

TENDON AND LIGAMENT SPRAINS

Understand what has happened Recovery and self help

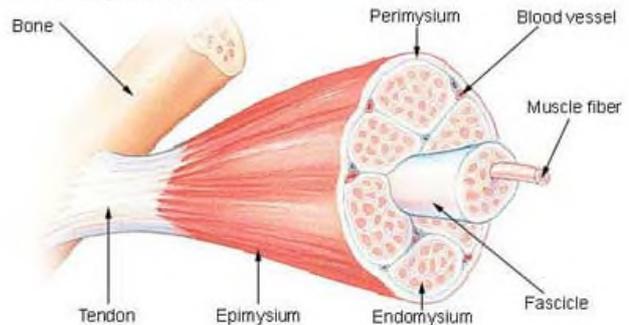
Any injury to the body causes the 'inflammatory response' (see relevant sheet)

Your body is bringing important help to the injured area via the blood. The extra important fluids which the blood provides surround the muscle cells and support the tendons; white blood cells fight infection and special proteins mend the injury.

This is why the area swells and becomes red.

Your body also needs you to know there is a problem and to rest this is why you experience pain

Structure of a Skeletal Muscle

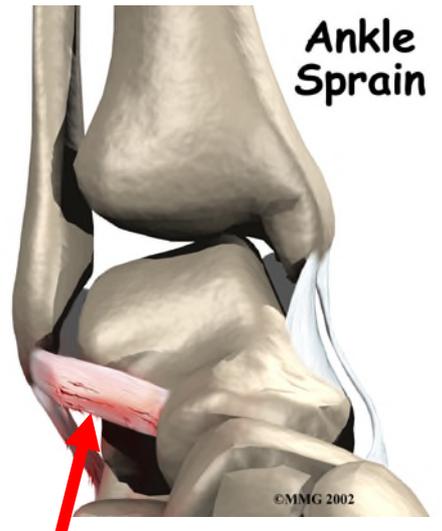
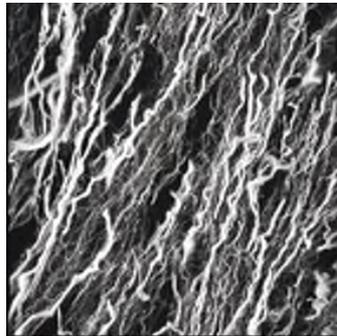


Muscles are made of lots of long thin cells called muscle fibres which are made into 'bundles of bundles'. Each fibre and each bundle has a covering which we can call a sheath; each type of sheath has 'mysium' at the end.

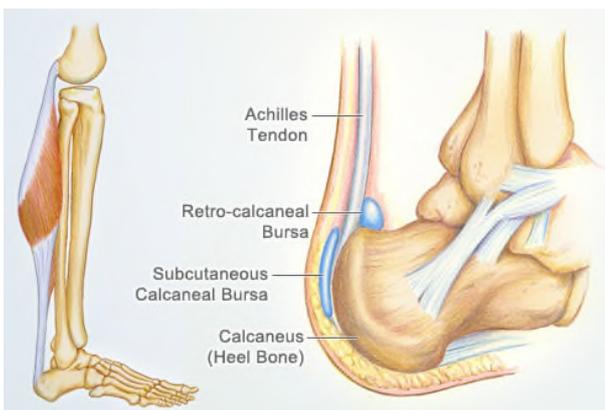
Tendons and ligaments are made of

Long strands of collagen which is a tough protein.

These lie within the fluid; and the cells which make the collagen are there too.



Ligament has been damaged; blood flows out plus inflammatory response



When we experience a sprain in our ankle, Achilles Tendon or one of the tendons of the rotator cuff in the shoulder we have pulled and damaged a tendon or ligament and blood has leaked out of the capillaries which surround the area due to the damage.

Sometimes we have damaged a **ligament** which attaches bone to bone, you may have heard of the cruciate ligament in the knee. This is made of the same collagen fibres.

Recovery and self help

When you are in the **sub-acute phase**

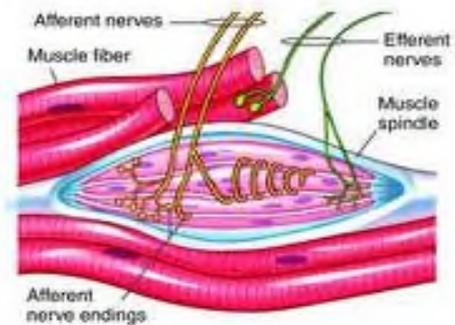
You are able to take weight on the area and the swelling has nearly gone down

Massage

Almost all conditions treated by the medical massage therapist can be improved through stimulation of the muscles and stretch receptors.

You have an inner Autopilot which is the part of your nervous system which listens to our stretch receptors in the muscles plus special messenger chemicals. This system is always trying to restore balance when injury, tension or stress occur and throws you out of balance.

Gentle massage movements maintain the flow of important fluids around the injured area and stimulate your autopilot by rebalancing the stretch receptors through gentle pressure. The sense of touch soothes while the increase in mobility is assessed using gentle joint mobilisation movements



Positive clinical results will continue long after your massage therapy treatment due to the "normalization" of connective tissue including the tendons



'Cold and hot' treatment at home

Keep those important fluids moving to flush out the toxins which are naturally forming due to the healing process. Take your gel pack out of the freezer and place on the area for **1 minute** (the fluids are being driven deep into the area).

Remove and replace for **3 minutes** with a warm wheatie (as warm as the area will take) or a hot water bottle or flannel dipped in warm water and wrung out. This brings out the toxins to be removed and released from the body via the kidneys. **Repeat 5 times; 3 times a day if possible**

Exercise—walking is best allowing the body to move around the fluids surrounding the area and so remove toxins.

Cardiovascular exercise is important to exercise the heart as well as the muscles and is shown to increase your positive chemicals=endorphins Can be fun and adjusted to your life style with some thought and insight.

When you have sprained your ankle exercise your arms and Shoulders and the other leg by stamping and stretching



Stretch across the area as this releases the 'static' held in the connective tissue beneath the skin and Increases elasticity and flexibility, stretches the muscle sheaths around the muscles and allows the muscles to 'breathe' better.

See relevant stretches handout

Remember—If the Autopilot is constantly working overtime just to sustain basic balance, your issues won't heal and you can't make long-term results. **So rest as much as you can**