

Nerve Rehab Guide

Phalloplasty neurosensory re-education protocol

What is nerve rehab?

Nerve rehab (neurosensory re-education) is a set of exercises that can help improve sensation in your penis after phalloplasty surgery. During surgery, your surgeon connects the nerves in your penis to nerves in your groin and genital region that are still connected to your brain, a process called sensory nerve transfer. After a nerve is transferred, nerve rehab helps retrain your brain to feel more sensitivity to touch and sexual stimulation.

A surgeon with extensive experience in phalloplasty and nerve transfer surgery created this guide to help your penis sensation reach its full potential. The protocol draws on the combined expertise of therapists experienced in nerve rehabilitation, sensory re-education and pelvic floor physiotherapy, and sex therapy, as well as persons with lived phalloplasty experience.

Is nerve rehab important?

The goal of nerve rehab is to help you get as much enjoyment and satisfaction as possible out of the sensation in your penis.

We believe nerve rehab can benefit everyone, but we understand everyone has different goals and priorities for surgery. Sensation may not be a key focus or consideration for you, and your participation is entirely voluntary. Many phalloplasty patients recovered good sensation before this protocol was available.

Don't feel guilty if you choose not to do these exercises. Any additional use of or engagement with your penis is a positive thing. Your motivation, time and resources may change over time. You can start or end at any time and adjust your use to your own comfort level. This guide is an extra tool, and we hope it will be helpful to you no matter where you are on your phalloplasty path.

Language: You may use your own words to describe your genitals. In this guide, we refer to the phallus as the penis and the clitoris/t-dick as the natal erogenous tissue.



Before surgery

Focus on your health by exercising, eating nutritious food and not smoking.

- Exercise makes every cell in your body healthier and helps your nerves regenerate after surgery. Before surgery, try to do 20–30 minutes of aerobic exercise five times a week. After surgery, you can return to aerobic exercise after you are cleared by your surgeon.
- If you need more information and support for healthy eating, exercise or stopping tobacco, please ask. We will give you the help you need.

Visualization: Imagine what your penis will look and feel like.

This visualization can help prepare your brain and nervous system for nerve recovery and integrate it into your brain's image of your body.

- For a few minutes three times a day, think about what your penis will look like. You can use photos with a packing device in place if you find this helpful.
- It will help if there are no distractions so you can focus only on this activity.
- Although you may have done visualization work in the past, it is important to picture what your penis will look like after phalloplasty. Try to not picture a natal penis.
- Begin by imagining simple things, such as what your penis will look like in pants, in underwear, and without clothing.
- Visualize standing and holding your penis in a urinating position, if you are pursuing urethral lengthening.
- Visualize holding your penis while lying down.

After surgery: Stage 1

Starting day 1

Start these exercises on the first day after the first stage of your surgery.

Visualization: Continue the work described above.

Touch: Use your sense of touch to make your penis part of your self-image and help it be represented in your brain.

- Incorporate touch into your routine.
- While in the hospital at flap checks, try to hold your penis around the time of massage.
- Once out of the hospital and in the “penis cloud,” continue touching and holding your penis during dressing changes and wound care.
- Look at your penis when you touch it.

Four weeks after surgery

Begin these exercises after your penile and perineal surgical sites are healed and your sutures have been removed. By this time, you are likely to start coming out of the supportive cloud dressing.

Continue them until your Stage 2 surgery.

Connecting with the penis between Stage 1 and 2 is important for maximal future sensory development. Touching, looking at, and using your penis will help it be represented in your brain, helping you experience more sensation as your nerves recover.

Visualization: Continue the work you did before and add dynamic visualization. You can start to visualize:

- Urinating from the tip of the penis when you are urinating from your natal urethra (with urethral lengthening).
- Masturbating and sexually stimulating the penis.
- If you want to use your penis for penetrative intercourse in the future, start visualizing it. This is also helpful if you plan to have erectile device placement in the future (stage 3 surgery).

Touch: After your penis is out of its supportive cloud dressing, you can routinely:

- Touch your penis during showering and hygiene activities.
- Gently adjust the position of your penis in underwear and clothing throughout the day.

Sensory Stimulation: Perform these targeted sensation exercises at least once per day.

- **Light touch:** Very lightly stroke your penis. You can use your fingertips, a Q-tip, cotton ball, or tissue.
- **Textures:** Try a variety of fabrics with different textures. For soft textures, try facial tissue, satin, silk, flannel, velvet. For rough textures, use a washcloth, dish towel, paper towel, polyester, or loofa sponge.
- Look at your penis during these exercises. If you find this dysphoric, it is also okay to perform these exercises in the dark. However, visual input is helpful, if possible.
- As sensation starts to enter your penis from the nerve repairs, you should use and touch your penis more often. This will reinforce the developing sensation in your penis.
- If you are starting to develop hypersensitivity, spending more time using rough textures can be helpful to desensitize hypersensitive areas. This should not be painful.

Dysphoria support

We understand that dysphoria can still be very present at this stage, and you may feel like you're in between stages or not yet done. Doing these exercises may help you feel like you are making progress and connecting more with your penis.

We are here to support you. If you would like assistance with these feelings, please contact your care team by sending us a message on MyChart. We can connect you to our Transgender Health Program psychologist, as well as a team member with lived phalloplasty experience who has used this protocol for additional support.

Sexual mirroring: This method helps you develop sexual sensation in your penis that is separate from the sensation from the natal erogenous tissue.

- The first step is stimulating your penis and the natal erogenous tissue at the same time.
- Watch your penis as it is stimulated, even though you are not yet likely to feel much sensation in your penis.
- It is helpful for you to only see your penis being stimulated and not the natal erectile tissue being touched. This way your brain will associate the sexual pleasure with penile touch as well.
- For 4 to 12 weeks after surgery, these exercises are best done individually while your tissues are still healing. Touch your penis in a sexual manner (light masturbatory movement) while simultaneously stimulating the natal erectile tissue. This can be done using a vibrator tool or your own hand.
- After 12 weeks, when your tissue has healed, you can do these exercises with a partner. With your consent, a partner can stimulate the natal erectile tissue while you touch your penis, or a partner can do both penile and natal erectile stimulation. Use manual, oral, or vibratory stimulations as you please.
- **Have FUN!**

Note: If you had a one-stage phalloplasty or a conversion from a metoidioplasty to phalloplasty, then your natal erogenous tissue may already be buried. If so, then you can start the sexual mirroring exercises described in the Phase 3 section below.

Stage 2

You can start these exercises about four weeks after your Stage 2 surgery, which is often five to six months after Stage 1 surgery.

Visualization: Continue your Stage 1 work.

Touch and sensory stimulation: Perform these targeted sensation exercises at least once per day, after you are well healed from glansplasty.

- **Low frequency vibration:** Use a hand-held vibration device to apply low frequency vibration to your penis. Focus on the areas where sensation is present and developing.
- **Light touch:** Lightly stroke the penis with Q-tip or cotton tip, etc.
- **Textures:** Use different textures. Soft textures: facial tissue, satin, silk, flannel, velvet. Rough textures: washcloth, dish towel, paper towel, polyester, loofa sponge.
- **Temperature sensation:** Use warm and cold towels to feel different temperature sensations applied to the penis.
- **Deep pressure:** Apply deep pressure with a smooth but firm object. Ideally the object should have a small surface area. For example, use your finger, a Q tip, a rounded pen cap, a rounded handle of a spoon etc.

Sexual mirroring

- Continue the exercises from Stage 2. Do them individually at first. You can introduce a partner after 12 weeks of healing.
- Depending on the type of phalloplasty you had, your natal erectile tissue may have been buried at Stage 2. If the tissue was not buried, then the sexual mirroring exercises can continue as above.
- If buried, then find the new location of the buried erogenous tissue.
- Touch the penis in a sexually stimulating manner through a masturbatory movement.
- Simultaneously stimulate the buried natal erectile tissue manually or with the use of a vibration device or other type of stimulation that is pleasurable.
- Work to achieve orgasm during penile stimulation with less and less stimulation to the buried tissue, if this is something that you desire for yourself.

Stage 3

This phase of sensory re-education is for those who chose to have Stage 3 surgery and have an erectile device placed. Begin these exercises six to eight weeks after the Stage 3 surgery. With an erectile device, the goal can be to experience pleasure and erogenous feelings through penetrative sexual activities.

Visualization: Continue as above. Focus more on visualization exercises that involve an erection and penetrative activities.

Touch: Continue the exercises from Stage 2 starting six weeks after your surgery, when you are well healed.

- If an inflatable device was placed, it is time to start cycling the device. Follow the directions of your urology team.

Sexual mirroring: Continue the exercises from Stage 2 until ready to begin device inflation. Once you can cycle the erectile device, stimulate your penis with the erectile device inflated.

- These exercises can be done individually or with partner assistance.
- Once cleared by your urology team, sexual penetration can begin. This is typically three months after placement of the device.

Conclusion

There is no set end point or conclusion to this protocol. Ultimately, it should serve as a road map to help you navigate and explore your new anatomy and maximize your pleasure from penile sensation.

Your journey is unique, and this guide is a tool to assist you in your own self exploration. We are always receptive and open to feedback to help us improve it. Your insight about your personal experience is appreciated. Please feel free to give us any feedback during your visits with our team.

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