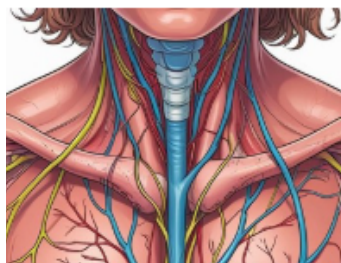




# WHAT IS THORACIC OUTLET SYNDROME?

## COULD MY ACCIDENT HAVE CAUSED THIS?



Thoracic outlet syndrome (TOS) occurs when there is compression of the nerves and/or vessels that travel within the upper part of the chest into the arms. This can happen when the first rib, clavicle and associated muscles in the neck and upper chest lead to compression of the brachial plexus, subclavian artery, and/or the subclavian vein.

TOS is classified into neurogenic, venous and arterial forms. The most common of these is neurogenic TOS. Specific causes of neurogenic TOS are cervical ribs, fibrous bands, hypertrophy (enlargement) or scarring of the muscles in the area. In patients with repetitive injuries to the upper extremities, they may develop swelling of the muscles that leads to compression of the vein or artery.

It has been well demonstrated that car accidents resulting in sudden whiplash, direct impact injuries and traumas resulting in rib fractures can result in TOS. Additionally, repetitive work activities using the upper extremities can also lead to chronic injuries related to TOS. Patients may present with headaches, neck and/or shoulder stiffness or pain, as well as temporomandibular joint issues. These symptoms can be elicited by provocative maneuvers during a physical exam.

Long term impacts of thoracic outlet syndrome are significant. Conservative management with oral pain medication, stretching, and physical therapy are often the initial form of management. Lifestyle changes such as weight loss and ergonomic adjustments may be encouraged, but are not often successful. Reported success rates for physical therapy can be in the range of 27-59% and can require up to 3 months to see results.

Surgery for management of TOS is recommended for those with persistent symptoms. Surgery may involve first rib resection, scalenectomy, neurolysis, and, when indicated, vascular reconstruction. Although rates of post-operative pain are significant, surgical outcomes are reported to be successful in up to 90% of cases.

### WHAT CASES CAN WE HELP YOU WITH?

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## NEWSLETTER

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Suggestions on topics of interest to you? Email us today!