

Description

Acute injury to the thoracic spine is usually defined by pain and tenderness over the upper back, which can be aggravated by bending and twisting activities, coughing or sneezing or simply prolonged poor posture. Pain in this region can be due to injuries to surrounding muscles, referred spinal pain, disc, ligament or rib attachment injuries. A thoracic spine injury can often affect rib movement, refer pain to the chest or sternum and even make breathing painful (particularly deep breaths).

Anatomy

The thoracic spine (upper back) is made up of 12 individual vertebrae. These vertebrae are held together by ligaments and are surrounded by various muscles which attach throughout the spinal column, pelvis, shoulder blades, head and neck. The thoracic spine provides the attachment for the 12 ribs, via strong ligaments to the body of the vertebra.

The fundamental movements of the thoracic spine include flexion (bending forward), extension (bending backward), side flexion and rotation (twisting). Bending or twisting whilst loaded or carrying is a common cause of injury because it is these movements that place most stress upon joints of the thoracic spine. Muscles which stabilize and assist movement of the shoulder girdle have attachments with the thoracic spine and strains can occur at these points of attachment during heavy lifting or arm movement, causing irritation or in some cases injury to the thoracic vertebra.



Causes

The most common causes of thoracic spine injury include:

- Reduced flexibility or stiffness – particularly poor extension or rotation range of movement
- Prolonged poor sitting or standing postures. This includes poor workstation ergonomics, work demands such as prolonged driving or sustained flexion postures
- Heavy lifting or poor lifting technique – particularly bending and twisting whilst loaded
- Heavy or prolonged upper body exercise (eg. excessive or incorrect upper body strength program in a gym)
- Prolonged coughing or sneezing (chronic chest infections)
- Traumatic fall or direct blow to the chest or upper back (eg during sport)

Signs and symptoms

Some common signs and symptoms of a thoracic spine injury include:

- Localized tenderness over the upper back
- Pain upon twisting, bending, flexion or extension movements
- Sharp pain with cough, sneeze or deep breathing
- Ache radiating from the upper back into the lower back or neck (rarely associated with pins and needles) and occasional upper arm pain.
- Pain / ache into the chest or ribs. Injury to the thoracic spine can refer pain to the chest.

Chest pain only may be present, and can sometimes be mistaken for heart or rib related pain. Your physiotherapist can advise you if a medical opinion should be sought for these symptoms based upon an examination or presentation.

Treatment

A thorough diagnosis and avoiding positions or movements that cause pain is vital during the early stages of thoracic spine injury. Appropriate investigations such as X-ray, CT-scan, MRI or bone scans may need to be conducted to correctly diagnose the injury. Your physiotherapist can liaise with your doctor, or directly with a radiologist to order such investigations.

If a soft tissue injury (muscle, tendon or ligament) has been sustained, swelling or even bruising can occur. Please remember swelling can be difficult to notice in this region, but nevertheless, it is still important to rest, ice and avoid aggravating activities. You may also be directed to take pain or anti-inflammatory medication by your doctor.

Initial Treatment should include:

- Rest (avoid any lifting, twisting or bending; avoid prolonged sitting postures)
- Ice (you may find temporary relief from an ice pack placed on your back)
- Physiotherapy or doctor consultation
- If necessary, appropriate scan investigations
- Anti-inflammatory and pain medication as directed by your doctor.

Physiotherapy techniques can include massage, thoracic spine mobilizations, taping, neural mobilizations and rib mobilizations. However, advice relating to workstation ergonomics, posture and an appropriate strength & flexibility program is often the key to overcoming thoracic spine injury. To prevent reoccurrence, you need to be aware of posture and lifting techniques that minimize stress to your spine.

Please feel free to discuss any problems or queries with your physiotherapist or get up to date treatment options by subscribing online at www.rehabonthenet.com.