

# Injections: Radio Frequency Ablation (Lesioning)

## WHAT IS RADIOFREQUENCY (RF) LESIONING?

Radiofrequency lesioning is a procedure in which special needles are used to create lesions along selected nerves. The needles heat the nerve to 80°C (about the temperature of hot, not boiling, water). When this heat is applied to the nerve for about 2-3 minutes, the nerve stops carrying pain signals. The body tends to try to regrow nerves that are blocked in this manner but that process can take up to a year or longer.

### AM I A CANDIDATE FOR RADIOFREQUENCY LESIONING?

Radiofrequency lesioning is offered to patients with certain types of low back or neck pain (predominantly pain from the facet joints). You must have responded well to diagnostic local anesthetic blocks (Medial Branch Blocks) to be a candidate for RF lesioning. How effective RF lesioning will be to you depends on how well you respond to the "temporary" or diagnostic block.

# WHAT ARE THE BENEFITS OF RADIOFREQUENCY LESIONING?

The procedure disrupts nerve conduction (such as conduction of pain signals), and it may in turn reduce pain, and other related symptoms. Approximately 70-80% of patients will get a good block of the intended nerve. This should help relieve that part of the pain that the blocked nerve controls. Sometimes after a nerve is blocked, it becomes clear that there is pain from the other areas as well.

## HOW LONG DOES THE PROCEDURE TAKE?

Depending upon the areas to be treated, the procedure can take from about 30 minutes to an hour.

#### **HOW IS IT ACTUALLY PERFORMED?**

Since nerves cannot be seen on x-ray, the needles are positioned using bony landmarks that indicate where the nerves usually are. Fluoroscopy (x-ray) is used to identify those bony landmarks. After needle placement, extremely low voltages are applied to the needle to test for proper placement. After confirmation of the needle tip position, a small amount of local anesthetic is injected. After the nerve is sufficiently numbed, higher radiofrequency voltages are applied and the nerve heats to the desired temperature.

#### **HOW PAINFUL IS IT?**

All of our procedures begin by injecting a small amount of local anesthetic through a very small needle. It feels like a little pinch and then a slight burning as the local anesthetic starts numbing the skin. After the skin is numb, the procedure needle feels like a bit of pressure at the injection site. Most people choose to be drowsy or more heavily sedated for these procedures. There may be soreness after the procedure. Ice packs help this.

### WILL I "BE ASLEEP" FOR THIS PROCEDURE?

You can choose to have the procedure done under local anesthetic only. You can also choose to have IV sedation, which can keep you very comfortable. It can range from some drowsiness or you may have little or no memory of the procedure depending upon your comfort level, regardless of the amount of sedation, you must not eat or drink anything for 6 hours prior to this and you must also have a driver when choosing sedation. It is OK to take your medications with a sip of water with either decision.



### WHAT SHOULD I EXPECT AFTER THE PROCEDURE?

After recovery from the sedation, you should have someone drive you home. There will be some muscle soreness that may persist for up to a week. Application of ice packs will help. Your doctor will also discuss with you any medications you can take to help with the post-procedure discomfort. Although most patients experience significant relief within a week, it can sometimes take up to 6 weeks.

### CAN I GO TO WORK TO WORK THE NEXT DAY?

You should be able to return to your work the next day. Sometimes soreness at the injection site causes you to be off work for a day or two.

### HOW LONG WILL THE EFFECTS OF THE PROCEDURE LAST?

If successful, the effects of the procedure can last from 6-18 months.

## HOW MANY PROCEDURES DO I NEED TO HAVE?

Your doctor will evaluate this on subsequent visits. Keep in mind that although this is a "permanent" procedure, the body tends to re-grow these nerves over time. You may need to have it repeated in the future.

#### WHAT ARE THE RISKS AND SIDE EFFECTS?

Generally speaking, this procedure is safe. However, with any procedure there are risks, side effects, and the possibility of complications. The risks and complications are dependent upon the sites that are lesioned. Any time there is an injection through the skin, there is a risk of infection. This is why sterile conditions are used for these blocks. The needles have to go through skin and soft tissues, which will cause soreness. The nerves to be lesioned may be near blood vessels or other nerves which can be potentially damaged. Great care is taken when placing the radio frequency needles, but there is a rare risk of complications. Your doctor will discuss all of the risks when you meet with him/her prior to the procedure.

#### WHO SHOULD NOT HAVE THIS PROCEDURE?

The following patients should not have this injection: if you are allergic to any of the medications to be injected, if you are on a blood-thinning medication (e.g. Coumadin, injectable Heparin), or if you have an active infection going on. With blood thinners like Coumadin, your doctor may advise you to stop this for a few days beforehand or take "bridge therapy" with Lovenox prior to the procedures. Anti-platelet drugs like Plavix may have to be stopped for 5-10 days prior to the procedure.