

# Thoracic Outlet Syndrome

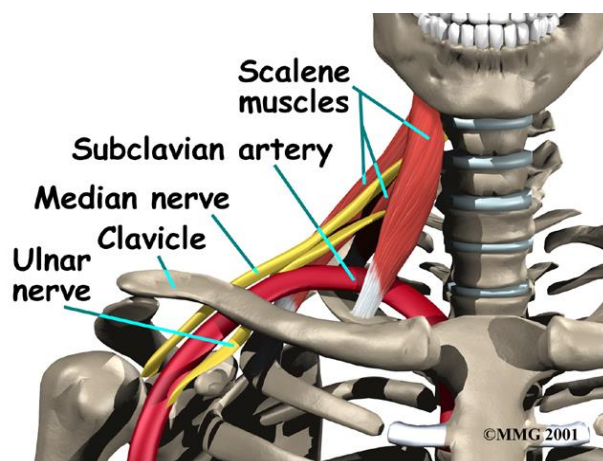
## What is Thoracic Outlet Syndrome?

Thoracic outlet syndrome (TOS) can cause pain, numbness and occasionally weakness in the neck, shoulder, arm, and hand. Testing for TOS can be difficult. There is no one test to accurately diagnose TOS, and other conditions can have similar symptoms. You will need to go through several tests to find out if TOS is actually the cause of your pain. Effective treatment is always based on accurate diagnosis.

## What Causes Thoracic Outlet Syndrome?

The pain, numbness and weakness associated with TOS is caused by the compression of the nerves and/or blood vessels that travel from the neck, through the thoracic outlet, under the collar bone and down into the arm. The Thoracic Outlet is an almost triangular passage formed by the scalene muscles, the collar bone, and the first rib.

The compression of these delicate structures can be caused from trauma such as breaking a collar bone, congenital reasons such as having an additional first rib, or behavioural reasons such as poor posture or uneven muscular development.



The most common cause of TOS is compression of the nerve bundle, known as Neurogenic TOS. This type of TOS can be conservatively treated by a physiotherapist with good effect.

## What Does Thoracic Outlet Syndrome Feel Like?

Neurogenic TOS causes pain along the top of the collar bone and shoulder. The pain may spread along the inside edge of the arm and occasionally may spread into the hand, mostly into the ring and pinky fingers. Numbness and tingling may accompany the pain, especially in the early hours of the morning before it's time to wake up. Symptoms tend to get worse when driving, lifting, carrying, and writing. The arms may also feel tired when held overhead. It may be harder to hold and grip things, and the hand may feel clumsy.

Symptoms related to the blood vessels are less common. If the blood vessels are causing symptoms, the arm and shoulder may feel heavy and cold. The arm may become somewhat blue, and the constriction of vessels can cause the arm and hand to swell. Problems with the blood vessels that go to the arm are serious. If you experience these symptoms, you should call your doctor right away.

## Treatment of Thoracic Outlet Syndrome

Physiotherapy management is often sufficient to manage TOS. Treatments include a variety of exercise to mobilise and stretch the soft tissue and neural structures associated with TOS, 1<sup>st</sup> rib mobilisation, myofascial releases and trigger point therapy, taping or bracing the shoulder girdle, postural education and strengthening, improving breathing technique as well as worksite modification and ergonomics.

This resource is provided by Proactive Physiotherapy Ph: 40536222

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