



# Cryo Nerve Block Therapy Patient Education

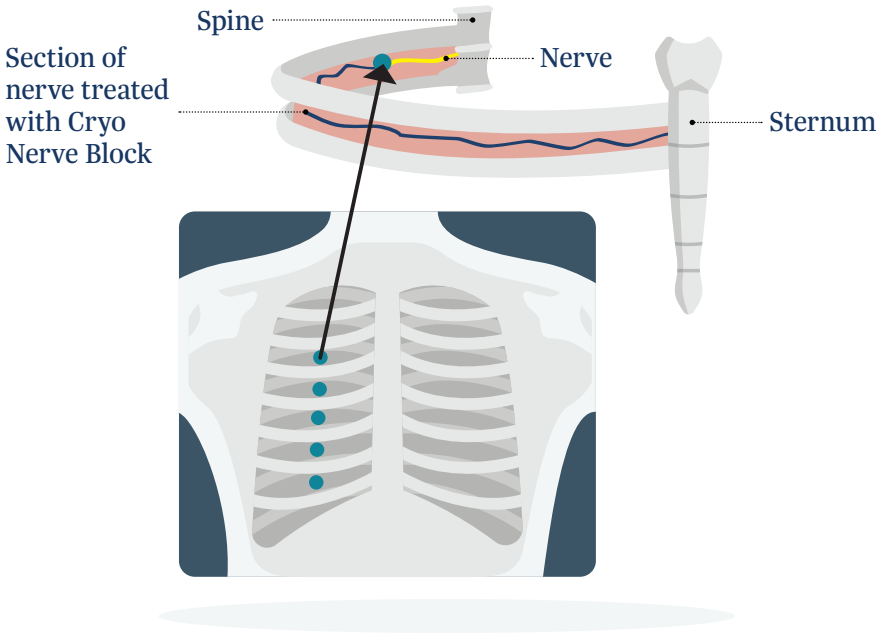
A non-opioid solution for post-operative pain

**AtriCure**

# What Is Cryo Nerve Block Therapy?

Cryo Nerve Block Therapy helps relieve post-surgical pain by freezing the nerves in the chest beneath each rib. These nerves are one of the main sources of pain after chest surgery.

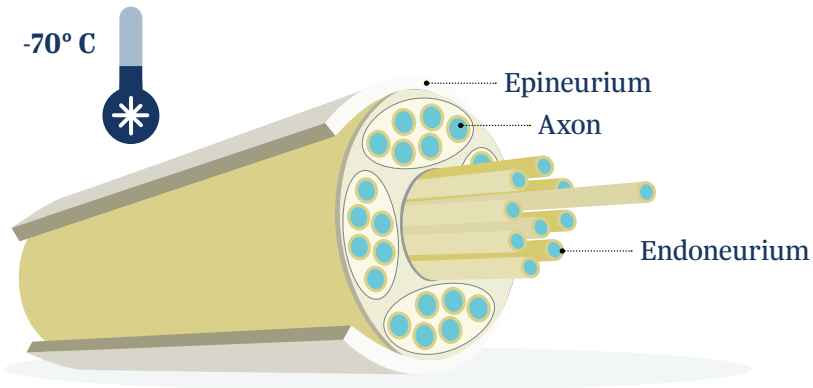
Cryo Nerve Block works by temporarily blocking pain signals, which is like shutting off the nerve. After your surgery, you will have a feeling of numbness — **which means a lot less pain**. The numbness sensation will slowly go away over several months during the healing process.



**Cryo Nerve Block works by temporarily blocking nerve signals — which means less pain after surgery**

# How Does Cryo Nerve Block Work?

Your nerve has two main parts: an outer protective structure and the nerve fibers inside that sense and send pain signals to the brain. Cryo Nerve Block prevents these signals from being sent to the brain by freezing the nerve at a specific temperature, which disables it without damaging the outer protective structure.



As you recover, the nerve will regrow over several months and normal feeling in your chest will gradually return. With this therapy, you can be doing light activity, coughing, and deep breathing without pain.



## A Long-Lasting Treatment

After receiving Cryo Nerve Block, you should begin feeling numbness in your chest within a few days. The numbness may last for several months as the nerve regrows 1-2 mm per day. As the numbness fades, feelings of fullness or swelling will eventually give way to tingling, itching, or other sensations.



**With Cryo Nerve Block, you'll be trading pain for the feeling of numbness**

# Will I Still Experience Some Pain After Surgery?

## Types of Pain After Surgery

It is normal to experience some pain after surgery, but for many, Cryo Nerve Block helps relieve nerve pain. There are three primary types of pain you may have:

- Pain from the **incision**, which results from the surgeon cutting into the skin and lasts about 7-10 days.
- **Muscle pain** from the surgery, which feels like tightness and may last up to six weeks.
- **Nerve pain**, which feels like sharp, shooting, or burning pain, or like numbness. It also causes your skin to feel pain even when lightly touched (called hypersensitivity). In many cases nerve pain radiates (moves) from the back to the front of the chest.

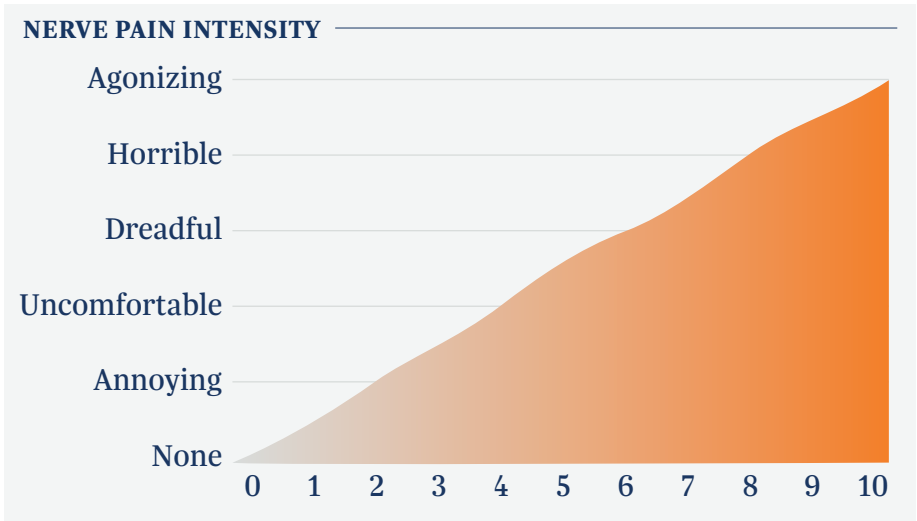
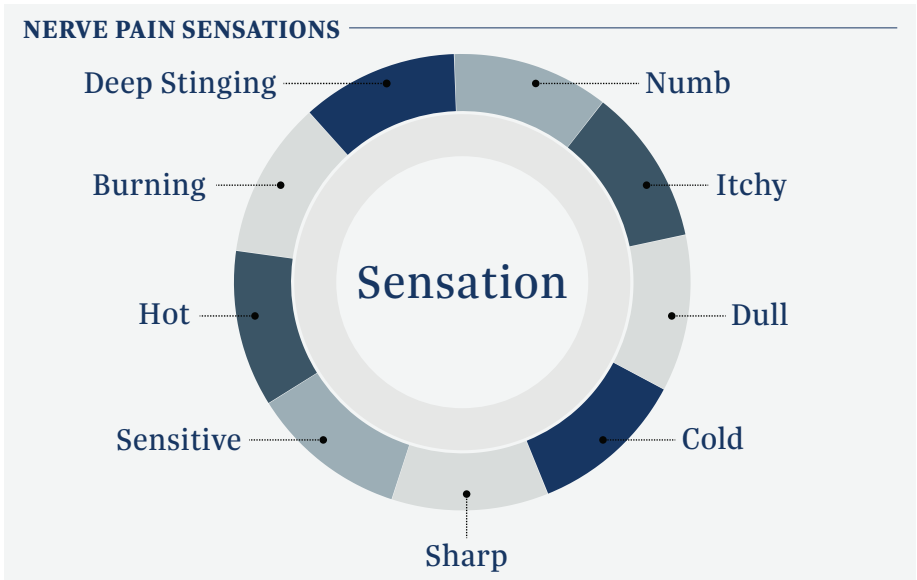
All these types of pain are related to the incision the surgeon made in the body's tissues — skin, muscles, and nerves — during surgery. Post-surgery nerve pain can last up to one year; in rare cases, it might not be relieved.

**For many, Cryo Nerve Block helps relieve nerve pain, which is common after surgery**

# Talking to Your Doctor About Pain

Tell your physician team when the numbness goes away and normal sensations return. However, if during surgery there was damage to the nerve's protective structure near the incision site, you may again notice nerve pain in that area as you regain feeling in the chest. Contact your physician team to discuss the best ways to address the pain.

These visuals can help you discuss nerve pain with your physician team.



# Learn More About Cryo Nerve Block Therapy

Visit the website to view patient testimonials and learn how Cryo Nerve Block is used in surgical procedures.



## Indications

### **cryoICE® cryoSPHERE®+ Probe**

**U.S. Indications: For Adult Patients** AtriCure's cryoICE® cryoSPHERE®+ cryoablation probes are sterile, single use devices intended for use performed by freezing target tissues, creating an inflammatory response (cryonecrosis) for blocking pain by temporarily ablating peripheral nerves. **For Adolescent Patients** The cryoICE cryoSPHERE+ cryo-ablation probes are intended for use to temporarily block pain by ablating intercostal nerves under direct visualization<sup>1</sup> in adolescent patients of at least 12 years of age.

<sup>1</sup>Direct visualization, in this context, requires that the surgeon is able to see the targeted tissue for cryoablation directly or with assistance from a camera, endoscope or other similar optical technology.

### **cryoSPHERE MAX Probe**

**For Adult Patients** AtriCure's cryoICE® cryoSPHERE® MAX cryoablation probes are intended for use to temporarily block pain by ablating peripheral nerves performed by freezing target tissues, creating an inflammatory response (cryonecrosis). **For Adolescent Patients** The cryoICE cryoSPHERE MAX cryoablation probes are intended for use to temporarily block pain by ablating intercostal nerves under direct visualization<sup>1</sup> in adolescent patients of at least 12 years of age.

<sup>1</sup>Direct visualization, in this context, requires that the surgeon is able to see the targeted tissue for cryoablation directly or with assistance from a camera, endoscope or other similar optical technology..

## **ATRICURE, INC.**

7555 Innovation Way  
Mason, Ohio 45040 USA  
+1 (513) 755-4100  
+1 (866) 349-2342  
www.AtriCure.com

PM-US-3362B-0826-G

**AtriCure**