

Joe nearly despaired when phantom pain took away his change to regain his sporting lifestyle. Today, Joe competes globally as a para snowboarder, thanks to TMR.

### Read Joe's story at TMRnerve.com/joes-story

Provided by Checkpoint Surgical, Inc. Checkpoint's Stimulator can be used to identify motor nerves and muscle during TMR and other procedures. checkpointsurgical.com Theresa chose to have TMR at the time of a planned amputation. Today, Theresa is active and free from pain.

### Read Theresa's story at TMRnerve.com/theresas-story

Tiffany lost her arm in a shark attack but was fortunate to receive TMR at the time of her amputation, preventing a lifetime of pain and disability. Today, Tiffany spreads her message of faith, hope and renewal through her Be an Overcomer Ministry. **beanovercomerministries.com** 

Read Tiffany's story at TMRnerve.com/tiffanys-story

# **TMRNERÝE**

What is TMR? Watch the video!





Targeted Muscle Reinnervation

A New Hope for Amputation Nerve Pain Relief



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# Why am I in pain?



Like many amputees, you may be experiencing nerve pain that prevents you from living life to the fullest. When a limb is amputated, the nerves that are left can no longer connect with their intended target. As a result, these nerves become disorganized and may develop into painful medical conditions.

### Neuroma pain.

The amputated nerve may form a painful bundle of nerve endings in the residual limb (the part of the limb that's left). Called neuromas, these nerve bundles may be too painful to allow use of your prosthetic limb.

#### Phantom limb pain.

When the amputated nerve is disconnected from its muscle target, the brain may interpret the nerve signal as pain. As a result, you may feel phantom pain in the limb that's no longer there.

## What is TMR?

TMR resolves painful conditions by reconnecting amputated nerves to nearby nerves and eventually muscle targets. If you think about nerves as electrical wiring, TMR helps to complete the "circuit" by reconnecting the "live wire".

Recent studies<sup>1,2</sup> have demonstrated that patients who underwent TMR surgeries experienced less pain than patients who received standard treatments for amputated nerves.

### TMR at the time of amputation

Some research<sup>2</sup> suggests TMR is most effective when performed at the time of amputation, before nerve pain begins. If you and your physician are planning an amputation, you may want to discuss TMR as an option.

# TMR for established nerve pain

TMR is also performed to address pain that's developed from a prior amputation. TMR can be effective even if you've experienced postamputation pain for 10 years or longer.<sup>1</sup>

## Is TMR right for me?

Once you decide to have TMR surgery, your surgeon may perform a simple in-office test to determine whether TMR will be effective to reduce your pain.

If your surgeon or rehabilitation team is not familiar or experienced with TMR, you may want to consider a second opinion. You may find a TMR surgeon in your area at TMRnerve.com.

TMR is not a treatment option if you have a spinal cord injury, brachial plexus nerve root injury, or are not healthy enough for surgery. Your physician will help you determine whether TMR is right for you.

### What can I expect?

- A TMR surgery lasts 2-4 hours and usually requires a hospital stay of 1-5 days.
- Your physician will schedule follow-up appointments at 2 weeks, 4 weeks, 3 months, 6 months and 12 months post-surgery, with annual follow ups.
- If you had TMR at the time of amputation, you can begin the fitting process for your new prosthetic at 4-6 weeks.
- If you had TMR for established nerve pain, you may be back to work as early as 2 weeks after surgery, depending on the type of work you do.<sup>1</sup>

### When will I have relief from pain?

Most people experience surgery-related pain but not nerve pain immediately after the TMR procedure. Nerve pain may increase for a period of time while nerves grow and connect with new targets. Your need for pain medication will decrease over time as the nerves heal. Over time, many people can reduce or eliminate the need for pain medications under their physician's supervision.<sup>3</sup>

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- Valerio IL, Dumanian GA, Jordan SW, et al. Targeted muscle reinnervation (TMR) at the time of major limb amputation decreases phantom and residual limb pain. J Am Coll Surg. 2019;228:217-226.
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