

The Jaw and Temporomandibular Joint

The jaw bone is called the mandible. It forms a joint with the temporal bone called the temporomandibular joint or TMJ, and is moved by pairs of short powerful muscles.

The jaw plays a pivotal role in two of our most important human activities, talking and eating. Both require great precision of movement, achieved through a high number of proprioceptors in the TMJ and surrounding tissues and intense neurological control of the jaw muscles. The muscles need to be of considerable strength

The TMJ is an unusual joint for the following reasons:

- the presence of a fibro cartilage disc in the joint whose movement is controlled by muscle fibres.
- articular surfaces that are fibrous rather than hyaline cartilage.
- very little synovial tissue
- an articular tubercle that interrupts the smooth flow of movement.

As the jaw opens the condyle of the mandible initially slides forward and inferiorly against the posterior surface of the tubercle. The last phase involves the condyle slipping forward under the articular tubercle. When the mouth is fully open you should be able to fit three knuckles stacked on each other into it.

The major muscles that move the TMJ are:

to open mouth: digastric
mylohyoid
glenohyoid.

to close mouth: masseter
temporalis
medial pterygoid
superior lateral pterygoid

lateral deviation: ipsilateral temporalis
contralateral pterygoids

protraction: masseter
suprahyoid muscles
pterygoids

Myofascial trigger points

The simplest form of somatic dysfunction in the shoulder is the formation of trigger points. All the muscles of the shoulder can be overloaded through sudden unaccustomed use, chronic overuse, postural strain. Trigger points are a common consequence of overload.

All trigger points, whether latent or active, will restrict joint movement which can contribute to any of the syndromes described in the following sections. Significant latent trigger points should be found and treated.

Active trigger points will produce characteristic patterns of pain distribution which can be recognised; the diagnosis confirmed when the point is located and successfully treated.

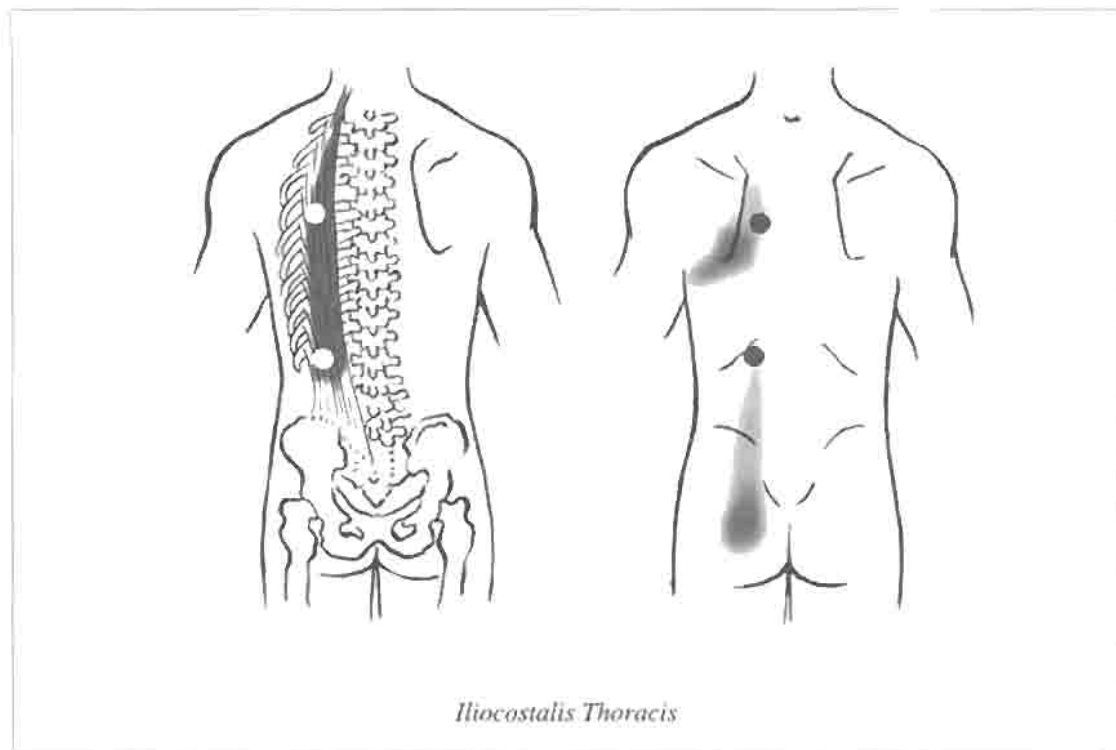
Although mild in terms of pathology, trigger points can cause discomfort equal to that from more serious problems. In addition they can be secondary to more serious disorder but still an important source of symptoms.

The most common sites of active trigger points are:

Infraspinatus	pain is felt deep in the anterior aspect of the shoulder
Supraspinatus	usually in association with tendinitis
Deltoid	especially anterior deltoid
Subscapularis	in cases of frozen shoulder

In addition to muscles attaching to the scapula or humerus in the shoulder, several muscles that are more trunk muscles refer pain to the shoulder and arm. Chief among these are serratus posterior superior (pp 155) and the scalene muscles (pp 140).

Iliocostalis thoracis. Trigger points in the iliocostalis muscle at the level of the low thoracic segments also refer pain across the low back and into the buttock. Use the outer UB points angled very obliquely to pass through these fibres as they attach just medial to the angles of the ribs.



Psoas: Although psoas cannot be needled directly in the low back, Shenshu (UB 23) has a strong effect on psoas triggers and can be used in conjunction with some manual therapy to relieve them.

