

## **What is regional anesthesia?**

Regional anesthesia or “the nerve block” is a form of anesthesia in which only a part of the body is anesthetized (“made numb”). If you are having surgery on your upper extremity (e.g. shoulder, elbow or hand) you will receive an injection (peripheral nerve block) above or below your clavicle (collar bone) that will anesthetize only the arm being operated on. Surgery on your lower extremity (e.g. hip, knee, foot) will be performed either under an epidural or spinal anesthetic which will anesthetize the lower half of your body, or, as with the upper extremity, the nerves supplying the operative leg can be blocked.

## **What are the benefits of regional anesthesia?**

Regional anesthesia has many specific benefits beyond avoiding the risks and side effects of general anesthesia. One of the primary benefits is the elimination of pain both intraoperatively as well as postoperatively. Postoperative pain control can be extended for many hours by using long-acting local anesthetic agents. This benefit may be prolonged for days by using epidural analgesia and continuous regional analgesia (delivering a continuous infusion of local anesthetic through a catheter that is placed alongside a nerve). As a result, opioids (morphine-like drugs) can be avoided thus avoiding their side effects such as nausea, vomiting, and sedation. The lack of pain and opioid-related side effects result in a shortened stay in the recovery room and reduces the risk of an unplanned admission to the hospital. Regional anesthesia provides excellent muscle relaxation and reduces intraoperative bleeding resulting in improved operating conditions for the surgeon. This may reduce the duration of the surgery as well as the risk of requiring a blood transfusion. Epidural and spinal anesthesia decrease the risk of blood clots forming in the lower extremities during the surgery. Studies in which general anesthesia was compared with regional anesthesia in patients who have received both forms of anesthesia have consistently demonstrated a patient preference and improved satisfaction with regional anesthesia.

## **Is regional anesthesia safe?**

Anesthesia, whether general or regional, is extremely safe today due to advances in medical knowledge, the availability of new and safer medications and techniques, as well as technological advances in the monitoring of a patient during and after the surgery. While no technique is completely risk free, the complications and side effects associated with regional anesthesia tend to be of a minor nature such as tenderness and/or bruising at the injection site. Occasionally a nerve block may be followed by numbness and tingling in the distribution of the blocked nerve(s) for a limited time following the nerve block. Significant complications associated with regional anesthesia are extremely rare.

### **How is the nerve block performed, and is it painful?**

All blocks are normally performed in the Block Room before you enter the operating room with the exception of epidural and spinal anesthesia. An intravenous line is inserted, monitors are attached, and your anesthesia team will explain the entire procedure to you and answer any questions you may have. You will then be sedated to a point of comfort and, in fact, most patients hardly remember the block being performed. Before the block is performed the skin is cleaned with a sterile solution followed by a small skin wheal of local anesthetic at the block needle insertion site. All that you will feel is a small pinch, and usually not much after that.

### **Will I see, feel, or hear anything in the operating room?**

Before the start of surgery the block is tested to make sure that it is 100% effective, i.e. you don't feel anything. The anesthesia team will then start an infusion of a sedative through your intravenous line that will keep you as sleepy as you want to be. Some patients prefer to be mildly sedated, while others want to be completely asleep (which we can achieve with sedation alone). It is your choice.

### **Will I be nauseated during or after the surgery?**

It is uncommon for patients undergoing orthopedic surgery under regional anesthesia and sedation to complain of nausea for a number of reasons. Orthopedic surgery itself does not cause nausea nor does regional anesthesia (unlike general anesthesia). In addition, one of the main sedatives used during the surgery actually prevents nausea. Finally, because the surgery is performed under regional anesthesia, you do not need opioids (morphine-like medications) to control your pain during or immediately after the surgery. As a result, another potential cause of nausea is removed.

### **Will I have pain after the surgery?**

The block will last for a varying amount of time depending on the local anesthetic agents used to perform the block. The usual duration is about 6 – 10 hours, however, local anesthetics can be used that last for 20 – 24 hours. During this time your arm or leg will remain completely numb (anesthetized). The surgical team will prescribe oral pain medications for you to take when the block starts wearing off. It is important that you take these medications as soon as you start feeling some pain so that there is a smooth transition from the pain control provided by the block to that provide by the oral analgesics. The more the pain is allowed to build up, the more difficult it is to control.