

# **Stellate Ganglion Blocks**

## **1. What is the Stellate Ganglion?**

The Stellate Ganglion is a bundle of nerve fibers located in the lower neck. It is part of the sympathetic nervous system.

## **2. What is the sympathetic nervous system?**

The sympathetic nervous system is responsible for the body's response to situations during times of stress or danger. For example, sympathetic nerves cause the heart to beat faster and adrenaline to be released in preparation for our response to a stressful situation. In addition, sympathetic nerve impulses cause the constriction of peripheral blood vessels (the arteries and veins in our arms and legs). The sympathetic nervous system is important for our physical protection.

## **3. How are sympathetic nerves involved with pain?**

Sometimes a sympathetic nerve may be unnecessarily stimulated as a result of injury or other trauma to the body. In this situation, the involved sympathetic nerve will cause the blood vessels in the arm or leg to constrict and remain constricted resulting in poor circulation to that limb. The person may then experience pain and possibly swelling in the extremity, nail changes, unusual color of the skin, and temperature changes in the extremity. If the sympathetic nerve impulse is blocked, the blood vessels dilate, circulation is improved and pain relief may occur.

## **4. What conditions are treated with sympathetic nerve blocks?**

The most commonly treated condition is Reflex Sympathetic Dystrophy (RSD) also unknown as Complex Regional Pain Syndrome (CRPS). These blocks may also be used in conditions in which increased circulation to a limb would be beneficial for healing as in diabetic neuropathy, Raynaud's Syndrome, Berger's Disease or slow healing wounds.

Sympathetic blocks may also be helpful in the diagnosis of certain conditions.

## **5. What can I expect during a Stellate Ganglion block?**

Prior to a Stellate Ganglion block an IV is started so that you may be given IV sedation. You will be given supplemental oxygen through a nasal cannula. You will be connected to a monitor to observe your blood pressure, heart rate and rhythm and oxygen level.

Skin thermometers will be placed on your hands. The physician and nurse will observe the thermometers for an increase in temperature in the hand on the side that was injected. A rise in temperature indicates that the Stellate Ganglion block was successful.

For the procedure you will be placed on your back with your neck extended. You will be asked not to speak or swallow during the procedure. The physician will feel your neck to locate the area that he will inject. The physician will cleanse the skin with an antibacterial solution. The skin will be numbed with a local anesthetic and then the physician will inject the medication into the stellate ganglion.

The physician typically injects a combination of local anesthetic and steroid.

#### **6. Are there risks with a stellate ganglion block?**

As with any procedure, there is a potential for problems. The risks with stellate ganglion blocks though rare, are bruising swelling or inflammation at the injections site; infection, bleeding; transient numbness or drooping of the face; hoarseness; difficulty swallowing; breathing difficulty; or collapse of the lung.

#### **7. What can I expect immediately after the stellate ganglion block?**

The nurse will continue to monitor you for approximately one hour after the injection. This will include your blood pressure, heart rate, oxygen level and the temperature in your hands.

After a stellate ganglion block the temperature in your hand should increase. You will most likely experience “Horner’s Syndrome” on the injected side. This is an expected side effect and indicates a successful block. Signs of Horner’s Syndrome include drooping of the face on the side that was injected, constriction of the pupil, redness and watering of the eye, flushing of the face, nasal congestion and hoarseness. These side effects are temporary and last a few hours.

You will notice that your arm and hand becomes rosy in color, feels warm and the blood vessels have dilated. The most important result is that the pain should decrease.

#### **8. How should I care for myself after the stellate ganglion block?**

You should take it easy on the day of the injection. Normally you may resume your normal activities the following day.

If the injection site is uncomfortable, you may apply ice to the injection site during the first 24 hours after the injection. After 24 hours, you may apply ice or heat if you wish. Whatever you choose to use, apply only 20 minutes at a time (20 minutes on/20 minutes off). Continuous use of ice or heat may damage your skin.

You may continue your pain medications as needed and your other medications as prescribed.

Please start eating soft foods and progress your diet to solid food s as you tolerate swallowing.

#### **Please notify your doctor if you experience:**

- ◆ Excessive bleeding at the injection site
- ◆ Dizziness or weakness
- ◆ Signs of infection at the injection site
- ◆ New onset of shortness of breath