

## CLINICAL COMMENTARY

## WHY ARE ECCENTRIC EXERCISES EFFECTIVE FOR ACHILLES TENDINOPATHY?

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Achilles Tendinopathy is a complex problem, with the most common conservative treatment being eccentric exercises. Despite multiple studies assessing this treatment regime little is known about the mechanism of effect. This lack of understanding may be hindering therapeutic care and preventing optimal rehabilitation. Of the mechanisms proposed, most relate to tendon adaptation and fail to consider other possibilities. The current consensus is that tendon adaptation does not occur within timeframes associated with clinical improvements, therefore the clinical benefits must occur through another unidentified pathway. This clinical commentary critically reviews each of the proposed theories and highlights that muscle alterations are observed prior to onset of Achilles Tendinopathy and during the disease. Evidence shows that the observed muscle alterations change with treatment and that these adaptations have the ability to reduce tendon load and thereby improve tendon health. The purpose of this clinical commentary is to review previous theories regarding the mechanisms by which eccentric exercise might affect Achilles tendinopathy and offers a novel mechanism by which the plantarflexor muscles may shield the Achilles tendon.

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**Level of Evidence:** 5

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