

Injection treatment no help for hamstring injuries, study says

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(HealthDay)—An expensive and unusual treatment that relies on components from a patient's own blood doesn't appear to speed recovery from hamstring muscle injuries, according to new research.

The [treatment](#) is favored by top athletes, but the study found no benefit from platelet-rich plasma injections, at least when administered in a certain way.

A physician who relies on the largely untested therapy says the new research misses the mark. But the study's lead author stands by the findings, published in the June 26 issue of *The New England Journal of Medicine*.

"We found no benefit of platelet-rich plasma injections compared to placebo injections" in terms of the time athletes needed to return to playing sports and their risk of getting injured again, said study lead author Dr. Gustaaf Reurink, a sports medicine specialist with Erasmus Medical Center in Rotterdam, the Netherlands.

Hamstrings are muscles at the back of the thigh and crucial to flexing the hip and knee, said Dr. Lewis Maharam, a sports medicine specialist in New York City.

If they're warmed up, the muscles should stretch like warm taffy, Maharam said. But if they're not, they can become inflexible and be torn during exercise.

Injured people will find that "it hurts to run, and it may hurt to walk," he said. "It may hurt all the time. It depends on how big the tear is."

In the past, pro football players with torn hamstrings might need to be kept off the field for eight to 12 weeks to recover through rest and physical therapy, Maharam said. But he said platelet-rich plasma injections have made a big difference.

The goal of the treatment is to attract body-repairing stem cells to the hamstring injury, he said. To do this, a physician sends a patient's blood to a lab for processing to remove platelets and parts of the immune system known as lymphocytes. These are injected into the patient's body at the site of the injury and, at least, according to theory, send a cry for help to stem cells that arrive to save the day.

"When it's done correctly, patients heal in two to three weeks maximum, and they're back running," Maharam said.

There are caveats. There's no research showing that the treatment works on hamstring injuries, and insurance companies won't cover the treatment because it's experimental, Maharam said. He declined to pinpoint the potential cost but said the treatment is for wealthy people and pro athletes.

Study lead author Reurink said single injections cost \$500 to \$1,000. The number of injections needed, he said, is up for debate.

The treatment is also used for chronic tendon injuries, such as tennis elbow; new ligament and [muscle injuries](#); knee arthritis; during some orthopedic surgeries, and even for broken bones, according to the American Academy of Orthopaedic Surgeons. However, the orthopedic group said the treatment hasn't been definitively proven for any condition, and the current evidence for the therapy is limited.

In the new study, researchers gave two injections of either platelet-rich plasma or saline (a placebo) to 80 athletes with hamstring injuries. The researchers tracked them for six months.

The researchers reported that the treatment appeared to have no effect. The median time to start playing sports again was 42 days for athletes in both groups. About 15 percent of athletes in both groups re-injured themselves.

Reurink said the treatment might not work because the plasma doesn't do enough to boost the healing process.

Maharam questioned the study, saying the researchers didn't flood the injured hamstrings via the injections or adjust the amount of plasma based on the size of the injury. Reurink responded that the researchers carefully pinpointed the injuries and used the treatment amount recommended by the manufacturer of the system that produced the plasma treatment.

"We do not know whether these results can be generalized to other interventions, such as injections with more fluid," Reurink said. Still, research hasn't shown that other approaches actually work, he said.

More information: For more about platelet-rich plasma therapy, visit the [American Academy of Orthopaedic Surgeons](#).

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