



autologous cultured  
chondrocytes  
on porcine  
collagen membrane

# MACI REHABILITATION: HELPING RESTORE ACTIVE PATIENTS

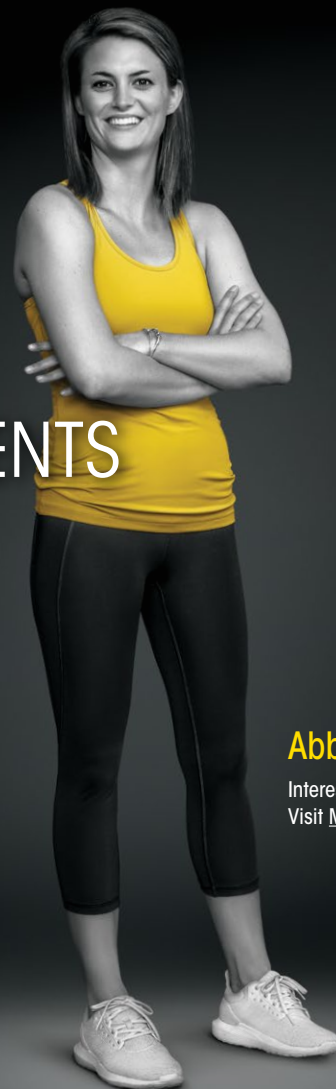
ACHIEVE ROUTINE >>>> BUILD STRENGTH >>>> BE ACTIVE

The content presented reflects clinical expertise derived from the Delphi technique—a method of congregating expert opinion through a series of iterative questionnaires, with a goal of coming to a group consensus—conducted with a panel of US orthopedic surgeons experienced with MACI implantation.<sup>1</sup>

**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.

**Important Safety Information:** Common side effects include joint pain, tendonitis, back pain, joint swelling, and joint effusion. More serious side effects include joint pain, cartilage or meniscus injury, treatment failure, and osteoarthritis.

Please see [Important Safety Information](#) and [Full Prescribing Information](#). [MACI.com](https://www.maci.com)



**Abby, MACI Patient**

Interested in speaking with Abby?  
Visit [MACImentors.com](https://www.maci.com)

MACI REHABILITATION:  
HELPING RESTORE ACTIVE PATIENTS

0-3 months following surgery

# ACHIEVE ROUTINE

I had an amazing physical therapist and overall felt like things progressed really well. I was back to work as a resident physician 4 weeks after surgery and completely off crutches by 6 weeks.\*

\*Paid testimonial by a MACI patient.  
Individual results for rehab may vary.

[MACI.COM](http://MACI.COM)



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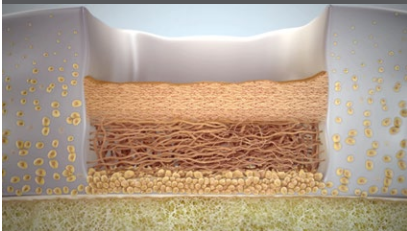
Courtney,  
MACI Patient

Interested in speaking with Courtney?  
Visit [MACImentors.com](http://MACImentors.com)

# >>>>> ACHIEVE ROUTINE 0-3 months following surgery



## TISSUE PHASE



### Implantation & Protection

Cells adhere to bone and begin to proliferate throughout the defect

## FUNCTIONAL GOALS

- Mobile with crutches within first week
- Limited weight bearing and pain-free, full knee extension by 2-3 weeks
- Independent home exercise as early as 1 month
- **Patellofemoral defects**—full knee ROM by 7-9 weeks  
Single defect—immediate weight bearing  
Multiple defects—full weight bearing by 5-6 weeks
- **Tibiofemoral defects**—full weight bearing and full knee ROM by 7-9 weeks
- Free from knee brace by 8-12 weeks post-surgery

## ACTIVITY MILESTONES

- Return to light recreational exercise including walking and stationary cycling
- Perform daily routine and activities of daily living (navigating stairs, showering, etc.) with the assistance of crutches
- Start driving again and return to office or seated work



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Recovery from MACI treatment is highly individualized and activity and repair progress may vary. Timelines are based upon clinical observations and should not be considered medical advice. Always talk to your doctor with any questions and before starting any new exercises or returning to any heavy impact activities. MACI is contraindicated in patients who are unable to follow a physician-prescribed post-surgical rehabilitation program.

Please see [Important Safety Information](#) and [Full Prescribing Information](#), or visit [MACI.com](#)

MACI REHABILITATION:  
HELPING RESTORE ACTIVE PATIENTS

3-6 months following surgery

# BUILD STRENGTH

“My physical therapist and I were so impressed with the rehabilitation program provided by MACI. It broke down the exercises and expectations for each week and gave me milestones to look forward to. **After 4 months, I was able to start jogging again and going back to the gym.**”

\*Paid testimonial by a MACI patient.  
Individual results for rehab may vary.

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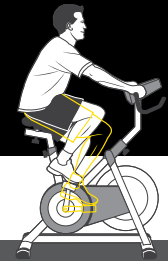


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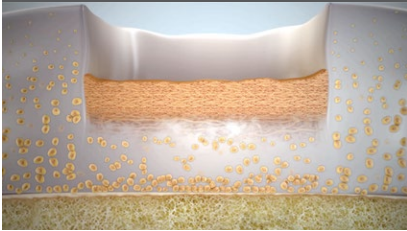
Kayla,  
MACI Patient

Interested in speaking with Kayla?  
Visit [MACImentors.com](http://MACImentors.com)

## >>>>> BUILD STRENGTH 3-6 months following surgery



### TISSUE PHASE



### Transition & Proliferation

Continued proliferation forms a defect-spanning matrix

### FUNCTIONAL GOALS

- Full and pain-free weight bearing and range of motion
- Continue progression of strengthening exercises without pain or swelling
- Transition to gym/home based rehab
- Free from crutches

### ACTIVITY MILESTONES

- Return to low-impact recreational activities including:
  - cycling
  - golf
  - yoga & pilates
  - rowing & kayaking
  - swimming
  - dancing
  - elliptical & treadmill
- Return to more physically active jobs such as nursing or construction (as directed)
- Return to daily activities that require strength and endurance



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**MACI REHABILITATION:**  
HELPING RESTORE ACTIVE PATIENTS

6-9 months following surgery

**BE  
ACTIVE**

I was surprised by how quickly I felt better. I was doing my physical therapy exactly as I was supposed to. I kept on track and was able to see rapid improvements.

After 6 months, I was even attending my previous fitness classes and I had returned to a regular running program.\*

**Chris, MACI Patient**

Interested in speaking with Chris?  
Visit [MACImentors.com](http://MACImentors.com)

\*Paid testimonial by a MACI patient. Individual results for rehab may vary.

**POST-REHABILITATION**

9+ months following surgery

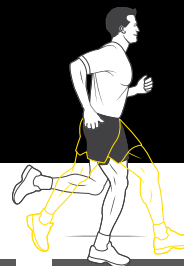
**Chris' recovery\***

"I'm close to being back to the best shape of my life and keep improving every day. I have been able to get back to all the physical activities I love doing, like running, squatting, jumping, lunging, weight lifting, taking fitness classes, boxing, hiking, and camping."

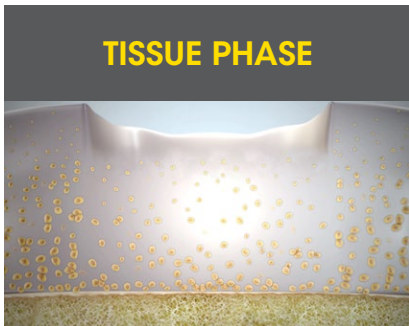
Recovery from MACI treatment varies greatly. That's why your rehabilitation program is tailored specifically to your individual goals and objectives. Everyone heals at their own rate and cartilage will continue to mature over time. Always follow the advice of your doctor as you get back to heavy impact activities such as cutting or pivoting.



## >>>>> BE ACTIVE 6-9 months following surgery



### TISSUE PHASE



### Remodeling & Maturation

Expansion of the cell matrix into puttylike consistency, progressive hardening until durable repair tissue forms

### FUNCTIONAL GOALS

- Increase distance, time, and difficulty of exercises
- Ability to tolerate lengthy walking distances
- Return to a pre-operative level of activity

### ACTIVITY MILESTONES

- Return to pre-injury sports-based recreational activities including:
  - running distances
  - skiing & snowboarding
  - weight training
  - tennis
- Return to work for those in heavy labor fields such as military deployment or firefighting (as directed)
- Over time, heavy impact activities such as cutting or pivoting can be reintroduced



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Please see [Important Safety Information](#) and [Full Prescribing Information](#), or visit [MACI.com](#)



## 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

It is not known whether MACI is effective in joints other than the knee.

It is not known whether MACI is safe or effective in patients over the age of 55 years.

## 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 or inflammation 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 a 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 or ligament 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.

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

Common side effects include joint pain, tendonitis, back pain, joint swelling, and joint effusion.

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



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REFERENCE 1. Flanigan D, Sherman SL, Chilelli B, Gersoff W, Jones D, Lee CA, Toth A, Cramer C, Zaporozjan V, and Carey J. Consensus on Rehabilitation Guidelines among Orthopedic Surgeons in the United States following Use of Third-Generation Articular Cartilage Repair (MACI) for Treatment of Knee Cartilage Lesions. Cartilage [Internet]. First published October 30, 2020. Available from: <https://doi.org/10.1177/1947603520968876>

For more information, please see [Full Prescribing Information](#), or visit [MACI.com](#)