

Re-Learning Your Body Phalloplasty: neurosensory re-learning (re-education) guide

Introduction:

This guide helps explain what neurosensory re-learning (re-education) is and is designed to assist and support people who are undergoing phalloplasty surgeries by providing a set of exercises to help improve sensation and to help with their penis sensation reaching its full potential.

Language: There are many different words people use to describe their genitals. In this guide, we refer to the phallus as the penis and the clitoris as the natal erogenous tissue.

Please remember the information provided here does not replace the information you receive from your surgeon which will be tailored to your individual needs. We are constantly working to improve our resources to better suit your needs, this resource will continue to be updated.

Acknowledgement:

The primary source of information for this decision support booklet has been derived from the patient information created by Blair Peters, M.D. Assistant Professor – Division of Plastic Surgery, Transgender Health Program, Oregon Health & Science University (OHSU).

What is neurosensory re-learning?

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

The focus of this guide is to help you maximize any tactile (temperature, texture and pressure) sensory nerve regeneration that occurs using targeted sensory stimulation exercises, developing and aiding integration of your penis and any evolving sensation into your sense of self. For individuals highly focused on sensation, this guide provides some peace of mind that they are doing everything they can to optimize sensory and erogenous nerve rehabilitation and to strengthen their mind-body connection.

Is neurosensory learning important?

The goal of neurosensory re-learning is to help you get as much enjoyment and satisfaction as possible out of the sensation in your penis.

We believe neurosensory re-learning/ education 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.

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.

What are the tactile exercises?

The tactile exercises progress from simple touch and progress toward targeted sensory stimulation exercises. This includes stimulation with light touch, deep pressure, different soft and rough textures, vibrations, and temperatures. As sensation enters the penis from the regenerating nerves, patients are asked to increase the frequency of tactile and sensory stimulation exercises. Sexual stimulation or "sexual mirroring" focuses on developing erogenous sensation in their penis that is separate from the erogenous sensation in the natal clitoral tissue. This phase begins with combined stimulation of the penis and the clitoral tissue together. Over time the aim is to rely more and more on the erogenous sensation from penile stimulation in order to achieve orgasm, while relying less on clitoral stimulation. The purpose of this phase is to maximize erogenous sensation in the penis and integrate the erogenous zones of the genitals in mind and body.

What is nerve hookup during phalloplasty?

Nerve hookup involves taking existing nerves from the donor site, such as the arm, transferring and connecting them to nerves located in the pelvis or groin. This allows you to have sensation in the reconstructed penis.

How fast do nerves regrow

On average nerves regenerate or grow back at the rate of around 1 millimeter per day. It often takes at least 6 months for the nerve fibres to reach the base of the penis, and much longer (up to a year or longer) for nerves and sensation to reach the tip. The rate at which nerves regrow and recover is variable. You might ultimately have partial sensation, where some parts of your penis have more feeling, and some have less. Sensation recovery varies by patient.

Return of nerve sensation is not guaranteed.

How do I know if the nerve is recovering?

As your nerve recovers and strengthens connections, the area the nerve supplies may feel quite unpleasant and tingly. You might experience shooting pain, tingling or an electric shock sensation at the level of the growing nerve fibres; the location of this sensation often moves as the nerve heals and grows.

Sometimes there is an internal burning or itchy feeling as your body is working to “rewire” or create new nerve pathways and as the internal cells create new blood supplies to survive. Over time, generally 3 – 4 months, these feelings begin to subside.

It is important to remember with nerve grafting, that your surgeon takes a length of nerve from somewhere else in your body, transfers it and places it as a graft. The surgeon performs this repair using a microscope. You will have a scar from the surgery and often a numb patch in the area the nerve graft was taken from.

Before surgery

When performing visualization exercises, patients are asked to focus on what their phalloplasty will look like, not a cis penis.

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. (usually 16 weeks after surgery)
- If you need more information and support for healthy eating, exercise or other healthy lifestyle choices, please speak to your GP.

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 cis 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.

Please note: Nerve regeneration is significantly influenced by your age and lifestyle habits, such as smoking. The younger and healthier you are, the better the chances for nerve regeneration are. Emotional wellbeing and stress management also plays a crucial part in healing. In the case where the nerves do not develop, the natal erogenous tissue can still be stimulated in its new location at the base of the penis. Your ability to achieve orgasm after phalloplasty remains essentially very similar as before surgery. Orgasm after surgery is almost always possible, but it may take longer or feel different.

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 the doppler and wound care checks.
- Once out of the hospital continue touching and holding your penis during dressing changes and wound care.
- Look at your penis when you touch it.

Six 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 have started to reduce the number of supportive dressings used.

Continue them until your Stage 2 surgery. Connecting with the penis between Stage 1 and 2 is important for maximum 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 4 surgery).

Touch: After your penis is no longer needing supportive dressings, 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 cotton bud, 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.

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 the first 8 to 12 weeks after surgery, these exercises are best done individually while your tissues are still healing. Touch your penis gently 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 enough and your surgeon has ok'd you to resume sexual activity, 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!**

Dysphoria

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. If you have a counselor or psychologist that you see, we encourage you to contact them for any additional support you may need.

It is important to keep remembering that there is risk of you damaging your penis while there is no protective sensation present.

After surgery: Stage 2

You can start these exercises about eight weeks after your Stage 2 surgery, Stage 2 surgery occurs at least six months after and once you have fully healed from 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 cotton bud or cotton ball, etc.
- **Textures:** Use different textures. Soft textures: facial tissue, satin, silk, flannel, velvet. Rough textures: washcloth, dish towel, paper towel, polyester, loofa sponge. Remember to be gentle- you are still healing.
- **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 cotton bud, 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.
- Continue

After surgery Stage 3

After about 8 weeks after Stage 3 surgery, continue on with the Stage 2 exercises above, repeating them.

After surgery Stage 4

This phase of sensory learning/education is for those who chose to have Stage 4 (erectile device placement) surgery and have an erectile device placed. Before proceeding with stage 4 surgery, you must have regained sensation in the penis.

Begin these exercises ten to twelve weeks after the Stage 4 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 and Stage 3, starting ten – twelve weeks after your surgery, when you are well healed.

- If an inflatable erectile device was placed, check when it is time to start cycling the device. Follow the directions of your surgical team and urologist.

Sexual mirroring: Continue the exercises from Stage 2 and Stage 3 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 surgeon and urology team, sexual penetration can begin. This is typically four 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 resource is a tool to assist you in your own self exploration. We are always open to feedback to help us improve it. Your insight about your personal experience is appreciated. Please feel free to give us any feedback- our email is gender.surgery@tewhatauora.govt.nz .

Gender Affirming (genital) Surgery Service Team

National Specialist Services