



ACHILLES TENDINOPATHY: MANAGING LOAD ON THE TENDON WITH GRASTON TECHNIQUE

Graston Technique (GT) has come to be my “go-to” treatment approach for Achilles Tendinopathy. This condition typically affects active individuals, typically between the ages of 30 to 50. As with most conditions I treat, one of the most important factors when establishing a treatment plan is to identify the stage of the condition, as this will dictate my treatment approach.

It is important to start by clarifying some terminology. First, the term Tendinopathy. Tendinopathy refers to any disease of a tendon. This can be an acute inflammatory condition, which would be called tendinitis, or a chronic degenerative non-inflammatory condition, which is referred to as tendinosis. The difference between the two has a physiologic basis. To make an analogy, we could consider an acute condition as a hot burning fire. There is active inflammation and the treatment strategies should reflect the philosophy of first controlling, and then extinguishing the fire so that it does not result in harm to the adjacent tissue. Modalities to control the inflammatory process are indicated, as well as interventions designed to reduce the abusive load, such as activity modification, stretching, and heel lifts (2).

On the other hand, tendinosis is a chronic degenerative condition often related to overuse. This would be analogous to rotting wood in the forest. Symptoms typically include pain and stiffness upon initiating activity, which leads to progressive pain with increased activity. Increased tendon thickness is often observed, and the tendon is often tender to palpation. Pain is caused by neurovascular ingrowth, one of the hallmark features of tendinosis, not from an inflammatory process (6). Treatment strategies in this situation should concentrate on bringing new life to the tissue in order to strengthen it and encourage new growth and organization.

In order to stimulate new growth, the interventions chosen need to influence the fibroblast. The fibroblast is responsible for many functions, which include secreting collagen and other components of the extracellular matrix, and assisting in scar formation. They change in form depending on load. We need to be able to affect the fibroblasts, and encourage them to lay down collagen in an organized manner. The Alfredson protocol for eccentric exercise has been shown to be an effective intervention for the treatment of Achilles tendinosis; however, the recommended treatment period is 12 weeks (1). Graston Technique has the potential to achieve positive outcomes in less time.

Graston Technique is a unique form of IASTM combined with

exercise used to identify and treat soft tissue dysfunction, and has been shown clinically to effectively treat Achilles tendinosis. It is an effective method for identifying and treating restrictions in the kinetic chain to decrease abnormal load on the tendon in the acute phase, as well as an effective method for loading the tendon in order to stimulate new growth in a chronic phase. We have case series (12), case reports (5, 9, 10), a retrospective study (11), and numerous animal models that support these concepts.

Studies in animal models have shown that delivering pressure through the tissue with an instrument results in proliferation and activation of fibroblasts, stimulating collagen production (3, 4). It is plausible to deduce that the same concept would also be true in humans. Graston Technique has been shown to increase blood flow into an area which has the potential to increase the rate of healing for ligaments (8). There is the potential for GT to assist in accelerating tendinosis injury by assisting in fiber alignment and potentially lead to stronger tissue as a result of influencing collagen production and alignment (7).

In a chronic phase, my treatment goals are to improve the capacity of the tendon and muscle to handle load, while avoiding exacerbation of the pathologic state. Graston Technique is an effective method for progressively loading the tendon. We increase the load on the tendon with the instruments, as well as with exercise. Initially, treatments are performed in a static, non-weight bearing position. We gradually add active, then resistive motion while weight bearing. As the tendon becomes stronger, GT can eventually be performed in conjunction with eccentric exercise. Careful progression of this loading principle will result in new growth to the tendinopathic tissue.

Successful management of Achilles Tendinopathy involves first properly identifying the stage of the condition. Then, choosing the appropriate intervention to address the condition. Whether treating the tendinopathic tissue in an acute or a chronic state, proper management of load is key.

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