## PATIENT EDUCATION RESOURCE Thoracic Outlet Syndrome



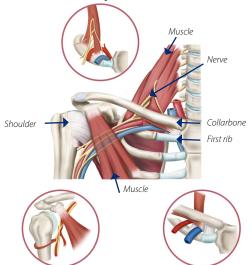
"Working with a knowledgeable hand therapist can make the difference between success and failure in complex hand surgical cases. The therapist extends the continuum of our care, as well as functioning as coach and trainer for our patients."

MARYBETH EZAKI, MD, PAST PRESIDENT, AMERICAN SOCIETY FOR SURGERY OF THE HAND

### What is thoracic outlet syndrome?

The thoracic outlet is the tunnel where the nerves and blood vessels go from the head and chest into the arm. Thoracic outlet syndrome is a collection of symptoms affecting the head, neck, shoulder, arms and hands due to compression of these nerves and vessels as they pass through the neck and shoulder areas.

#### Thoracic outlet anatomy



# What are the symptoms of thoracic outlet syndrome?

- Headaches
- Cold fingers and hands with bluish skin color
- Weak pulse
- Arm feeling heavy
- Numbness in the arm and hand
- Fatigue and reduced endurance during work tasks
- Night pain that disturbs sleep

### What causes thoracic outlet syndrome?

Blood vessels and nerves can be compressed due to:

- Poor posture
- Poor ergonomic setup in work and home activities
- Abnormal rib at the neck level (e.g. extra rib)
- Muscle tightness from stress and tension
- External pressure from a heavy backpack or purse
- Tight straps on clothing
- Injuries to the neck area

### What can a hand therapist do for me?

A hand therapist can look at posture, muscle strength, muscle tightness and nerve tightness to determine the source of the symptoms. The hand therapist will teach ways to change postures during work and sleep to prevent compression.

An ergonomic review can be done for home and workstations to check posture and arm position. Using tablets or smartphones with bad posture can increase nerve pressure and make hands get numb or cold. Sleeping with a tilted head can also close the space in the neck/shoulder region, as can slouching on the sofa or chair.

Additionally, a home symptom management program will be developed to include stretches, nerve motion and strengthening.

Poor posture and work setup can compress blood vessels and nerves.



To locate a hand therapist in your area, visit the American Society of Hand Therapists at www.asht.org or call 856-380-6856.