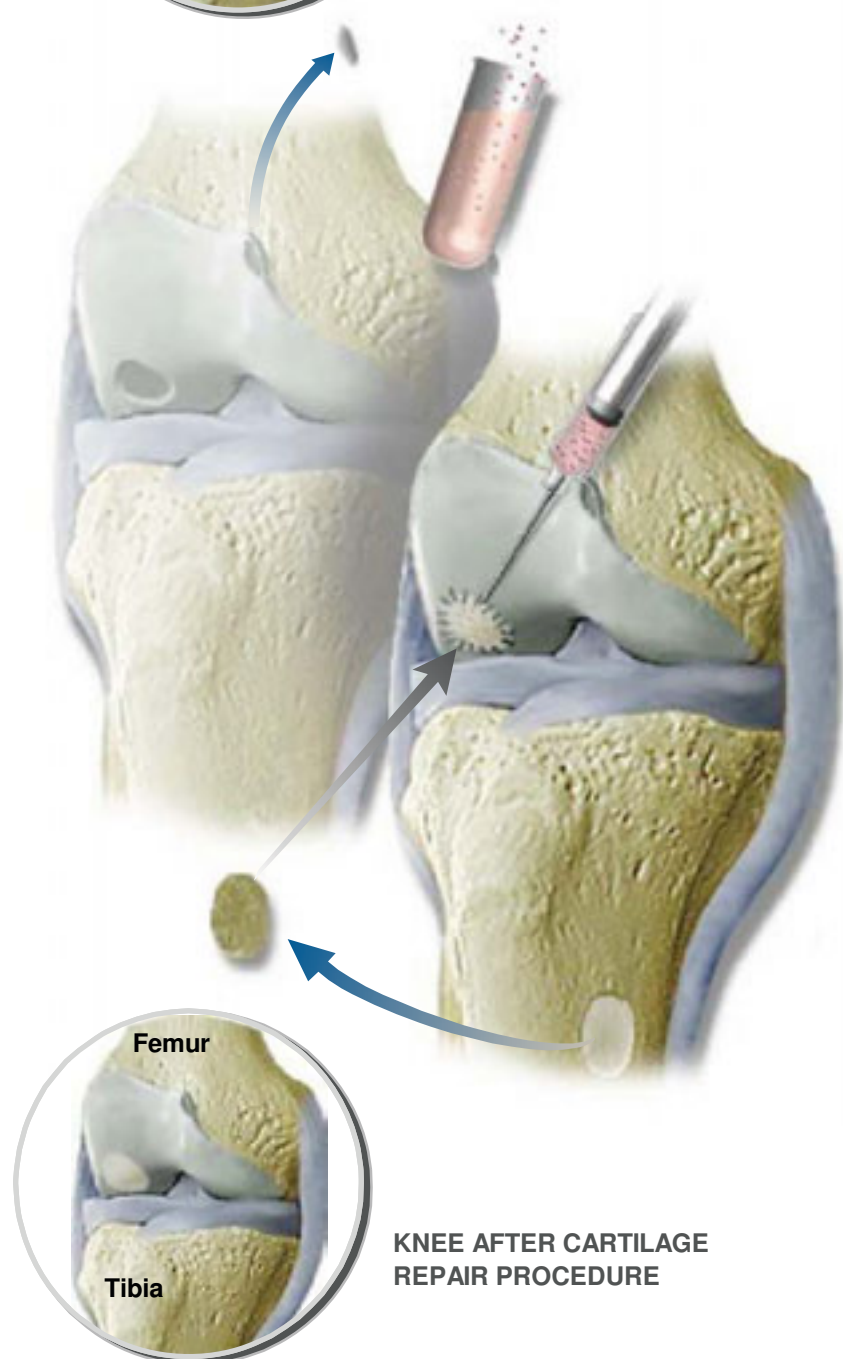


CARTILAGE REPAIR



KNEE BEFORE CARTILAGE REPAIR PROCEDURE



KNEE AFTER CARTILAGE REPAIR PROCEDURE

Overview

This technique is designed to treat and repair cartilage defects by regenerating the patient's own hyaline cartilage, (a weight-bearing cartilage that lines the surface of the knee joint).

Knee Examined

Through a small incision in the knee, the surgeon uses an arthroscope to look for signs of damage in the knee joint.

Sample Removed

If a defect is found, the surgeon removes a small sample of healthy cartilage from a non weight-bearing region of the knee.

Cells Cultured

The sample is sent to the Genzyme laboratory, where it is stimulated to produce approximately 12 million similar cells. The process, called cell culturing, takes about four to five weeks. Once completed, the new cells are returned to the surgeon.

Diseased Cartilage Removed

The surgeon now performs a second surgery to implant the new cartilage cells. First, the surgeon removes the knee's damaged or diseased cartilage, along with any loose tissue.

Periosteum Removed

A small patch of thin, fibrous tissue called periosteum is removed from the surface of the tibia.

Patch Sewn

The periosteum patch is sewn over the area where the diseased or damaged cartilage was removed.

Cells Implanted

The cultured cells are implanted beneath the patch through a thin needle.

End of Procedure

Over time, the cultured cells will adhere to the damaged area, forming a new layer of weight-bearing cartilage tissue.