DEMYSTYFING TENDON PAIN

What is tendinopathy?

- Tendinopathy most commonly means abnormal tendon tissue and pain
- The pain is usually worse during or after activity
- Some people have 'stiffness' in the morning or after rest

Why do we have tendons?

- Tendons transfer forces from the muscle to the bone to allow us to move
- Long ropey tendons like the Achilles often become painful because they absorb forces

Figure 1. The Achilles tendon

Some tendons absorb forces

Think about tendon like a spring or a buffer. Some, like the Achilles tendon absorb **stretching forces** and then release this energy again when we move. Others, like the supraspinatus in the shoulder mainly absorb **pressing forces**. These tendons have an important job in dealing for forces in the body, but if the forces are excessive tendinopathy can develop.

What causes tendinopathy?

Many factors may contribute. Some we cannot change, such as:

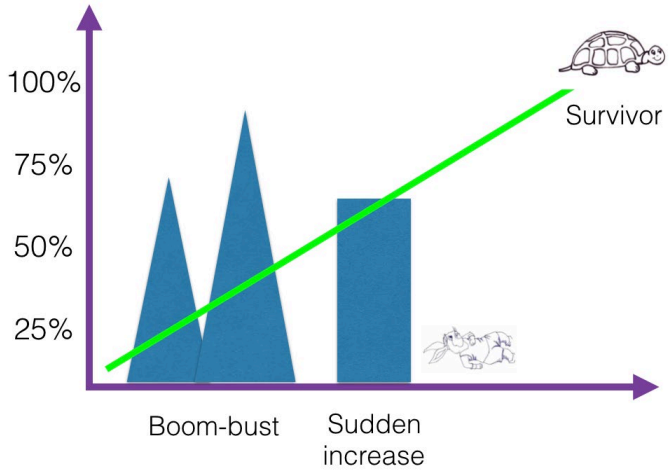
Age: tendons become less able to repair themselves with age so the risk of injury increases.

Genetic predisposition: certain genes can increase the risk of tendinopathy. You may be more susceptible if other people in your family are also affected.

Your body alignment: how your bones are aligned may be a risk factor for tendinopathy. The good news is usually these factors only increase the risk slightly.

There are some factors we can change to reduce the risk of tendinopathy:

Activity: Doing too much **walking, running, jumping**, **or repetitive arm use** is a risk factor. These activities produce high tendons loads at fast speeds.



Obesity: excess weight increase load on your leg tendons, but also obesity may increase risk via biochemical mechanisms

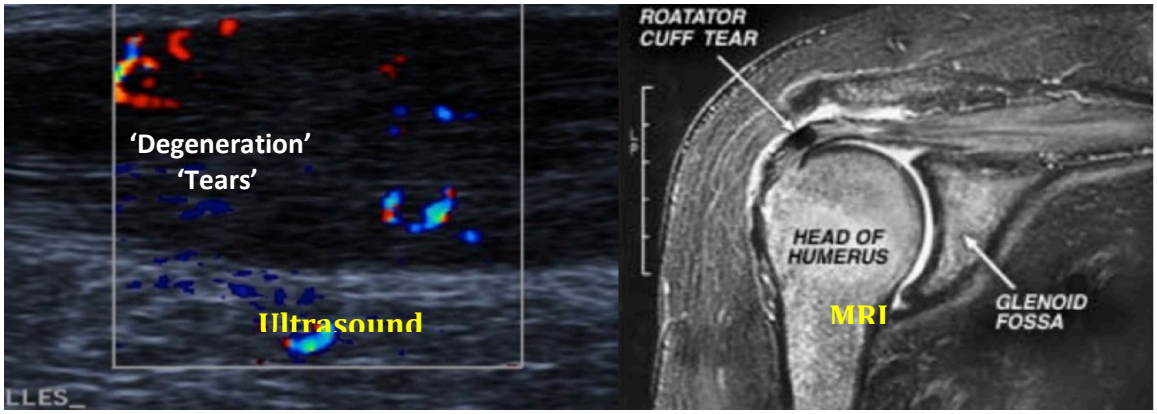
Elevated cholesterol: high cholesterol is a risk factor for tendinopathy. Aerobic exercise, diet and medication may help you overcome tendinopathy.

Hormones: women are more susceptible around menopause. This is probably due to reduced estrogen levels at this time.

Muscle weakness: weak muscles are unable to protect the tendon and this can increase loads on the tendon and the risk of tendinopathy.

Biomechanics: the way that you move as well as your joint flexibility may place increase loads on your tendons and increase injury risk.

What happens to the tendon?



Should I be concerned about pathology?

One of the most important messages that you can take away from this education is that pathology is not clearly related to pain. This is how the pathology story goes, please commit it to memory….

Pathology is common in people without pain

Even with very severe pathology your pain can improve

Painful and pathological tendons hardly ever tear suddenly

Why is it painful?

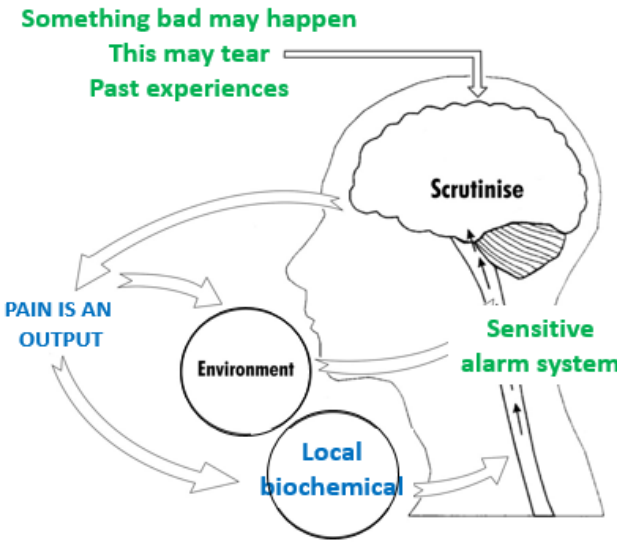
Pain ≠ damage

Most likely local biochemical

Modulated by many factors

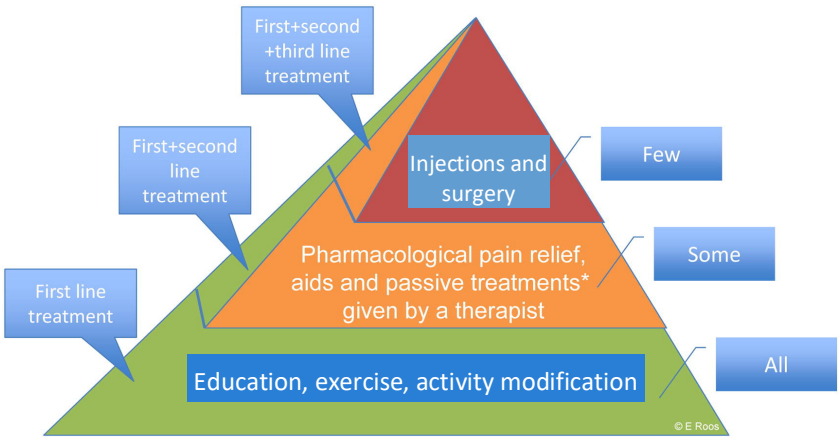
'It feels like it is tearing'

'I'm not concerned about the pain'

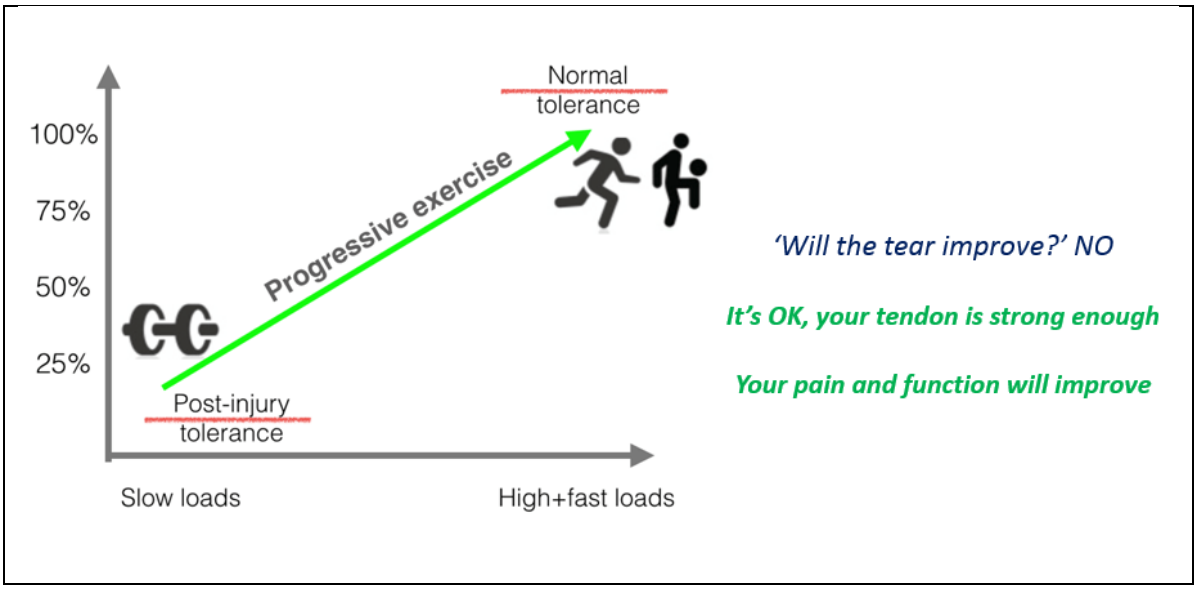


Mature Organism Model, Louis Gifford, 1998

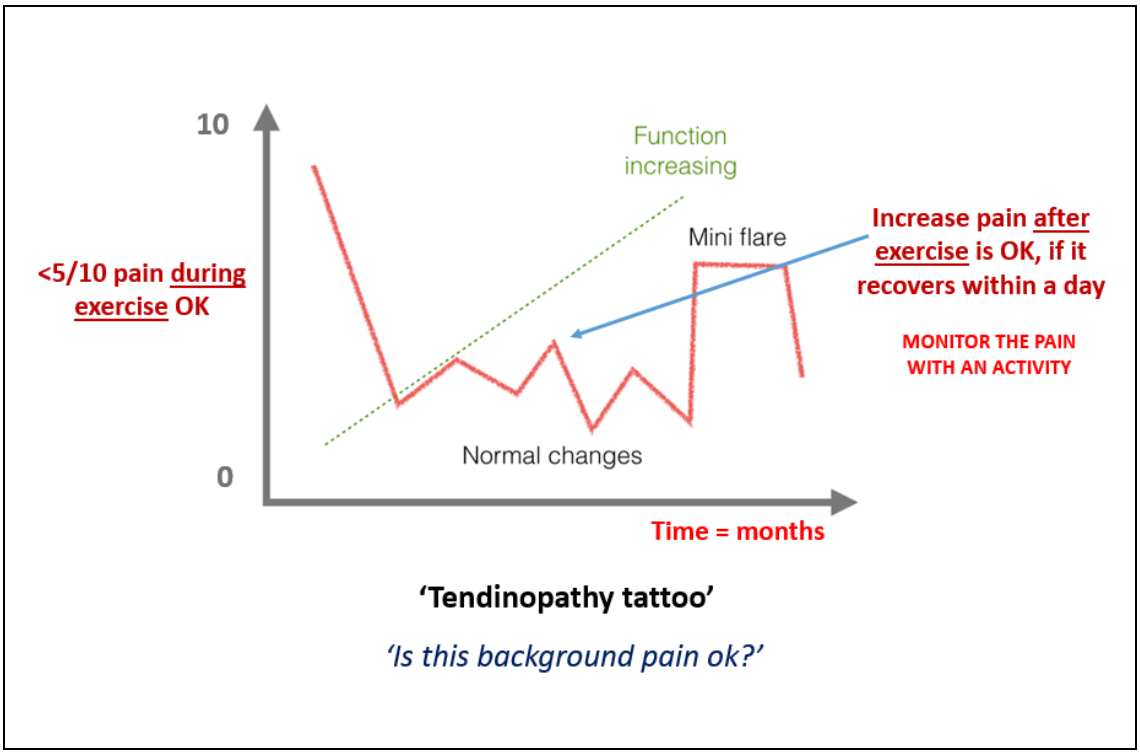
How can you treat tendinopathy?



Only exercise can increase load tolerance



What should I expect with exercise?



Advice about physical activity

Initially you may need to reduce activities such as running and walking that are very painful until you have improved your load tolerance. Then you can GRADUALLY resume these activities. Monitoring your activity with a fitbit or exercise diary can be helpful to make sure you are not progressing too quickly.

Mini flare-up strategies

- Reduce your activity for 2-3 days to allow pain to settle
- Ice or heat
- Anti-inflammatory medications if the pain is strong
- Self-massage or foam rolling

What else may help pain

- General physical activity or cross training like swimming or cycling
- Managing stress with mindfulness, meditation, relaxation, breathing techniques or yoga
- Managing sleep with strategies such as reading and limiting screen time prior to bed, medications like melatonin

Sleep strategies

If you having trouble sleeping, consider these strategies and resources

- Minimise screen time prior to bed
- Go to sleep when you are tired
- Bath, reading or relaxing ritual prior to bed
- Don't look at the clock
- Write down worrying thoughts/ideas and deal with them in the morning
- www.sleepfoundation.org/how-sleep-works/the-sleep-environment

Relaxation strategies

If you having trouble relaxing, consider these resources

- Mindfulness apps may help eg Smiling Mind and Headspace
- Practice deep breathing and relaxation exercises
- Stress management

Further pain resources that may be helpful

- Understanding pain and what to do about it in 5 minutes
- Understanding chronic pain
- Lorimer Moseley: The role of the brain in pain
- Stress and pain