Myofascial pain syndrome [1, 2, 3, 4]

Causes and signs of disease [1, 2, 3]

A

Muscle overloading (e.g. due to stress or constantly recurring movements)

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Local under-supply of oxygen and release of inflammatory mediators

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Hypersensitive focus with continuous contraction in a muscle (trigger point)

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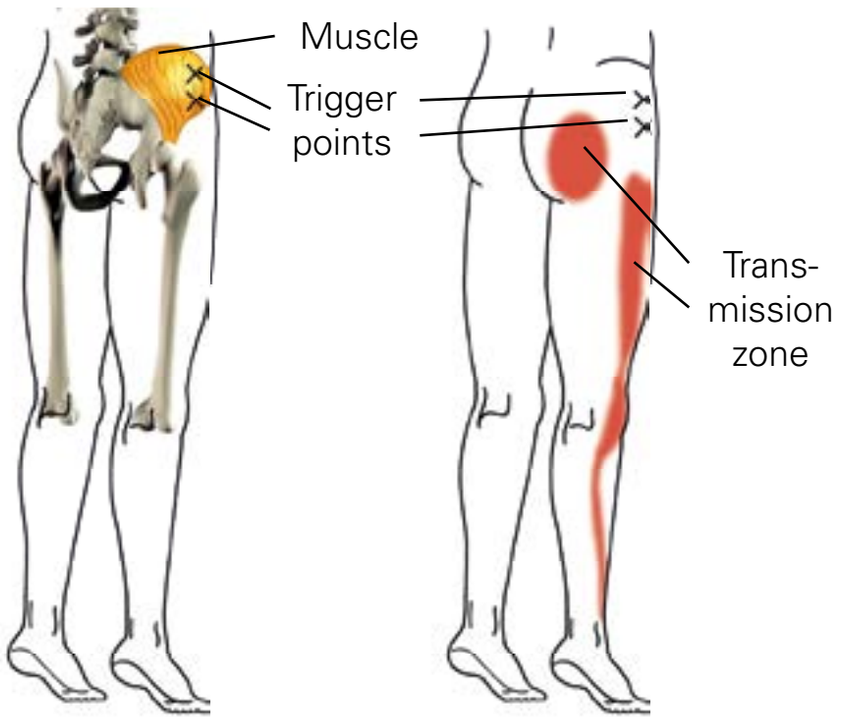
Extension of the pain into the transmission zone when pressure is applied to trigger point

Palpable hardened areas and local muscle twitching when pressure is applied to trigger point

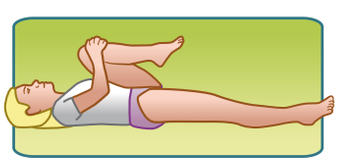


Treatment [1, 2, 3, 4]

B

Massages to reduce muscle tension

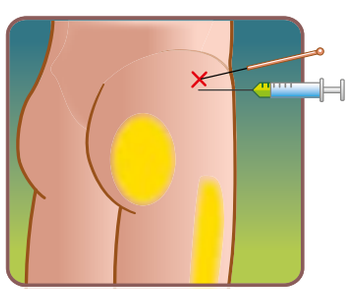
Heat applications to improve blood flow



Stretching exercises

Muscle-relaxant medicines

In refractory cases:



"Dry needling" and infiltration of sodium chloride or local anaesthetics into the trigger points

Myofascial pain syndrome [1, 2, 3, 4]

A Causes, symptoms and signs of disease [1, 2, 3]

Myofascial pain syndrome is a locally limited pain condition that arises as a result of muscle overload.

The muscle overload may be due to stress, minor damage caused by recurrent movements, undernutrition and malnutrition (e.g. under-supply of protein, vitamin deficiency), hormonal disorders, immobility, muscle weakness, convulsions or neurological damage (damage to individual nerve roots).

Overloading of a muscle leads to persistent contraction of individual muscle fibres. This leads to locally limited under-supply of oxygen and consequently to continuous contraction. This hypersensitive focus is known as a trigger point. A hard area consisting of muscle fibre bundles can be felt at this point (taut band).

Pressure on the trigger point leads via secretion of chemical messengers to a locally limited pain, which can extend through reflexes to adjacent muscle regions (referred pain). Referred pain has nothing to do with pain that is radiated along a nerve as a result of nerve injury.

When pressure is applied to the trigger point, there is also reflex twitching of the muscle fibres there (local twitch response). In addition, there is restricted mobility and muscle weakness in the area.

B Treatment [1, 2, 3, 4]

Physiotherapy measures such as massages to reduce muscle tension, and application of heat to improve muscle blood flow and remove the local oxygen deficiency, are important.

Stretching exercises can generally only be performed if a painkilling cooling spray is used. Muscle relaxants and muscle relaxation techniques are used for support.

In refractory forms use is made of "dry needling" (destruction of the trigger point by repeated fan-shaped pushing to and fro of a needle in the trigger point), for example using acupuncture needles. The effectiveness of this technique can be reinforced by injecting a saline solution (to dilute the pain-triggering substances in the trigger point) or local anaesthetics.

[1] Vazquez-Delgado E et al. Med Oral Patol Oral Cir Bucal (2009) 14: e494- e4988.

[2] Vazquez-Delgado E et al. Med Oral Patol Oral Cir Bucal (2010) 15: e639- e643.

[3] Borg-Stein J, Simons DG. Arch Phys Med Rehabil (2002) 83(3 Suppl 1): S40-S47, S48-S49.

[4] Srbely JZ. Curr Pain Headache Rep (2010) 14(5): 346- 352.