



## STELLATE AND T2 GANGLION BLOCKS

This page is all about Stellate and T2 ganglion blocks, why we do it, what it does and what you should expect after a Stellate block. More information is available at <http://www.fpmx.com.au/solutions.html#diagnostic-procedures>

### WHAT ARE THE STELLATE AND T2 GANGLIONS?

The nerves that control blood flow and some of the pain in the upper part of the body join together in swellings called the cervical sympathetic ganglia. The inferior cervical sympathetic plexus is 'star shaped' and is usually called the "stellate ganglion" and supplies the head and neck and arms to some extent. The T2 Ganglion is slightly lower and primarily supplies the arms rather than head and neck. There are paired ganglions on either side of the spine (back bone) in the neck, between the spine and the gullet (oesophagus) at the level of the voice box (larynx) and breast bone (sternum) respectively. There are four very important main blood vessels (arteries) that supply the brain and run close to the stellate ganglion, and the spinal cord runs in a bony tube behind the main part of the spine. We perform Stellate Ganglion blocks with ultrasound or xray guidance and T2 ganglion blocks using x-ray guidance to deliver the local anaesthetic to the right spot and to avoid these important structures. Ladies if you may be pregnant, please tell your doctor ASAP.

### WHAT DO THE STELLATE AND T2 GANGLIONS DO?

They control blood flow and sweating to the upper part of the body, from the top of the head to low on the chest on the side where the ganglion is situated. The Stellate Ganglion also controls the size of the pupil of the eye, and the droopiness of the eyelid, sweating and some other less noticeable functions. They are part of the background system (sympathetic nervous system) that the body uses to keep things going automatically.

### WHAT IS A STELLATE OR T2 GANGLION BLOCK?

It is an injection of local anaesthetic into the respective "ganglion".

### WHY DO A STELLATE OR T2 GANGLION BLOCK?

To relieve pain, to help improve blood flow to an area of the body that has insufficient blood flow, and in a case of shingles, to encourage antibodies to enter an area starved of blood flow.

### WHAT PREPARATION IS REQUIRED?

Please take your normal medications with a sip of water (Except: blood thinners other than aspirin and diabetics on tablets or insulin - please ask your doctor). Please have nothing else to eat or drink for 4 hours before the injection. Expect to stay 3-5 hours and arrange someone to take you home after the procedure.

### WHAT COULD GO WRONG?

Potential side effects include temporary husky voice, weakness in the arm, breathing difficulties, faintness and dizziness. The potential risks include bleeding, infection, spinal



block, unwanted nerve injury and damage to nearby structures. The chance of a catastrophic problem is very small.

## WHAT EFFECTS WILL I NOTICE IF EVERYTHING IS NORMAL?

Usually the first thing you will notice is that your pain has gone. Your eyelid may droop, and the eyeball looks smaller and slightly red due to the increased blood supply (more likely after a Stellate block). The nose may become "sniffly" on that side. The local anaesthetic agent may spread onto other nearby nerves causing a husky voice or arm weakness for several hours. Some people also get headaches - due to the increased blood flow. Some people have local soreness or bruising. The risk of permanent harm is minimal.

## WHAT SHOULD I WORRY ABOUT?

Report fevers  $>38^{\circ}\text{C}$ , unexpected redness or severe pain, new numbness, weakness or shortness of breath. Breathing difficulty is the main hazard due to bruising or puncturing the top of the lung. If you do get short of breath, go at once to the nearest Emergency Department, and tell them you have had the block.

## HOW WILL I FEEL AFTER I GET HOME?

It is very difficult to predict. Most patients feel sleepy because the pain has stopped them sleeping normally, and now with no pain, sleep happens. It is common to feel a little unbalanced for a while, so we advise that you rest for a few hours, and don't do anything hazardous - like pouring boiling water, make any important decisions or sign contracts for 12 hours. Apply ice to painful areas for 24 to 28 hours.

## HOW SOON CAN I EAT AND DRINK?

When you feel like it - BUT your first drink should be water in case your gullet is numb and the water goes the wrong way. A little drop of water doesn't matter - hot tea or food does matter.

## HOW MANY BLOCKS WILL BE NEEDED?

Usually three blocks will indicate whether you are going improve with this treatment. In acute shingles we try to do these blocks at 48 hr intervals, in chronic conditions weekly or fortnightly.

Please make a review appointment in 2 - 4 weeks.