a catheter (very small soft plastic tube) near the nerves involved in the area to be operated on. This type of anesthesia numbs the part of the body around the catheter so that a surgical procedure can be performed without pain. This technique also serves as an analgesic (painkiller) in the operated area and lasts during the post-operation period: the infusion of anesthetics through the peripheral nerve catheter is continued in the recovery room, your hospital room and sometimes even at home.

What will the procedure involve?

You will be given custom-tailored anesthesia by specialized doctors and nurses. Before you are brought to the operating room, you may be offered medication to control anxiety.

Your anesthetic care will start by fitting devices to monitor your vital functions:

- Heart: patches connected to a screen will be attached to your chest.
- Blood pressure: a cuff will be wrapped around one of your arms.
- Breathing: a sensor will be placed on the tip of one of your fingers.

An intravenous infusion (drip) will be placed to allow for the administration of medication during the operation if necessary.

The nerves will be located for placement of the catheter by ultrasound (echography) and/or a neurostimulator that delivers weak electrical pulses through the tip of a needle. A catheter is inserted through that needle. Your active participation is required to ensure it is properly placed: make sure you report any pain you experience. After injection of the local anesthetics, the zone to be operated on will feel "tingly", become heavy and then progressively go numb.

In addition to this localized anesthesia during the operation, you may be offered one of the following options during the procedure, depending on the operation or your own preference:

- To remain alert and possibly to listen to music.
- To doze spontaneously or with the help of medication.

Depending on the operation or if this technique fails, you may be given general anesthesia.

Note: the doctor responsible for anesthesia during your operation will not necessarily be the person you met during the consultation appointment. However, he/she will have all the information required for your care. He/she may suggest modifying the planned anesthesia technique if necessary.

For your safety, your identity, the type of operation scheduled and the surgical site (the part of the body to be operated on) will be verified several times during your stay. It is crucial that you cooperate actively with these checks.

What are the risks of peripheral nerve catheter anesthesia?

All medical procedures involve risks, even when they are performed by experts. The rate and severity of these risks depend on your state of health, age or general lifestyle. The anesthesia techniques used are safe. The risks of unexpected and potentially life-threatening complications such as an allergy are extremely small. All necessary measures will be taken to prevent and treat any complications in the best possible way.

However, the following complications could occur:

When the catheter is placed:

- Hematoma at the injection site: this usually resorbs spontaneously.
- Pain in the anesthetized limb: common, though short-lived and without consequence.
- Convulsions, breathing and cardiac problems: this occurs when the local anesthetic is accidentally injected into a blood vessel. These effects are rare and can be immediately corrected by medication and breathing assistance.
- Nerve damage: this complication is rare and generally transient.

Later, during the period after surgery:

- Disappearance of the analgesic effect due to shifting or disconnection of the catheter.
- Infection at the catheter entry point: this requires specific treatment.
- Risk of falling if the lower limb is anesthetized, due to loss of muscle function.
- Other specific side effects depending on the area operated on: these effects are generally transient and will have been described by the doctor during your pre-anesthesia appointment.

Note: there may be other risks if additional treatments or monitoring measures are required. Likewise, the risk connected with the operation itself should be discussed with the surgeon.

If you notice or are concerned by any persistent symptom, make sure to talk with the anesthesia team, your surgeon or your own physician.

What are the necessary safety precautions?

Your cooperation is crucial for the success of the procedure. Please follow the recommendations below:

- Medication: only take medication authorized by the anesthesiologist during the consultation appointment and report any medication taken, including aspirin, anti-inflammatory drugs or blood thinners.
- Dentures, jewelry, contact lenses, piercings or other devices (except hearing aids and glasses if worn) should be removed before your arrival in the operating room.

To reduce the risks of accident or infection caused by gastric fluid entering your lungs, follow the recommendations below:

- Food: do not eat, suck on candy or chew gum less than six hours before the procedure.
- Beverages: stop drinking fluids six hours prior to the procedure; only clear liquids (water or tea) are permitted up to two hours before the procedure; after that time, all beverages are prohibited.
- Smoking: it is advisable to stop smoking at least 12 hours before the procedure.

Note: to limit the risks of theft or loss, only bring in items that are absolutely necessary.

Contact

Division of Anesthesiology

Rue Gabrielle-Perret-Gentil 4 - 1205 Geneva

Phone 022 372 75 15

Information videos available at: <http://anesthesiologie.hug-ge.ch>