OVERUSE INJURIES

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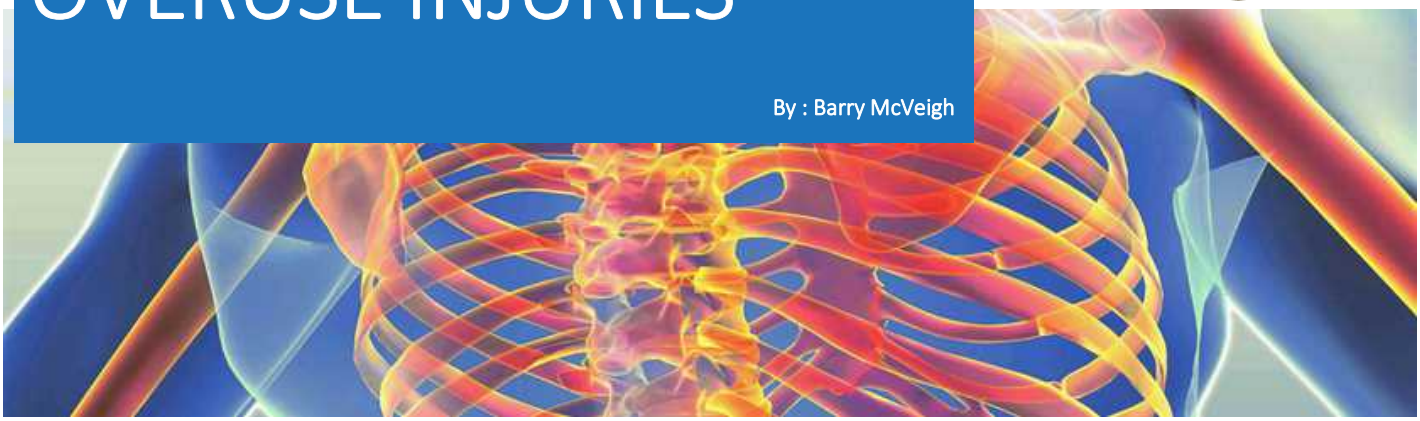
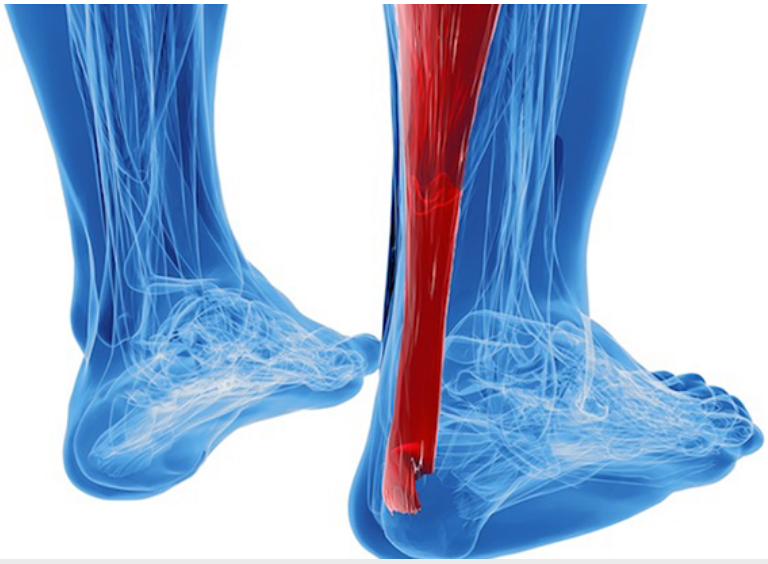
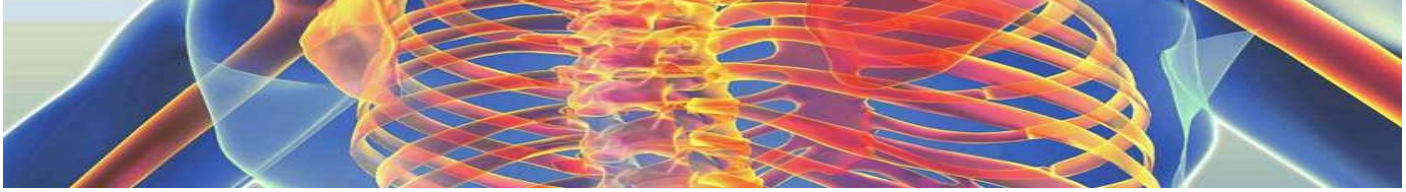


GENTLE NON INVASIVE APPROACH TO TENDONITIS

Tendons are very strong structures that attach muscle to bone. When a muscle shortens it exerts a force on the tendon which in turn pulls on the bone and movement is created. It may be useful to think of tendons as ropes. Tendon pain is often misdiagnosed as tendonitits or in other words inflammation of the tendon. A more appropriate diagnosis would normally be tendonosis, which is degeneration. Recent histological studies of patients with tendon pain have revealed that there is an absence of inflammatory cells, rather there is evidence of degeneration of the connective tissue. To be more precise patients with tendon pain have a disarrangement of collagen fibers and blood vessels, the collagen fibers are what give the tendon its strength. These fibers become less dense in number and are no longer arranged in the most structurally appropriate manner which results in a thicker tendon that over time becomes progressively weaker as well as becoming painful. The more traditional treatment of a cortisone injection can lead to further degeneration in the tendon putting it at increased risk of rupture. Osteopathic treatment of tendonosis starts with identifying what has caused the problem in the first place.

"One of the guiding principles of osteopathy is that we consider the body as a unit. What this means is we do not look at any one part of the body in isolation."





For example for an athlete it may be due to incorrect footwear, or an increase in training too quickly, without allowing the body time to adapt.

An examination of the body as a whole is carried out to assess if there are any biomechanical abnormalities causing an excessive force being transmitted to the injured tendon. These may include restrictions both bony and muscular or muscle weakness and poor muscle control. You may be asked to perform functional tests such as squats. These tests provide information on your ability to control your joints, limbs and axial skeleton.

For example weak glute medius muscle (side of the hip) is often associated with hip drop along with the knee rolling inwards during walking and running. Functional exercises can be prescribed to improve the strength and control of the outer hip. By learning to control unwanted movements your body is better able to distribute stresses.

Examples of muscular restriction elsewhere in the biomechanicl chain may include tight hip flexors or hamstrings. Either of these can effect the position of the pelvis which in turn can effect walking/running gait.

The osteopath will treat these tight muscles and will often provide advice on stretching them. Joint restriction may involve back vertebrae that have become locked. For a tennis player with tennis elbow this may effect their ability to rotate the spine when hitting the ball.

Releasing the restrictions in the spine can free up its movement. In turn the arm does not have to work so hard thus reducing the stresses placed on the elbow.

Often the adjoining muscles are stiff and have lost some of their elasticity. As muscles also act as shock absorbers, releasing tension with some deep tissue massage helps the area to absorb and dissipate forces away from the injured tendon. If the area is not too painful, then some frictions of the tendon itself may be applied and possibly ultrasound of the area.

The research which is showing the most promising results in the treatment of tendonosis is what has been termed eccentric loading. In other words the patient is asked to perform exercises which put high loads through the injured tendon as the muscle is lengthened. Eccentric loading has been demonstrated to decrease pain, restore the cross sectional area of the tendon, increase the density of collagen fibers and restore the arrangement of both the collagen fibers and blood vessels. Eccentric loading of the offending tendon may be prescribed to help rectify the local changes within the painful tendon. Patients will often also report improvement in performance due to more efficient movement. This holistic approach addressing all the various contributing factors to the injury aims to fix the underlying cause and not just the symptoms.

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