

1 WHAT IS KNEE CARTILAGE?

The **knee is a complex joint** made up of three different bones: the thigh bone (femur), shin bone (tibia), and knee cap (patella)

There are two types of cartilage in the knee:



ARTICULAR CARTILAGE

Durable tissue covering the ends of bones providing a smooth, impact-resistant surface to help you during activities, such as walking, kneeling, running, and jumping

MENISCUS

Two crescent-shaped wedges acting as a cushion between the thigh and shin bones

2 WHAT CAUSES KNEE CARTILAGE DAMAGE?

CHRONIC OR REPETITIVE ACTIONS

Exercise, sports, or physical work can cause cartilage to weaken and wear out with time

ACUTE OR TRAUMATIC EVENTS

For example, a fall can cause immediate, severe cartilage damage



Unlike other tissues, cartilage does not repair itself. That's why articular cartilage injuries are chronic and often get worse as time goes on. If conservative treatment has not worked to relieve pain, surgery is often the answer¹.

3 WHAT ARE KNEE CARTILAGE REPAIR OPTIONS?

Several treatment options can help repair an articular cartilage injury in the knee. Your physician will make a recommendation depending on a range of personal factors (age, health, and nature of injury).

One option is **MACI**, a third generation Autologous Chondrocyte Implantation (ACI) treatment used for the repair of symptomatic cartilage damage of the adult knee. MACI (autologous cultured chondrocytes on porcine collagen membrane) is made up of your own cells that are expanded and placed onto a film that is implanted into the area of the cartilage damage and absorbed back into your own tissue. **See full indication on page 2.**

4 WHAT ARE THE STEPS TO THE MACI TREATMENT?

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
					
Biopsy of healthy cartilage is taken during diagnostic arthroscopy	Process biopsy to isolate cartilage cells in FDA licensed cell-processing facility	Grow cartilage cells, place on resorbable membrane	MACI delivered to your surgeon	MACI implanted into knee	Rehab

5 WHAT ARE THE BENEFITS OF MACI?



MACI uses your own cells to create a durable repair tissue



Reduces pain and restores joint function as early as 6 months after procedure



Helps you to return to the activities you enjoy

¹ de Windt TS, et al. Patient profiling in cartilage regeneration: prognostic factors determining success of treatment for cartilage defects. Am J Sports Med. 2009, Nov;37.

² Saris D, Price A, Widuchowski W, et al. Matrix-applied characterized autologous cultured chondrocytes versus microfracture: Two-year follow-up of a prospective randomized trial. Am J Sports Med. 2014;42(6):1384-94

MACI is covered by most commercial insurance plans

MyCartilage Care is a patient support program created specifically for MACI patients and MACI-trained surgeons

INDICATION

MACI® (autologous cultured chondrocytes on porcine collagen membrane) is made up of your own (autologous) cells that are expanded and placed onto a film that is implanted into the area of the cartilage damage and absorbed back into your own tissue.

MACI is used for the repair of symptomatic cartilage damage of the adult knee.

The amount of MACI applied depends on the size of the cartilage damage. The MACI film is trimmed by your surgeon to match the size and shape of the damage, to ensure the damaged area is completely covered.

Limitations of Use

The safety and long-term clinical benefit of MACI have only been studied in the knee joint.

The safety and effectiveness of MACI have not been proven for patients 55 years old and older.

IMPORTANT SAFETY INFORMATION

MACI should not be used if you:

- are allergic to antibiotics such as gentamicin, or materials that come from cow, pig, or ox;
- have severe osteoarthritis of the knee, other severe inflammatory conditions, infections in the bone joint and other surrounding tissue, or blood clotting conditions;
- have had knee surgery in the past 6 months, not including surgery for obtaining cartilage biopsy or a surgical procedure to prepare your knee for a MACI implant;
- or cannot follow a doctor-prescribed rehabilitation program after your surgery

Consult your doctor if you have cancer in the area of the cartilage biopsy or implant as the safety of MACI is not known in those cases.

Conditions that existed before your surgery, including meniscus tears, joint instability or alignment problems should be evaluated and treated before or at the same time as the MACI implant.

MACI is not recommended if you are pregnant or breast feeding.

MACI has not been studied in patients younger than 18 or over 55 years of age.

Common side effects include joint pain, cold-like symptoms, and headaches.

More serious side effects include joint pain, cartilage or meniscus injury, treatment failure, and osteoarthritis.

Please see [Full Prescribing Information](#) for more information — maci.com