

## THE MECHANOTHERAPY MODEL

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How does tendon respond to load?

Tendon has been thought to be relatively slow in adapting to load, and structural adaptation after puberty is still debated.

Short term adaptation to load has recently been investigated and this critical question can improve understanding of how the athletic loads on tendon can result in either a well adapted tendon or pathology.

Understanding the cell matrix links and how tendon responds to load in the short and long term to load may improve athletic loading strategies and clinical management of tendons.

Cell matrix interactions occur through direct cell attachments and through protein structures. The cell requires strong attachments and strain for normal function. Cell and matrix response to load are dependent on the type and magnitude of load and where the load is primarily detected in the tendon.

Both matrix and cell adaptation have been shown and the methods to detect these changes in vivo, especially in athletes, are complex.

The clinical implications of these adaptations are important and may guide the frequency, intensity and volume of load in training and in rehabilitation for tendinopathy.