

Facial Reanimation Surgery- Gracilis Free Flap Surgery

What is gracilis free flap surgery?

Gracilis (groin muscle) flap is a procedure to improve facial movement and smile. A **graft** consisting of muscle, nerve, and blood supply, is taken from the thigh and moved to a paralyzed (non-working) portion of the face. This surgery is typically performed in two (2) stages. These two stages are typically spaced 6 months apart, but this can vary.

What can I expect during each stage of surgery?

First stage:

During the first stage surgery, the surgeon takes the sural nerve graft (from the thigh) and connects it to a facial nerve branch on the normal side of the face (See **figure 1**). It is then tunneled to the non-working side of the face. The nerve graft is protected until the second stage, allowing it to regenerate across the paralyzed side of the face. For this surgery, you will have incisions on your lower leg and on the **normally moving** side of your face.

Second stage:

In the second stage of surgery, the surgeon brings a muscle from the inner thigh into the face and connects it to the nerve, artery, and vein (see photos below) (see **figures 2-3**). For this surgery, you will have incisions on your upper thigh and on the paralyzed (non-working) side of your face.

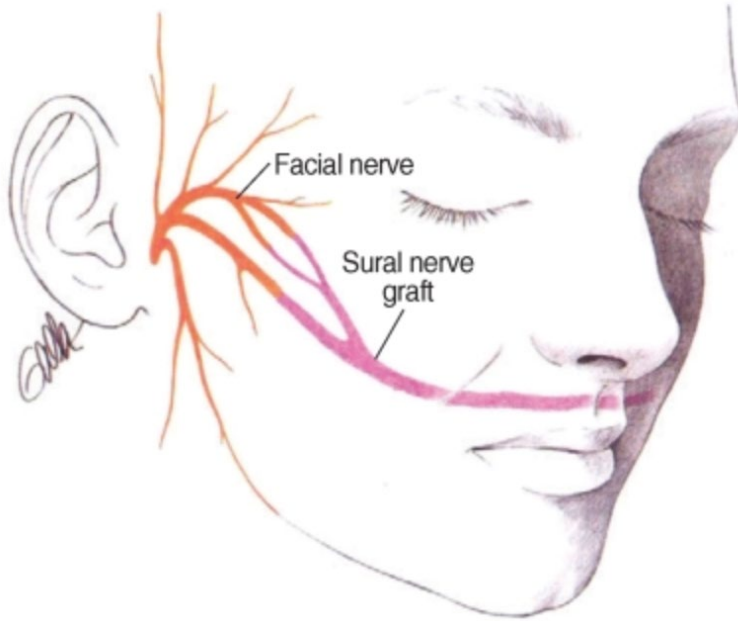


Figure 1:

This image shows the location of the sural nerve graft and where it connects to the facial nerve.

Mehta, Ritvik. (2009). Surgical Treatment of Facial Paralysis. Clinical and experimental otorhinolaryngology. 2. 1-5. 10.3342/ceo.2009.2.1.1. Figure- available via license: [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/)

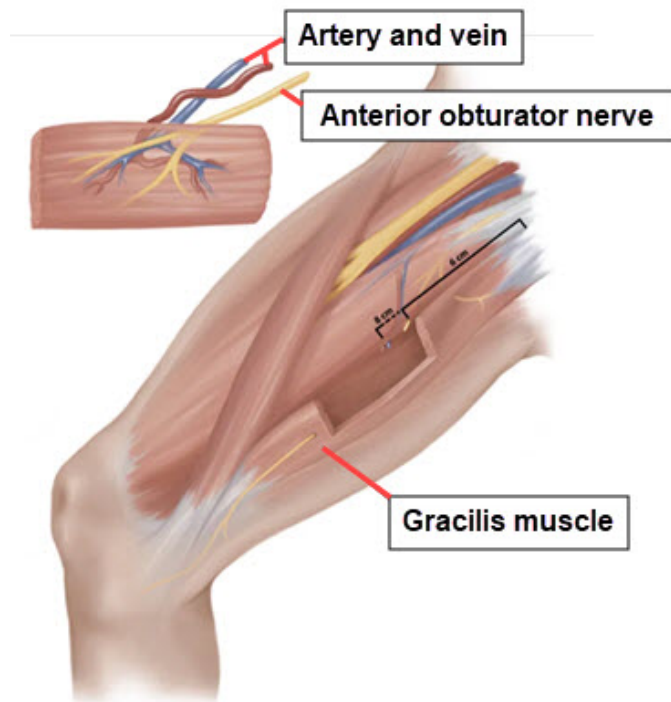


Figure 2

Stage 2 surgery: This image shows where the gracilis muscle graft is taken from.

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

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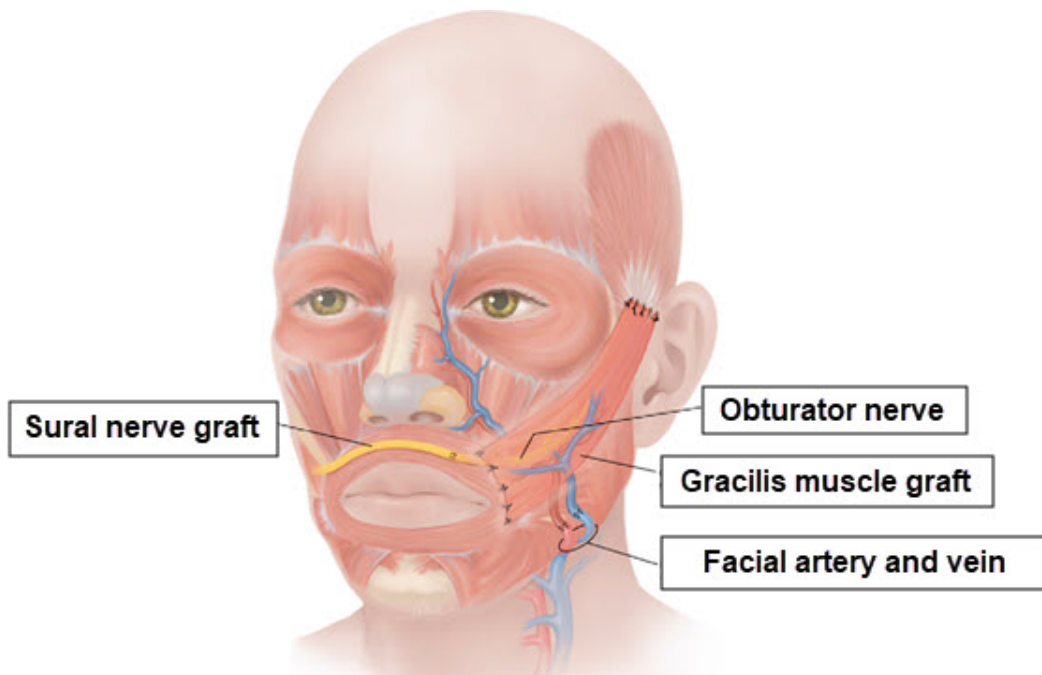


Figure 3:

Stage 2 surgery: This image shows the sural nerve muscle graft (in yellow) stitched onto the facial nerve

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

What do I need to buy before the procedure?

- Vaseline®
- Q-tips® (cotton swabs)
- 1 bottle of Hydrogen peroxide 3%
- 2 boxes of Ace wrap (6 inch) bandages

What are my instructions before surgery?

- Stop smoking e-cigarettes, cigarettes, and recreational marijuana at least 6 months before surgery, or as soon as possible.
- Stop chewing tobacco 4 weeks before surgery. Ideally you should quit all forms of tobacco permanently after 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 Stage 1 and 2 surgeries?

Length of stay:

Stage 1: You will be admitted for 1-3 days in the hospital.

Stage 2: You will be admitted for 3-5 days in the hospital.

The exact length of your stay will be determined by a number of factors that vary between patients such as:

- Need for postoperative monitoring
- Level of walking strength and safety
- Comfort with home care instructions
- Pain control and drain output

What food/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).
- 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 surgeries?

- Take gentle walks for 10 minutes at a comfortable pace every 3-4 hours while awake. This promotes better healing, and decreases swelling and the risk of a blood clot.
- Do not lift anything greater than 10 pounds for 4 weeks post-op. (For reference, a gallon of milk is 9.2lb).
- Elevating your leg may help reduce pain and swelling.
- Expect swelling in **both** your face and leg site (where the graft was taken from). 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.
- Facial movement: Do not expect facial movement immediately after the surgery.
 - After stage 1, you will see no changes in facial movement as this stage is preparation for stage 2.
 - After stage 2, you will start to see facial movement after about 6 months to 1 year, though this varies between patients. Nerve regrowth is slow (1 millimeter a day) and therefore takes some time.

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 the incision twice per day with half-strength hydrogen peroxide and water.
 - Mix these in a 1:1 ratio: start with $\frac{1}{4}$ cup of each.
 - After each cleansing, any time after Stage 1 or 2, blot 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 let the shower spray hit them directly.
 - **No** baths, hot tubs, or swimming until your surgeon approves.

- Drains (which are placed after both stages of surgery) are usually removed during the hospital stay. If your surgeon determines you need to go home with a drain, you will receive instructions in the hospital on how to care for the drain.

How do I manage my pain at home?

Medications

- You will receive information about your prescribed medication including instructions, dosage, and side effects from a nurse at the time of 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 you to use Tylenol (maximum of 3000 mg/day) unless you have a liver condition, in which case you should first speak with your doctor. Ask your doctor before using an NSAID (such as Motrin/ibuprofen /Aleve) or aspirin as these can increase bleeding risk.
- **Do not** drink alcoholic beverages, operate machinery, or drive a car while taking pain medications.
- If you are taking a narcotic pain medication 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 burning the skin.

- **Stage 1-** 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. You may also ice the lower leg incision, though this usually is not needed.

- **Stage 2-** Ice the inside of your thigh every 3-4 hours while awake for 2-3 days. You can continue after 3 days if this is helpful with pain control. It is also okay to ice your face after you leave the hospital.

Compress:

- A compress is providing gentle ongoing pressure on your thigh using an elastic bandage that was provided during the hospital stay. Change your compress daily so you can check on the healing of the incision site.

When can I return to work?

- This will be determined by your surgeons and will vary with the type of work you perform. Please discuss this with your doctor after each surgery, 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
- New or increasing swelling
- New or increasing separation of your incision(s).
- Increasing leg swelling especially the surgical side
- Cooling of the leg skin temperature especially the surgical side
- Increasing drainage or foul smelling drainage from your incisions
- Red streaks on the skin spreading from your incisions
- Pain not controlled by pain medication when used as directed.
- Significant pain with movement, especially the surgical limb.
- Any oral temperature over 101 degrees.

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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