
Cartilage Replacement Rehabilitation

What to Expect During Recovery

Talking to your doctor about recovery and rehabilitation after cartilage replacement surgery is important. Many patients have similar questions so we have compiled this list of frequently asked questions and answers to provide you with a better understanding of the typical recovery process and timeline. Please keep in mind that these are general guidelines and your recovery may differ depending on the unique circumstances of your procedure. Additionally, surgeons will utilize their discretion when detailing a patient's rehabilitation protocol.

Common Questions From Patients

Why does the recovery from cartilage replacement take so long?

Replacement surgery includes the removal of damaged cartilage and bone from your knee and the implantation of healthy cartilage and bone tissue in a procedure, often referred to as an osteochondral allograft. It takes time for the graft to incorporate into the surrounding tissues and ensure that it functions as part of your joint. Remember, too, healing of the graft is just the first step in your recovery. Working with a physical therapist to regain full function of your leg will also require some months. (See phases of rehabilitation below).

When can I bear weight on my leg after surgery?

When you can bear weight on your leg after surgery differs for each patient depending on the location in the joint the graft was placed and if additional procedures were performed at the time of the graft implantation. Typically, if the graft was placed on a weight-bearing area on the end of the femur bone, you may need to limit your weight-bearing for at least the first 6 weeks and then gradually begin to bear weight, within the care and direction of your physical therapist. Alternatively, if the graft was placed in a non-weight-bearing portion of your joint, you may be allowed to bear weight immediately after surgery. Keep in mind, other procedures performed at the time of your surgery can affect the length of time

needed before you can bear weight. These procedures include osteotomy (bone cutting) to correct your leg alignment, meniscal transplantation, and ligament reconstruction.

Will I need a brace after surgery and for how long?

Yes, a brace will likely be necessary after cartilage replacement surgery. Typically, the brace is placed in a straight position to protect your leg from bending and allow the incision to heal. Your doctor will determine the length of time you need to wear a brace and how much you can bend your knee according to your particular case. Factors that affect how long you will wear the brace are the size and location of the implanted graft and additional procedures at the time of surgery. Your therapist will work with you to regain muscle strength so that you may safely return to activities of daily living without a brace.

Will I need crutches after surgery and for how long?

Yes, you should expect to need crutches after cartilage replacement surgery. Crutches allow you to move around as needed but help to protect you from bearing weight too soon after surgery. Your doctor will determine how long you need protected weight-bearing with crutches. Factors that affect the length of time you are on crutches include the size and location of the implanted graft as well as the additional procedures performed at the time of surgery. Your physical therapist will work with you to regain muscle strength so that when the appropriate time comes to bear weight on your leg, you may safely discontinue using crutches.



Will I need physical therapy after surgery and for how long?

Yes, rehabilitation after cartilage replacement is necessary to help you return to your activities of daily living. It is very important to work closely with your physical therapist following the procedure for several reasons. The therapist will help guide you through the process of moving and strengthening your leg while the osteochondral allograft is healing. Most patients will see a therapist once or twice a week until they have regained their full range of motion and strength. All patients will be required to do exercises on their own to ensure a full recovery. Patients wishing to return to sports will often continue with a therapist even after they return to activities of daily life.

When will I be able to drive a car after surgery?

The length of time before you can drive a car after surgery differs for each patient. You must be off post-operative pain medication to consider driving. Typically, the therapist will work with you to regain your strength, mobility, and reaction time. Before driving again, be sure to ask your doctor whether it is safe to do so.

Will I be able to return to sports after surgery and how long does it take?

Returning to sports after cartilage replacement surgery is the final step of recovery. Your therapist will work with you to help you regain full mobility and strength before you can consider returning to sports. On average, patients take 6 to 8 months to return. Returning too soon or returning to high impact sports may put you at risk for reinjury, so be sure to talk to your doctor about your sports activities and expectations regarding a return.

Rehabilitation Guidelines

The goal of rehabilitation is to restore the function of your leg as soon as possible without overloading the bone and cartilage graft while it grows into your body. Speak with your doctor to learn more about their typical rehabilitation protocol following osteochondral allograft transplantation procedures.

Four Phases of Rehabilitation After Cartilage Replacement

Phase 1: Graft Protection

Modified weight-bearing precautions per physician. Control pain and swelling and manage soft-tissue irritation. Start range of motion and muscle activation exercises consistent with weight-bearing precautions. Restore patella mobility. Re-establish quad control. Begin scar massage once incision is healed.

Phase 2: Return to Activities of Daily Living

Progress weight-bearing and independent ambulation. Establish full range of motion. Progress closed chain and isotonic exercises. Transition from non-weight-bearing cardio to weight-bearing. Focus on functional movement and activity.

Phase 3: Return to Active Lifestyle

Advanced strengthening, core stabilization and balance/uneven surface training, single-leg exercise progressions, introduction to agility, plyometrics, and interval programs. Start gradual return to sport-specific training.

Phase 4: Athletic and Sports Participation

Continue strengthening and proprioceptive exercises. Continue with interval programs and incorporate more multi-plane movements for agility and plyometrics. Continue return-to-sports training. The typical progression for sports or high-demand recreational activity will be non-contact → limited practice → full practice → play. Return to sports is different for each patient and talking your situation over with your doctor and therapist is recommended before you participate.

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