TIPS ON

DESENSITIZATION

Parameters

The goal is to desensitize the residual limb to diminish pain and prepare the patient for a prosthetic. According to Smurr et al., (2008) desensitization can be done for 20-30 minutes, 3 times a day. This will change according to how the patient tolerates desensitization to the scar and surrounding skin. (Smurr et al., 2008)

Types of Desensitization

- Gentle massage
- Percussion/tapping
- Rubbing
- Texture bins

*This is all determined by what the patient is able to tolerate.

(Phantom sensation, 2024)

Importance of Desensitization

 When the somatosensory system is restructured by desensitization, it creates a new pathway for the stimuli to travel from the residual limb.
Desensitizing the residual limb inhibits the transmission of pain and increases the pain threshold.

(Horne et al., 2018; Melzack, 2001; Yoo, 2014)

 Horne et al. (2018) hypothesized that "using tactile inputs on adjunctive dermatomes after amputations could assist in the reorganization of the central nervous system and may affect pain level" (pp.691).

(Horne et al., 2018)

Added Benefits of Desensitization

There is no added cost to complete desensitization, and it can improve patient outcomes. This is also a simple way to give the patient a piece of control back. By making a home exercise plan, patients can choose when to complete their exercises.

References

- Horne, C. E., Engelke, M. K., Schreier, A., Swanson, M., & Crane, P. B. (2018). Effects of Tactile Desensitization on Postoperative Pain After Amputation Surgery. Journal of PeriAnesthesia Nursing, 33(5), 689–698. https://doi.org/10.1016/j.jopan.2017.02.005
- Melzack, R. (2001). Pain and the Neuromatrix in the Brain. Journal of Dental Education, 65(12), 1378–1382.
- Phantom sensation and Phantom Pain after amputation: Veterans Affairs. (2024). Veterans Administration/Department of Defense.
- https://www.veteranshealthlibrary.va.gov/Rehab/PhysicalTherapy/LowerLimbAmputation/142,88860_VA.
- Smurr, L. M., Gulick, K., Yancosek, K., & Ganz, O. (2008). Managing the Upper Extremity Amputee: A Protocol for Success. *Journal of Hand Therapy*, 21(2), 160–176. https://doi.org/10.1197/j.jht.2007.09.006
- Yoo, S. (2014). Complications following an amputation. Physical Medicine & Rehabilitation Clinics of North America, 25(1), 169–178. https://doiorg./10.1016/j.pmr.2013.09.003