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## Mechanotransduction of stem cells for tendon repair

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### Abstract

Tendon is a mechanosensitive tissue that transmits force from muscle to bone. Physiological loading contributes to maintaining the homeostasis and adaptation of tendon, but aberrant loading may lead to injury or failed repair. It is shown that stem cells respond to mechanical loading and play an

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Cited by: 183

Author: Megan L. Killian, Leonardo Cavinatto, Lee...

Publish Year: 2012

位置: 8600 Rockville Pike, Bethesda, MD

**Tendon** healing depends on the contributions of multiple cell sources, which may include fibroblasts from the endotendon and epitendon 2, inflammatory **cells** from the vasculature 21,39, **cells** from the synovial sheath 1,3,9, and mesenchymal **stem cells** 128, which may migrate to the area of **tendon** injury or proliferate from within the **tendon**. The ...

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Author: Lidi Liu, Jennifer Hindieh, Daniel J. Leong,...

Publish Year: 2017

**Stem** cell-based approaches for **tendon** repair: an overview **Stem cells** for **tendon** repair. **Stem cells** can be classified based on their lineage differential potential. Pluripotent **stem cells** such as embryonic **stem cells** (ESCs) and induced pluripotent **stem cells** (iPSCs), can differentiate into any cell in the body.

<https://www.sciencedirect.com/science/article/pii/S2214031X16302844>



Mechanotransduction of stem cells for tendon repair



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mechanotransduction mechanisms in tendon cells are still **unclear** and the elucidation of these mechanisms is a key goal in tendon research. Tendon stem/progenitor cells (TSPC) possess common adult stem cell characteristics, and are suggested to actively participate in tendon development, tissue homeostasis as well as repair.

**Author:** Cvetan Popov, Martina Burggraf, Ludwika Kreja, Anita Ignatius, Matthias Schieker, Denitsa Docheva

**Cited by:** 73

**Publish Year:** 2015

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Tendon stem/progenitor cells (TSPC) possess common **adult stem cell characteristics**, and are suggested to actively participate in **tendon development**, **tissue homeostasis** as well as **repair**. This

[s://global.bing.com/?FORM=Z9FD1](#) an important **cell population** for **tendon repair**, and also an interesting research target for