

Stem cells inside sutures could improve healing in Achilles tendon injuries

March 12 2014

Researchers have found that sutures embedded with stem cells led to quicker and stronger healing of Achilles tendon tears than traditional sutures, according to a new study published in the March 2014 issue of *Foot & Ankle International*.

Achilles tendon injuries are common for professional, collegiate and recreational athletes. These injuries are often treated surgically to reattach or repair the tendon if it has been torn. Patients have to keep their legs immobilized for a while after [surgery](#) before beginning their rehabilitation. Athletes may return to their activities sooner, but risk rerupturing the tendon if it has not healed completely.

Drs. Lew Schon, Samuel Adams, and Elizabeth Allen and Researchers Margaret Thorpe, Brent Parks, and Gary Aghazarian from MedStar Union Memorial Hospital in Baltimore, Maryland, conducted the study. They compared [traditional surgery](#), surgery with stem cells injected in the injury area, and surgery with special sutures embedded with stem cells in rats. The results showed that the group receiving the stem cell sutures healed better.

"The exciting news from this early work is that the stem cells stayed in the tendon, promoting healing right away, during a time when patients are not able to begin aggressive rehabilitation. When people can't fully use their leg, the risk is that atrophy sets in and adhesions can develop which can impact how strong and functional the muscle and tendon are after it is reattached," said Dr. Schon. "Not only did the [stem cells](#)

encourage better healing at the cellular level, the tendon strength itself was also stronger four weeks following surgery than in the other groups in our study," he added.

More information: "Stem Cell-Bearing Suture Improves Achilles Tendon Healing in a Rat Model" by Samuel B. Adams, Jr, MD; Margaret A. Thorpe, BS; Brent G. Parks, MSc; Gary Aghazarian, BS; Elizabeth Allen, MD; and Lew C. Schon, MD in the March 2014 Foot & Ankle International.

Provided by SAGE Publications

Citation: Stem cells inside sutures could improve healing in Achilles tendon injuries (2014, March 12) retrieved 1 May 2024 from <https://medicalxpress.com/news/2014-03-stem-cells-sutures-achilles-tendon.html>

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