

## Stellate Ganglion Injection for Smoking Addiction

### OVERVIEW

This injection can both diagnose and treat pain coming from the sympathetic nerves. It is a common treatment for shingles and Complex Regional Pain Syndromes affecting the head, face, neck, or arms. The Stellate ganglion injection resets the insula (areas pictured in red in figure 2) which is the addiction center of the brain. Recent research has shown that cigarette smokers who suffer damage to the insular cortex, from a stroke for instance, have their addiction to cigarettes practically eliminated. The patients have been able to quit smoking easily, immediately without relapse or the urge to smoke.

### STEP 1

Patients lie on their back on a table equipped with a special x-ray (fluoroscopic) unit, and an intravenous (IV) line is started to administer medication that relaxes the patient. A patch (consisting of lidocaine and tetracaine) may be placed on the right side of the patient's neck above the stellate ganglion to numb the area. A local anesthetic numbs the skin and all the tissue down to the ganglion nerves.

### STEP 2

The physician slides a needle through the anesthetized track. A contrast solution is injected so the physician can use an x-ray (fluoroscope) to see the stellate ganglion nerves and to confirm the correct location of the needle tip.

### STEP 3

Next, a mixture of anesthetic, saline and anti-inflammatory medicine is injected around the ganglion nerves to block sympathetic signals from reaching the brain.

### COMMON SIDE EFFECTS

Common side effects include nasal congestion and a bloodshot, droopy eye on the side the injection was given, as well as a hoarse voice and a warm tingling sensation in the arm and hand. They usually disappear after several hours. If the first injection alleviates the cravings for nicotine there will be no need for additional injections unless the urge returns.

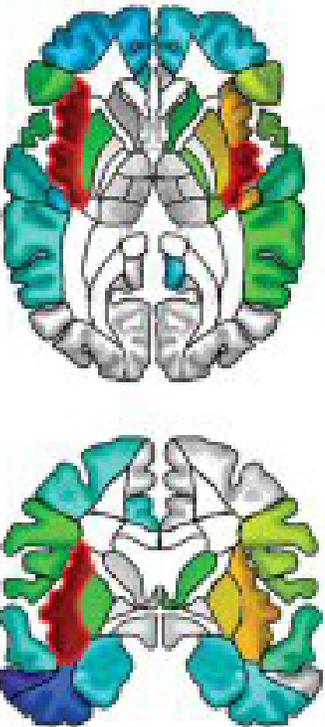
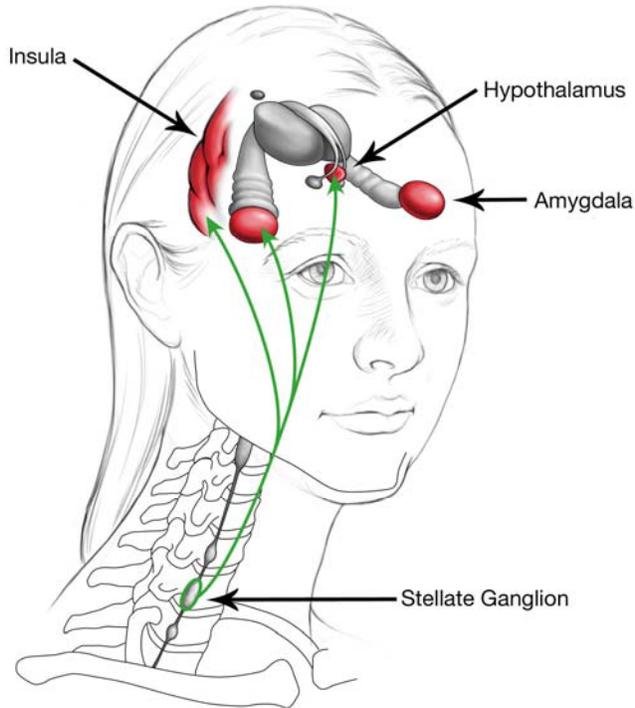


Figure 2