ELEVATE ORTHOPEDICS

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Understanding Thumb CMC Denervation Surgery

This handout provides information about surgery for thumb carpometacarpal (CMC) joint pain, called a denervation procedure. Please read it carefully and feel free to ask your healthcare team any questions you may have.

What is the Thumb CMC Joint?

The thumb CMC joint is located at the base of your thumb, where the long bone of your thumb (metacarpal) meets one of the wrist bones (trapezium). This joint is crucial for a wide range of hand movements, including pinching, gripping, and opposition (touching your thumb to your other fingers).

What is Thumb CMC Osteoarthritis?

Osteoarthritis is a common "wear and tear" condition that can affect the cartilage in the CMC joint. As the cartilage breaks down, the bones can rub together, causing pain, stiffness, swelling, and decreased function.

What is Thumb CMC Denervation?

A thumb CMC denervation is a surgical procedure designed to **reduce pain** in the CMC joint. It works by carefully cutting the small sensory nerves that transmit pain signals from the joint to your brain. Importantly, this procedure aims to relieve pain **without** affecting the strength or stability of your thumb.

Why is Denervation Recommended for Me?

Your team has recommended a thumb CMC denervation because you are experiencing significant pain from osteoarthritis in this joint, and non-surgical treatments (such as splinting, medications, and injections) have not provided adequate relief. This procedure may be a good option if you have pain primarily from arthritis localized to the CMC joint.

What to Expect Before Surgery:

- **Pre-operative Appointment:** You will have an appointment with your surgeon and/or their team to discuss the surgery in detail and answer your questions.
- **Fasting Instructions:** You will receive specific instructions about when to stop eating and drinking before your surgery, generally nothing to eat after midnight before surgery.
- **Anesthesia:** The surgery is usually performed under regional anesthesia (numbing your arm) or general anesthesia (putting you to sleep). This will be discussed with you by the anesthesia team. Either type of anesthesia requires you to have a ride home after surgery.

What Happens During Surgery?

The surgery typically involves the following:

1. **Incision:** A small incision will be made at the base of your thumb.
2. **Nerve Identification:** Dr. Anderson will carefully identify the small sensory nerve branches that supply the CMC joint.
3. **Nerve Transection:** These specific sensory nerve branches will be cut (transected) where they enter the joint.
4. **Closure:** The incision will be closed with sutures. A splint will be applied to your hand and thumb to protect the incision and let the thumb rest.

What to Expect After Surgery:

- **Pain Management:** It is normal to experience **some** pain after surgery. Often non-prescription pain medication will be sufficient to alleviate this discomfort. Follow the instructions carefully and take the medication as needed.
- **Swelling and Bruising:** Swelling and bruising around the surgical area are common and should gradually improve over several days to weeks. Elevating your hand can help reduce swelling.
- **Dressing/Splint:** Keep your dressing or splint clean and dry. Follow your surgeon's instructions on when and how to change it. It typically will be removed at your wound check appointment.
- **Movement:** You will likely be encouraged to move your fingers **gently** soon after surgery to prevent stiffness. However, avoid forceful grasping or pinching with your thumb until your team advises you it is safe.
- **Return to Activities:** The time it takes to return to your normal activities will vary depending on your individual healing and the type of work or activities you do. Your team will provide you with guidelines.

Potential Risks and Complications:

While thumb CMC denervation is generally a safe procedure, potential risks and complications can include:

- **Infection:** Redness, increased pain, swelling, or drainage from the incision.
- **Wound dehiscence:** Over doing it after surgery can pull apart the incision, let your hand rest after surgery to avoid this.
- **Nerve Injury:** Although the goal is to cut only the sensory nerves, there is a small risk of injury to nearby other nerves, which could affect thumb movement or strength or skin sensation.
- **Bleeding or Hematoma:** Excessive bleeding under the skin.
- **Scarring:** Some scarring is expected.
- **Persistent Pain:** While the goal is pain relief, some patients may continue to experience some level of pain. The surgery is generally effective for 85-90% of patients.
- **Numbness or Tingling:** Temporary or, rarely, persistent numbness or tingling in the thumb or surrounding area.
- **Complex Regional Pain Syndrome (CRPS):** A rare condition characterized by chronic pain, swelling, and changes in skin color and temperature.

When to Contact Your Doctor:

Call your team immediately if you experience any of the following:

- Fever of 100.4°F (38°C) or higher.
- Increased pain that is not relieved by medication.
- Significant swelling or redness around the incision.
- Drainage or pus from the incision.
- Numbness or tingling that is getting worse.

Follow-Up Appointments:

You will have follow-up appointments with your team to monitor your healing and progress. Be sure to attend all scheduled appointments.

Important Notes:

- Denervation primarily addresses pain and does not reverse the underlying arthritis in the joint.
- The long-term effectiveness of denervation can vary between individuals.
- While denervation aims to preserve thumb strength and stability, it's important to follow your surgeon's and therapist's instructions during your recovery.

	Thumb CMC Denervation	**CMC Arthroplasty (LRTI - Traditional Surgery)**
What happens?	"Unplugs" pain nerves; joint stays as is.	Removes a bone (trapezeum) and uses a tendon to create a cushion.
Recovery Time	2–6 weeks (Back to full activity fast).	4-6 months (Requires significant therapy).
Surgical Incision	Small (1–2 cm) over the joint.	Larger; may require a second incision in the forearm to harvest a tendon.
Strength	Preserves original grip/pinch strength.	May result in a slight decrease in pinch strength.
Sensation	No loss of skin sensation.	Small risk of numbness near the larger scar.
Success Rate	~80-85% durable pain relief	~95% durable pain relief.
Future Options	"No bridges burned"—can still do LRTI later.	Permanent change; revision is more complex.