

# ***THORACIC OUTLET SYNDROME***

## **DESCRIPTION**

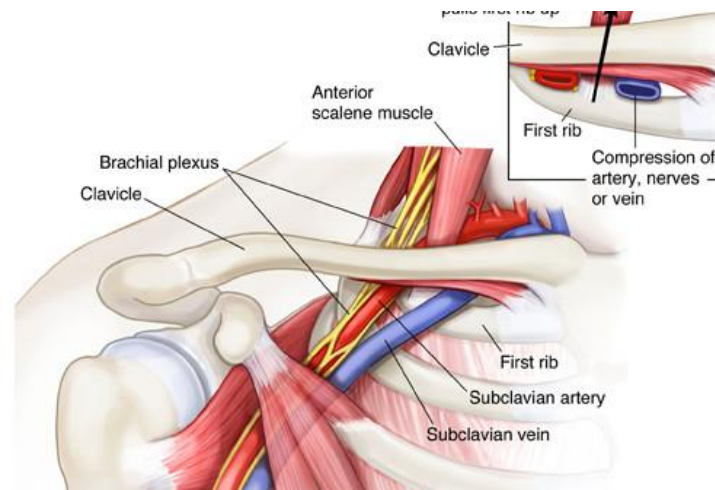
Pain and weakness from compression of nerves, and less commonly arteries and veins, in the neck that affect the shoulders, arm and hands.

## **FREQUENT SIGNS AND SYMPTOMS**

- Pain, numbness, and tingling in the neck, shoulders arms and hands.
- Weakness in the arms and hands
- Poor circulation, characterized by coldness, swelling and blueness in the hands and fingers (rare).

## **CAUSES**

The nerves and blood vessels that supply the shoulder, arms and hands start in the neck and pass as a group near the ribs and collarbone. Pressure on the nerves and/or blood vessel bundle creates symptoms. Pressure may be caused by an extra rib in the lower neck (called a cervical rib), over developed neck muscles (as may be required with some contact sports or may result from over-zealous weight-lifting programs), muscle weakness and drooping in the shoulder. Other causes include injury from overextending the arm or shoulder and abnormal positioning of the arm or neck for a prolonged period, such as can occur during surgery, during unconsciousness (for any reason), or while sleeping with a too-firm object under neck. Rarely, a tumor that has spread to the head and neck area from another part of the body may cause pressure on the nerve/blood vessel bundle.



## **RISK INCREASES WITH**

- Fracture of clavicle or first rib
- Body building with muscle bulk in thoracic outlet area (neck muscles)
- Rapid weight loss combined with vigorous physical exercise or exertion.

## **PREVENTIVE MEASURES**

- Avoid shoulder and neck injury whenever possible, wear appropriate protective equipment appropriate for your sport
- Good posture
- Avoid carrying bag or backpack on affected side
- Change sleeping positions. Try sleeping on one side or sleep without a firm pillow.
- If symptoms are caused from overdeveloped neck muscles, reduce neck muscle building exercises.

## **EXPECTED OUTCOME**

Usually curable in most patients with physical therapy and/or change in sleeping habits. However, occasionally surgery is necessary if symptoms persist despite therapy.

## **POSSIBLE COMPLICATIONS**

- Permanent numbness or loss of arm or hand strength if this syndrome is not treated.
- Post-operative pain or abnormal sensation in arm or hand (rare)
- Persistence or recurrence of disorder after surgery.
- Acute thrombosis (clotting) of the axillary vein - this is an emergency that needs to be treated immediately

## **GENERAL TREATMENT CONSIDERATIONS**

Initial treatment involves medications and avoiding the activity which initially caused the problem. Physical therapy and exercises are usually prescribed to promote shoulder muscle function and improve any posture abnormalities. Avoid straining or heavy activity for 3 months. Surgery to relieve pressure on the nerves and blood vessels, such as removal of all or part of a cervical (extra) rib, or cut muscles pressing on bundle may be indicated, particularly if symptoms persist despite 6 months of activity modification, therapy and exercises.

## **MEDICATION**

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Anti-spasmodics and muscle relaxants may be prescribed. Use only as directed and only as much as you need.

## **NOTIFY OUR OFFICE IF:**

- Symptoms worsen or do not improve in 6 weeks, despite treatment.
- You develop coldness, swelling and blueness in the hands and fingers
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.