



A painful & recalcitrant tendon is a frustrating problem for both sufferers and health professionals. Up until recently it was thought to be a simple diagnosis: tendinitis. Treatment would be aimed at decreasing inflammation and stretching the short tendon. General doctors would probably write a script for anti-inflammatories, advise complete rest and hope for the best.

Over the last 5-10 years our understanding of tendinitis has increased greatly and consequently the management has changed markedly too. We can now expect excellent outcomes if we have good patient compliance (but that is a big IF)... We now understand that in most cases there is no inflammation in the tendon, but something more akin to a break down or degeneration. Most commonly the condition occurs when there is a mismatch between the capacity of the muscle/tendon and what you are asking of it. When the tendon runs out of mojo but you keep asking it to perform, it starts to break down. When the breakdown has progressed for some time it becomes painful. The most common areas are in the elbow (tennis elbow), knee (patella tendon), wrist and achilles tendon, but it can occur in any area which is used frequently, especially if the rate or intensity of use increases quickly.

When looking at these painful tendons under a microscope there is rarely any inflammation present, and as the suffix -itis refers to inflammation, there has been a move in medical and physio circles that is gathering steam to change the name of the condition from tendinitis, and replace it with either 'tendinosis' or more commonly tendinopathy. These imply pathology of chronic degeneration or deterioration without suggesting inflammation.

Tennis Elbow

For those that have had a tennis elbow you will be aware of what a troublesome and painful problem it can be. Until recently, understanding of the cause, pathology and most effective treatment has been hit and miss at best. The name "tennis elbow" itself has recently been suggested as unsatisfactory as it is much more common in non-tennis players than tennis players and gives us no indication of the pathology. Many in the sports injury field are pushing to get away from over simplified names, although they do make it much easier to whinge to our spouses about... Some other non-descriptive terms for common injuries are: "Runner's knee" (patella mal-tracking OR Ilio-tibial band syndrome), jumper's knee (patella tendinopathy or bursitis) and the Japanese favourite "yon-ju/go-ju kata - 40 / 50 year old shoulder" (any one of a dozen shoulder problems all of which are more common in 40-50 year olds) or our favourite "Gaijin's head" (numerous bumps on the head after forgetting to duck through low doorways OR frazzled brain-cells due to lack of sleep, stress, over work and over-play).

"But I had a tendinitis, my doctor prescribed anti-inflammatories and the really helped" I hear some of you say. Research suggests that the positive effect of anti-inflammatory medication is most likely due to the analgesic component, not from them acting on the inflammation (as there rarely is any). So the next time your friend complains of having tendonitis in their knee or achilles you can say "Tendonitis is so 90's dahhlink,

tendinopathy is the essential knee accessory for the noughties”. On second thoughts, perhaps it would be better to wince slightly and say “oh that must be painful- I know a good place you can go.....”

Causes

Tendinopathy tends to occur in areas of the body that are subject to high use and that have poor blood supply and hence low healing ability. A lack of strength in the affected muscle and tendon is common in sufferers. A typical tennis elbow sufferer is a busy person who works with their hands regularly and quickly, are thin framed or slightly weak in the forearm muscles with decreased grip strength. As we would say in Australia: *Bludgers*¹ do not get this condition.

Treatment

The recent research on tendinopathy suggests the most effective form of treatment is a strengthening program, combined with avoidance of aggravation. The dilemma is that complete avoidance of use obviously avoids aggravation, but leads to continued weakness and many strengthening programs can aggravate. Hmmm... damned if you do and damned if you don't!?? Well if we do things correctly - maybe not. A specific eccentric² strengthening program (including warm-up and stretching) has been shown to be effective in several recent studies.

Below is a sample program for tendinopathy problems:

1. Warm up with general pain free exercise of entire limb, (can be helped by heat or massage). Light weights or arm circles / range of motion exercises for arms.
2. Strengthening Program: 3 x 15 eccentric strengthening exercises with a weight that causes the muscle to be fatigued by the end of each set of 15. As the strength improves, the weight can be increased, then the speed of the drop. For the elbow these entail holding a light weight and draping the wrist over the edge of a table and lifting the hand upwards at the wrist, lower and repeat.
3. Icing post exercise for 5-10 minutes.
4. A brace around the forearm or below the knee cap will help prevent aggravation by giving the muscle a new anchor point to work from.

1. Bludger: lazy person, layabout, somebody who always relies on other people to do things or lend him things.

2 Eccentric strengthening is the lengthening of a muscle against resistance. Think of the bicep curl, if you are holding a weight by your side and bend at the elbow on the way up the muscle is shortening during contraction (concentric contraction), on the way down the muscle is lengthening during contraction to stop the hand falling with gravity (eccentric contraction). It is the eccentric phase which provides shock absorption and is the most important for tendon problems.