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More activity improves recovery from knee surgery

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By Anne Harding

NEW YORK (Reuters Health) - The more frequently a person plays sports after having surgery to restore damaged knee cartilage, the better he or she will fare long-term, German researchers report.

Dr. Peter Cornelius Kreuz of University Medical Center Freiburg and colleagues found that patients who engaged in competitive sports at least once a week after initial recovery from the operation showed better knee function and cartilage regrowth as measured by MRI than their less active peers.

This applies to the period after post-surgery physical therapy, Kreuz told Reuters Health. "After the first three to six months it depends really on the patients themselves what they do," he said in an interview.

The researchers evaluated patients who underwent autologous chondrocyte implantation, a surgical procedure in which cartilage cells are removed from the non-weight bearing area of the knee, grown in a lab dish for several weeks, and then re-implanted to replace damaged the cartilage.

People must be inactive after the cartilage is removed from their knee, three to six months before the operation, so all patients start out their recovery in the same shape, whether or not they were athletic beforehand, Kreuz pointed out.

He and his colleagues followed 118 patients who had undergone autologous chondrocyte implantation surgery, following them for three years. The patients were categorized into four activity levels: I, engaging in sports four to seven days a week; II, one to three days a week; III, one to three times a month; or IV, no sports at all.

By six months after the surgery, the patients in levels I and II showed significantly better knee function and cartilage repair than those who were less active, and the difference persisted until the end of follow-up.

"There must be a stimulus for the cartilage," Kreuz noted, adding that too much stress can be detrimental. Patients were instructed to avoid very high-impact activities and sports involving sharp pivoting, such as basketball, football and soccer, and stick to lower-impact activities like jogging and tennis, for the first year after the surgery.

After 12 to 24 months, they could gradually increase their level of impact and eventually get back into contact sports.

He and his colleagues conclude: "Physical training improves long-term results after autologous chondrocyte implantation of the knee and should be carried out for at least two years after surgery."

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