

Facial Reanimation Surgery- Selective Neurectomy

What is selective neurectomy?

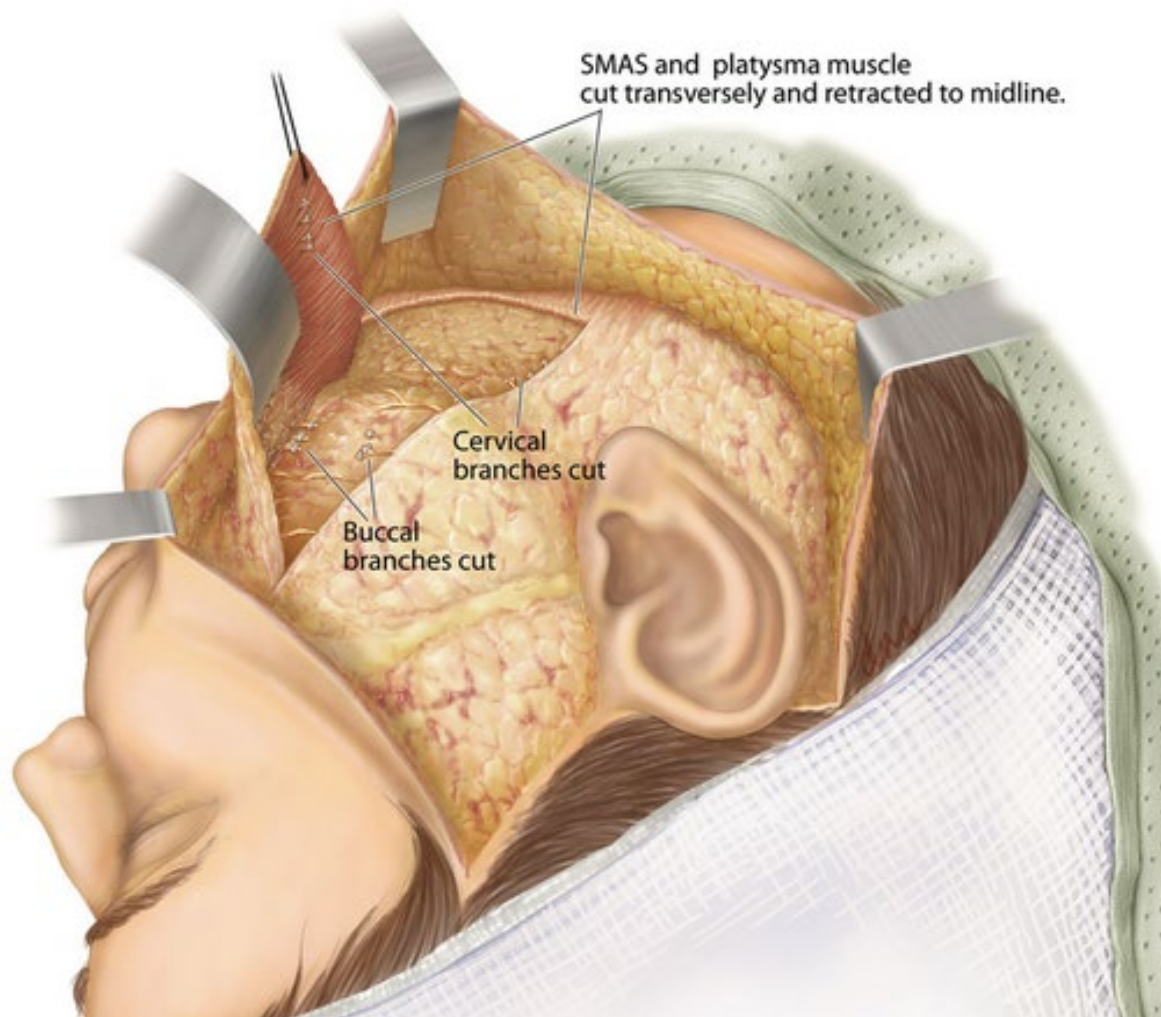
Selective neurectomy is a procedure done to improve synkinesis. **Synkinesis** is a condition in which voluntary muscle movement causes an involuntary contraction of another muscle. For example, a person might voluntarily smile and it would involuntarily cause their eye muscles to contract and squint.

Synkinesis can occur after facial nerve paralysis, or weakness caused by injury to the nerve. Some of the branches of the facial nerve are overactive and misguided. This results in tightness, discomfort, and abnormal movement of parts of the face, most commonly around the eye, mouth, and in the neck.

During selective neurectomy, the branches of the facial nerve causing synkinesis are cut to help relax the overactive muscles. This surgery is performed through an incision that runs along the hairline and is well hidden once healed (see figure 1). Often, a similar incision is made on the opposite side of the face (the side that works normally) and the skin and soft tissue of the face are tightened to help further improve symmetry. The goal is to make both sides look as similar as possible.

Figure 1

This image shows the incision made along the hairline. Soft issue and muscle (superficial musculo-aponeurotic system (SMAS) and platysma) are cut and moved to the side to gain access to the facial nerve branches (buccal and cervical branches).



(Courtesy of B. Azizzadeh MD, Beverly Hills, CA.)

What do I need to buy before the procedure?

- Vaseline®
- Q-tips®
- Hydrogen Peroxide 3%

What are my instructions before surgery?

- Stop smoking e-cigarettes, cigarettes, and recreational marijuana at least 3 months before surgery, or as soon as possible.
- Stop chewing tobacco 4 weeks before surgery. Ideally you should quit all forms of tobacco permanently before the surgery. We are happy to provide resources to help you quit smoking.
- Do not drink alcohol 24 hours before surgery.
- Be as active as possible, ideally with a regular walking routine.
 - Your goal is a minimum of three 10-minute walks every day. This will help your postoperative recovery.

What can I expect after the surgery?

You may be admitted for 1-3 days in the hospital. The exact length of your stay will be determined by a number of factors that vary between patients such as:

- The need for postoperative monitoring
- Walking strength and safety
- Comfort with home care instructions
- Pain control
- Drain output

What food and fluid restrictions do I have after the surgeries?

Ideally you will be walking, eating soft foods and drinking within the first 24 hours after surgery. Please see more information on diet below.

- Eat softer foods, it should be easy to chew and move the face as it heals. For example, avoid gum chewing, heavy salads, or foods that require lots of chewing like meat or bread rolls. Your surgeon will give you guidelines on when it is okay to reintroduce these foods.
- It is helpful to eat smaller meals 4-6 times day.
- Eat more fiber to avoid constipation.

- Hydration is important. Your goal should be 64 ounces of non-alcoholic beverages per day (preferably water) **unless** you have pre-existing medical issues that make this dangerous (such as heart failure or kidney problems). If you do have such a pre-existing condition, please follow your specialty doctor's directives on fluid limitations.
- You will need extra protein to help heal, and the body needs extra calories during recovery. Visit the following link for information on increasing protein: <http://www.med.umich.edu/1libr/Nutrition/IncreasingProtein.pdf>

What kind of activity can I do after the surgery?

- Take gentle walks for 10 minutes at a comfortable pace every 3-4 hours while awake. This both promotes better healing and decreases swelling and the risk of a possible blood clot.
- Do not lift anything greater than 10 pounds for 2 weeks post-op. (For reference, a gallon of milk is 9.2lb).
- Do not perform any strenuous aerobic activity (such as running or biking) until cleared by your surgeon, typically 2 weeks after surgery.
- Keep your head elevated as much as possible for the first 3 days after surgery.
- When you sleep keep your head propped on 2-3 pillows, or if more comfortable, sleep in a reclining chair.
- Expect swelling in the face. Swelling is typically the worst 3 days after surgery and then will gradually start to improve over the next 2 weeks, at which point most swelling will be gone. You will likely have a special wrap around your face after surgery to help minimize swelling. Your surgeon will let you know how long this should be worn.
- Facial Movement: You may not notice improvement in facial movement or tightness for a couple of weeks after surgery due to swelling.
 - Some people notice that their face feels more relaxed on the synkinetic side immediately after surgery.

- The non-synkinetic side will likely feel tighter for the first 1-2 weeks.
- There will be gradual changes over months.
- It is normal to have some weakness when closing your eye on the side of the face with synkinesis. This may result in dryness. If this occurs, your surgeon will prescribe a lubricating ointment to use when you sleep, and lubricating eye drops to use every few hours when awake, or more often if irritation is severe.
- A small percentage of people experience temporary lip or mouth weakness after the surgery. The majority of these cases are temporary and improvement may take months.

How will I take care of the surgery sites?

- Wash your hands before any post-op care.
- Keep the surgical area clean and uncovered (open to air) as much as possible.
- Clean incisions twice per day with half-strength hydrogen peroxide and water.
 - Mix these in a 1:1 ratio: start with ¼ cup of each.
 - After each cleansing, blot incisions dry and then place a thin coat of Vaseline over the incision.
- You can shower 24 hours after drains are removed and run soap and water over the surgery sites.
 - Do not have the shower spray hit directly.
 - No baths, hot tubs, or swimming till confirmed by surgeon.
- Drains are typically placed on both sides of the face and are usually removed during the hospital stay. If your surgeon determines you need to go home with a drain, you will receive instructions while in the hospital on how to care for the drain
- Sutures placed may be absorbable (will dissolve on their own) or may need to be removed. In cases in which non-absorbable sutures are placed, these

will be removed at your first postoperative appointment, usually 5-10 days after surgery. This appointment will be arranged before you leave the hospital.

How do I manage pain at home?

Medications:

- You will receive information about your prescribed medications including instructions, dosage, and side effects from a nurse at the time of your discharge.
- Limit your use of narcotics (opioids). These drugs can have serious side effects. You will be required by Michigan law to sign a consent form before going home with a narcotic prescription.
- We encourage the use of Tylenol (maximum of 3000 mg/day) unless you have a liver condition, in which case you should first discuss with your doctor. Ask your doctor before taking an NSAID (such as Motrin, ibuprofen, Aleve) or aspirin.
- **Do not** drink alcoholic beverages, operate machinery, or drive a car
- while taking pain medications.
- If taking narcotic pain medication, please do the following to minimize constipation:
 - Take a gentle stool softener such as Colace 100mg twice a day, which is available over the counter (without a prescription).
 - Try to increase fiber choices in your diet
 - Drink plenty of water. If you have no medical restrictions, please make your goal at least 64 ounces per day.

Ice

Use ice to manage your pain using the instructions below. Be sure to wrap the ice in a cloth to avoid possibly injuring the skin.

- Ice your face for 20 to 30 minutes every 3-4 hours while awake.

- Do this for the first 2-3 days after surgery to help minimize pain and swelling.
- Do not place ice directly on the surgical site, it may be placed as close to 2 inches away from any incision.
- You can continue to ice after 3 days if you find this comforting.

When can I return to work?

- This will be determined by the surgeons and will vary with the type of work you perform. Please discuss this with your doctor before going home from the hospital.
- Please fax disability papers to: (734) 998-2938 and be sure to include your full legal name and date of birth. Disability papers will be processed as received and can take up to 7 business days.

When should I call the doctors?

Call your doctor if you notice any of the following symptoms:

- New or increasing redness on your incision(s).
- New or increasing swelling of your incision(s).
- New or increasing separation of your incision(s).
- Increasing or foul smelling drainage from your incisions.
- Pain not controlled by pain medication when used as directed.
- Significant pain with movement, especially the surgical limb.
- Any temperature over 101 degrees Fahrenheit
- Redness or swelling in either lower leg. This can be a sign of a rare but serious side effect of surgery called a deep venous thrombosis (DVT) or blood clot. Notify your doctor immediately if this develops so that they can further direct you.
- New or worsening shortness of breath.
- New or worsening chest pain.

What is the contact information?

- Monday-Friday from 8am-5pm:
 - Call Otolaryngology nursing (Team 4) at (734) 615-8838
- After hours, on weekends, or on holidays:
 - Call hospital paging at (734) 936-6267 and ask for the Otolaryngology (ENT) resident on-call.

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