

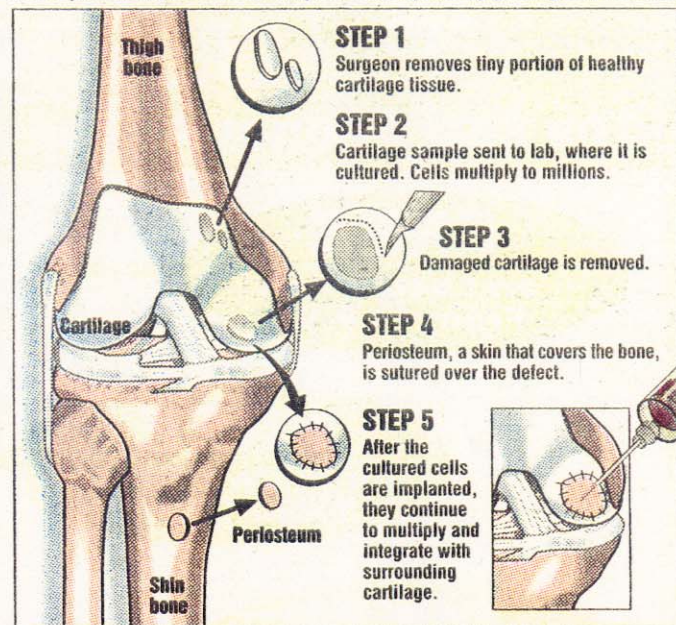


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Kevin Hoffman plays softball, skis and rides his bike after surgery on his knee regenerated cartilage cells.

ALTERNATIVE SURGERY

A new procedure called Carticel repairs knee injuries by growing new cartilage.



SOURCE: Genzyme Tissue Repair

GREG GOOD/SUN-TIMES

Surgery regenerates knee cartilage

For certain types of injury, about 85 percent of patients report improvements

BY JIM RITTER
SCIENCE REPORTER

After three cartilage operations on his right knee, Kevin Hoffman faced the prospect of arthritis, chronic pain and an eventual knee replacement.

Instead, Hoffman had a new procedure, now beginning to catch on in the Chicago area: growing cartilage.

A surgeon removed a speck of cartilage from Hoffman's knee and sent it to a lab for a few weeks, where a few cartilage cells multiplied to 12 million. The surgeon then transplanted the lab-grown cells into Hoffman's knee. There, the cells continued to multiply and integrate with surrounding cartilage.

Hoffman, 40, has almost no pain now. He plays softball, snow skis and rides his bike, although he has given up basketball and foot-

ball, which caused the cartilage injuries.

The procedure, called Carticel, "was a tough go, but worth it," Hoffman said. "It's an investment in my future."

Between 10 and 20 Chicago area doctors are trained to do Carticel, said Hoffman's surgeon, Dr. Brian Cole of Rush Cartilage Restoration Center. Patients include a ballet dancer and pro football player.

More than 800,000 people injure knee cartilage each year. Most injuries involve soft meniscus cartilage, which acts as a cushion between the thigh bone and shinbone.

Carticel is intended for less common injuries to the hard articular cartilage that lines the end of the thigh bone. Carticel can treat fewer than 5 percent of all cartilage injuries, Cole said.

Studies show about 85 percent of Carticel patients report improvements, said Dr. Sherwin Ho of University of Chicago Hospitals, who has done about a dozen procedures. "We're all very impressed with the results."

But there's no proof Carticel works better than older treatments such as microfracture, in which a surgeon drills small holes in the bone that heal to form a type of cartilage.

Cole and other researchers had planned a

nationwide study to compare Carticel with other treatments. But the study couldn't be done because patients all wanted Carticel, Cole said.

Carticel costs about \$30,000. As the procedure becomes more common, more insurance plans are covering it.

After surgery, patients must use crutches for six or seven weeks, according to Genzyme Tissue Repair, which cultures the cells. Patients also must do weight-bearing, muscle-strengthening and other exercises.

Patients can resume low-level activities such as swimming and biking as early as six months after the operation. It takes a year before they can play such sports as basketball and tennis, Genzyme said.

Hoffman said his slow recovery was "quite grueling."

Unlike arthroscopic surgery, Carticel requires open surgery, which can leave a 5-inch scar, said Dr. Kevin Luke of Advocate Christ Hospital in Oak Lawn. Luke recently operated on a 14-year-old girl, who was worried about how the scar would look. Over time, the scar will fade, but the new cartilage should remain strong, Luke said.



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The procedure, which costs about \$30,000, implants lab-grown cartilage in the knee.