



Comparing Stem Cell Treatment options for Knee Pain in Osteoarthritis Patients



Why and How We Did This Study

Knee osteoarthritis is a painful condition with cartilage breakdown. While there is no standard treatment, steroid injections are often given for the pain. Stem cell injections are a new treatment option. However, no studies have compared stem cell injections to each other and to steroids. This study compared knee pain improvement after steroid and stem cell injections. We also looked at safety of the injections.

This study was led by Emory University. Four organizations, including Duke, took part. The study included 480 patients. Participants were between 40 to 70 years old, and they showed signs of knee osteoarthritis on their recent x-rays.

Participant Characteristics

- Average Age: 58.3
- Male: 45.1%
- Female: 54.9%

Participants were randomly given one of four treatments: a steroid or one of three types of stem cells.

The stem cells came from the patient's own fat, their own bone marrow, or umbilical cords donated after birth.

Study Results



- At 1 year after treatment, the four different treatment types showed no significant differences in patient's pain levels.
- There were no significant changes in MRI imaging evaluations of knee health.
- There were no infections after any treatment.

What These Results Mean

The results of this study show that steroids or stem cell treatments are both equally useful for knee osteoarthritis pain.

These results may not affect or apply to each person. This study is one “piece of the puzzle” for this treatment; additional information may be available from other studies now or in the future. You should talk about these results with your personal provider to decide if the results should affect your clinical care.

Read more about this study in [Nature Medicine](#).