

## Sympathetic Block

### What is the Sympathetic Chain?

The sympathetic chain refers to long bundles of nerves that run along both sides of the front of the spinal column.

These nerves predominantly carry sympathetic fibers— that is, nerve fibers that are responsible for your “fight or flight” response, and play a key role in the development of chronic pain.

This block is can be utilized to treat a painful condition of the lower limb known **Complex Regional Pain Syndrome (CRPS)**. It can also be useful for **severe abdominal pain and pelvic pain**.

### What is a Sympathetic Block?

A sympathetic nerve block involves the injection of a local anesthetic near an area of the sympathetic chain. As noted, above, a blockage of the sympathetic system can break the chronic pain cycle and bring effective pain relief.

The most commonly performed sympathetic blocks are:

- **Celiac plexus block** – for abdominal pain.
- **Lumbar sympathetic plexus block** – for leg CRPS.
- **Superior hypogastric plexus block** – for pelvic pain.
- **Ganglion Impar** – for rectal or perineal pain.

### How is the Sympathetic Block Performed?

A local skin anesthetic is given first to numb the area. Next, a needle is directed towards the target ganglion under fluoroscopic guidance (low dose X-ray).

Once the needle is in the proper location, a small amount of contrast solution is injected to confirm that the medication will spread in an appropriate area. Next, a local anesthetic, such as Bupivacaine, will be administered to block the sympathetic ganglion. The medication will be administered slowly to avoid causing low blood pressure.

In special cases, your physician can use an agent such as Ethanol to treat the ganglion. This will burn the nerve bundle, and can result in longer-term pain relief.

### Risks and Complications:

Sympathetic nerve blocks are considered safe in general. As with any medical procedure, there are potential risks associated with the procedure. The most common adverse effect is a temporary decrease in blood pressure after the procedure, which is why we will usually place an IV prior to procedure. Low blood pressure will usually resolve 1-2 hours after the procedure.

Rarer complications are bleeding, infection, nerve injury, and allergic reaction. Through the use of image guidance and sterile technique, we will take every measure to minimize these potential risks and maximize the therapeutic benefit.