

Is MACI Right for Your Knee?

Your Complete Guide to Advanced Cartilage Repair Without Joint Replacement

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1. What Is MACI?

MACI stands for **Matrix-Induced Autologous Chondrocyte Implantation** — a cutting-edge cartilage restoration procedure for knee injuries. Unlike temporary treatments, MACI helps **regrow your own cartilage cells** to repair damage at the source.

How it works:

- Healthy cartilage cells are harvested from your knee
- They're multiplied in a lab over ~4–6 weeks
- The new cells are placed on a collagen “scaffold”
- That patch is then implanted into the damaged area via surgery

MACI is **FDA-approved** and designed for **focal cartilage defects**, often caused by sports injuries, trauma, or degeneration.

2. Step-by-Step: What to Expect During the MACI Process

Understanding the full MACI journey helps you feel confident in the process. Here's how it typically goes:

- 01

Initial Consultation & Imaging
MRI confirms the size and location of your cartilage damage.
- 02

Outpatient Cartilage Biopsy
A minimally invasive arthroscopy is performed to collect a small cartilage sample.
- 03

Lab Processing (4–6 Weeks)
Your cartilage cells are grown in a lab and embedded into a membrane scaffold.
- 04

MACI Implantation Surgery
A second surgery places the MACI patch into the damaged area.
- 05

Structured Rehab Protocol
Customized physical therapy helps ensure proper cartilage healing and function.

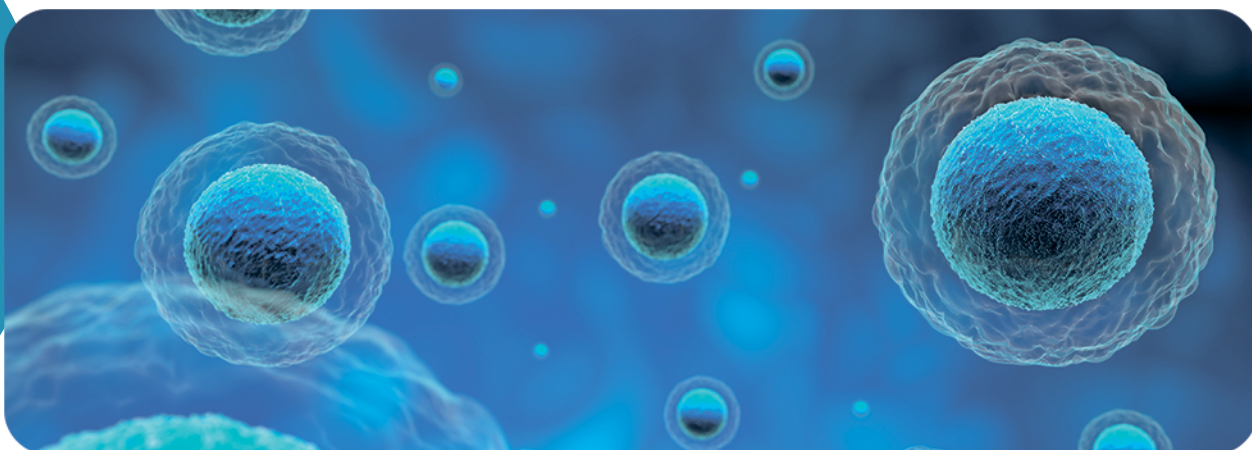
Total Time Commitment: ~3–6 months of recovery and rehabilitation.

3. MACI vs Microfracture vs Cortisone vs Surgery

Many patients are familiar with cortisone or microfracture. But how does MACI compare?

Treatment	What It Does	Longevity	Ideal Patient
MACI	Grows new cartilage	10+ years	Younger, active with cartilage defect
Microfracture	Stimulates fibrocartilage growth	1–3 years	Small lesions, low activity
Cortisone	Reduces pain/inflammation only	Weeks–months	Small lesions, low activity
Knee Replacement	Removes entire joint surface	15–20 years	Severe arthritis

MACI stands out because it regenerates actual cartilage — not just scar tissue or synthetic lubrication.



4. What the Research Says: Clinical Data Highlights

MACI has been studied in numerous trials with **long-term outcomes up to 10 years**.

Key findings:

- Over 90% of patients saw improved knee function
- Significant reduction in pain and swelling
- High return-to-activity rates (including sports)
- Lower reoperation rate compared to microfracture

FDA-Approved Since 2016 – used by leading orthopedic surgeons across the U.S.

Sources: Clinical Orthopaedics and Related Research, Am J Sports Med, MACI Long-Term Trials

5. Rehabilitation Roadmap: Recovery After MACI

Recovery is a critical part of MACI success. Here's what you can expect:

Weeks 1–6:

- Crutches (partial weight-bearing)
- Passive range-of-motion exercises
- Bracing if advised

Weeks 7–12:

- Gradual strengthening
- Stationary bike, pool therapy

Months 3–6:

- Jogging, agility drills
- Return to work (desk: 2–4 weeks, labor: 3+ months)

Month 6+:

- Return to sports possible with surgeon approval

Dr. Burke provides a **customized rehab plan** for every MACI patient.

6. Is MACI Right for You?

MACI may be ideal for:

- ☒ Patients under 55
- ☒ Isolated cartilage defects (not bone-on-bone arthritis)
- ☒ Pain, swelling, or mechanical symptoms (catching, locking)
- ☒ Desire to return to active lifestyle

MACI may **not be ideal** if:

- You have advanced osteoarthritis
- You're not able to commit to rehab
- BMI is severely elevated

Only an orthopedic exam with MRI can confirm if MACI is a good fit.



7. Questions to Ask Before Choosing MACI

To make an informed decision, consider asking your surgeon:

 **Schedule Your MACI Evaluation Today**



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