



## PROCEDURE INFORMATION

# SYMPATHETIC NERVE BLOCK

### WHAT ARE THE SYMPATHETIC NERVES AND WHY ARE SYMPATHETIC NERVE BLOCKS HELPFUL?

The sympathetic nerves run on the front surface of the spinal column and not in the spinal canal with the nerves that provides sensation and strength to your arms and legs.

The sympathetic nerves are part of the autonomic nervous system, which basically controls functions such as blood flow and temperature regulation to the arms and legs, sweating, heart rate, digestion, and blood pressure.

The autonomic nervous system is responsible for controlling bodily functions that you do not think about or have direct control over. However, there is a connection between the central nervous system (that you have control over) and the autonomic nervous system (which is auto-regulated). Regulation of this system may become altered secondary to injury. When regulation of this system is altered, various pain states can occur including complex regional pain syndrome (CRPS), also known previously as reflex sympathetic dystrophy (RSD).

### WHAT IS A SYMPATHETIC BLOCK AND WHY IS IT HELPFUL?

A sympathetic nerve block involves injecting numbing medicine around the sympathetic nerves in the back or neck. By doing this, the sympathetic nervous system in that area is temporarily 'switched off' in hopes of reducing or eliminating pain.

If the pain is substantially improved after the block, then a diagnosis of sympathetically mediated pain is established. The therapeutic effects of the anesthetic can occur, at times, longer than would be normally expected. The goal is to reset the sympathetic to a normal state of regulation. If the initial block is successful, then additional blocks may be repeated if the pain continues to sequentially diminish.

### WHAT WILL HAPPEN TO ME DURING THE PROCEDURE?

An IV will be started for safety, and relaxation medicine can be given if necessary. After lying on an x-ray table, the skin over the area to be injected will be sterilely cleansed.

Next, the physician will numb a small area of skin with numbing medicine (anesthetic) which stings for a few seconds. The physician will use x-ray guidance to direct the needle to the sympathetic plexus of nerves. The physician will then inject contrast dye to confirm that the medicine only goes over the targeted sympathetic nerves. Once this occurs, numbing medicine (anesthetic) will then be slowly injected.

### WHAT SHOULD I EXPECT AFTER THE PROCEDURE?

20-30 minutes after the procedure you will move the affected area to try and provoke your usual pain. You may or may not obtain improvement in the first few hours following the injection depending upon if the sympathetic nerves are carrying your pain signals.

You may notice increased warmth in the affected extremity for 4-18 hours after the block. If the sympathetic nerves in the neck are injected (e.g. stellate ganglion block), you will also notice a slight drooping of the eyelid, redness of the eye, facial flushing, increased warmth, and mild difficulty swallowing for several hours. This is normal, and should resolve over 4-18 hours.

You should report your remaining pain (if any) and record the relief you experience during the next week on a "pain diary."

You may notice a slight increase in your pain lasting for several days as the numbing medicine wears off. You might also experience mild pain at the injection site for several days. Ice will typically be more helpful than heat in the first 2-3 days after the injection. You may take your regular medication after the

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procedure, but try to limit your pain medication for the first 4-6 hours after the procedure so the diagnostic information obtained is accurate.

On the day of the injection, you should not drive and should avoid any strenuous activities. On the day after the procedure, you may return to your regular activities. If your pain is improved from this procedure, start your regular exercise/activities in moderation. Even if you are slightly improved, gradually increase your activities over 1-2 weeks to avoid recurrence of your pain.

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

As with all invasive medical procedures, there are potential risks. Risks are rare, but may include infection, bleeding, allergic reaction, headache, dural puncture, temporary numbness or tingling, weakness, and nerve injury.

Side effects are rare and, when they occur, are usually due to the steroid itself. These include, but are not limited to, pain at the injection site, headache, increased blood sugar, water retention, facial flushing, irritability, sleeplessness, burst of energy, and skin discoloration at the injection site.

You should contact your doctor or go to the emergency room if you experience any of the following symptoms: Severe headaches with nausea or vomiting, fever greater than 101°F, loss of control of bowel or bladder function, severe pain, and/or loss of function or feeling in the arms or legs.

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THIS PAMPHLET IS FOR GENERAL EDUCATION ONLY. SPECIFIC QUESTIONS OR CONCERNS SHOULD ALWAYS BE DIRECTED TO YOUR PROVIDER. YOUR PROVIDER CAN EXPLAIN POSSIBLE RISKS OR SIDE EFFECTS AND OTHER READILY AVAILABLE TREATMENT OPTIONS