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Health & Wellness Fact Sheet

BLUF: Stellate Ganglion Block (SGB)

SGB should not be considered a solitary and *primary treatment option* for PTSD symptoms. Prolonged Exposure (PE), Cognitive Processing Therapy (CPT) and trauma-focused Cognitive Behavioral Therapy (CBT)¹ are evidence-based care options for PTSD. SGB may be an effective intervention to help an individual better engage in evidence-based talk therapy.

What is a Stellate Ganglion Block (SGB)?

A Stellate Ganglion Block is a medical procedure (injection) where an anesthetic is injected near the stellate ganglion (located at the side of the neck near the thyroid and carotid artery). The stellate ganglion is a collection of sympathetic (fight or flight) nerves. Blocking those nerves temporarily disrupts the fight or flight signals to the brain. The procedure is done with guidance (ultrasound or x-ray) to increase precision and safety.

What symptoms can a SGB help?

SGBs were classically used to reduce pain symptoms in people coping with Complex Regional Pain Syndrome (CRPS) of the hand or arm.² *CRPS is a specific nerve pain syndrome typically seen after trauma and is different from “chronic pain”* more often associated with musculoskeletal pain caused by common injury or wear and tear. Historically, SGBs were also used in the treatment of intractable angina, hyperhidrosis (increased sweating), and blood clots of the arms.

Several studies explored the use of SGB for Post Traumatic Stress Disorder (PTSD).^{3,4} SGBs appear to have the greatest impact on the symptoms of irritability, difficulty concentrating, trouble sleeping, feeling cut off from others, and emotional numbness.⁵ Not

¹ Watkins, Laura, et. al. Treating PTSD: A Review of Evidence Based Psychotherapy Interventions. *Frontiers Behavioral Neuroscience*. 2018; 12: 258.

² Salmasi V, You J, et al. Outcomes of Sympathetic Blocks in the Management of Complex Regional Pain Syndrome: A Retrospective Cohort Study. *Anesthesiology* 2019; 131:883.

³ Mulvaney, Sean, et al. Stellate Ganglion Block Used to Treat Symptoms Associated with Combat-Related Post-Traumatic Stress Disorder: a Case Series of 166 Patients. *Military Medicine*. 2014;179,10:1133.

⁴ Rae Olmsted, Kristine, et. al. Effect of Stellate Ganglion Block Treatment on Posttraumatic Stress Disorder Symptoms. *JAMA Psychiatry*. 2020; 77, 2:130.

⁵ Lynch, James, et al. Effect of Stellate Ganglion Block on Specific Symptom Clusters for Treatment of Post-Traumatic Stress Disorder. *Military Medicine*. 2016;181, 9:1135.



everyone experiences benefits after a SGB and the duration of benefit varies in those who find benefit. Multiple studies are ongoing to explore the duration of benefit and optimal number of injections required.

Should someone consider a SGB?

A SGB should only be performed by physicians well-trained in the procedure. In experienced hands, the risks of the procedure are low and are generally well tolerated.⁶ SGB may be a helpful complementary treatment for individuals *diagnosed with PTSD while receiving evidence-based behavioral health care.*

⁶ McLean, Brian. Safety and Patient Acceptability of Stellate Ganglion Blockade as a Treatment adjunct for Combat-Related Post-Traumatic Stress Disorder: A Quality Assurance Initiative. *Cureus*. 2015; 7,9:e320.