

KNEE CARTILAGE REPAIR: REPAIR OF OSTEOCHONDRITIS DISSECANS OF THE KNEE POST-OP INSTRUCTIONS AND REHAB PROTOCOL

This protocol has been developed for the patient following repair of osteochondritis dissecans of the knee. Osteochondritis dissecans is a focal injury to the knee cartilage that has the potential to progress to osteoarthritis if not treated. This procedure is done to repair the patient's own cartilage and bone defect or to induce healing.

The goal of this rehabilitation plan is to facilitate return to the pre-injury level of function. Return to activity, sports and work depend upon multiple factors. This decision is based off the healing of the cartilage and the function of the knee. Return to work, sports and cutting activities is allowed after the cartilage is healed and the patient achieves adequate flexibility, strength and endurance of the knee equal to 80-90% of the uninjured side. Generally, return to sports and/or full activity is around 6 months after the initial surgery.

For Patients at a glance:

- a. **Take 1 tablet (325 mg) of aspirin per day**, starting the day after surgery and continuing for **2 weeks**. This is done to decrease the risk of blood clots.
- b. The dressing may be removed 3 days after surgery, but keep the steri-strips in place. Try to keep the wound as dry as possible until follow-up.
- c. It is ok to shower after surgery, but keep the dressings and incision wrapped with saran wrap or something similar. When in the shower, do not scrub or soak the incisions. Just let soap/water run over the knee and pat dry. Do not submerge incisions in bath or pool until fully healed (3-4 weeks).
- d. If you had a **nerve block at the time of surgery, it usually wears off 12-24 hrs post-operatively**. It is normal to have some numbness in the leg the first few days after surgery as a result.
- e. Take the prescribed pain medications as directed. You can supplement your pain control with ice, elevation of the affected extremity and over-the-counter Tylenol and ibuprofen if needed, making sure to follow the dosage as recommended on the bottle. Use ice 20-30 minutes every 1 to 2 hours the first several days to help control pain and swelling.
- f. **Brace:** You will be placed into a brace after surgery to protect the repair. The brace will allow for **range of motion from 0-90 degrees for the first 2 weeks**. After 2 weeks full range of motion will be allowed. You may remove the brace for showers and exercises
- g. **Weight Bearing:** After surgery you will be non-weight bearing on the operative extremity (your toes may touch the ground for balance control but no additional weight). **You will be non-weightbearing x 6 weeks.**

- h. **Physical Therapy:** you may attend therapy wherever you prefer. You should call to schedule your first appointment within 7-10 days of surgery
- i. Other exercises to work on 3-4 times per day, before seeing therapist include calf pumps, straight leg raises, quad sets (contracting your thigh and holding for 10 seconds) and bending the knee to 90 degrees. A good goal is 500 reps of bending your knee per day.
- j. Return to driving. There is no conclusive data to guide the exact time when it is safe to return to driving. You cannot drive while still on narcotic pain medications. In general you should have minimal pain/swelling of your knee and be able to quickly brake/make evasive maneuvers if needed.

I. Rehabilitation Protocol 0-6 Weeks Post-Op

- a. **Range of motion goal: Emphasize full extension of the knee.** Goal is 500 reps of bending and straightening per day.
 - i. Weeks 0-2: Restricted 0-90 degrees
 - ii. Weeks 2+: Gradual progression of PROM/AAROM as tolerated
- b. **Weight Bearing:**
 - i. **Weeks 0-6: non-weightbearing.** Your toes may touch the floor to keep you balanced, but you should not put any additional weight on the leg.
- c. **Brace:** You will wear the brace x 6 weeks. Range of motion is allowed and encouraged in the brace as soon as tolerated. For the first 2 weeks ROM is restricted to 0-90 degrees. The brace may be removed for physical therapy and showering.
- d. Heel slides, prone hangs
- e. Bilateral closed chain exercises
- f. Hip/Core progressive resistive exercises
- g. Patellar mobilization emphasize superior glides
- h. Gastroc-soleus stretch
- i. Modalities: cryotherapy, electrical stimulation, edema control, etc.

II. 6-12 Weeks Post-Op

- a. **Range of Motion:** advance range of motion as tolerated. Goal is full extension and **full flexion by 8 weeks.**
- b. **Weight bearing:** wean off crutches, weight bearing **as tolerated.**
- c. **Brace:** None required. May consider compression/functional brace for activities, especially if concomitant ligament of meniscus surgery
- d. **Gait:** progress normalized gait pattern, no limping
- e. Progress bilateral closed chain strengthening using resistance less than patient's body weight. Progress to supine unilateral leg press with low weight. Begin open chain knee strengthening.
- f. Mini Squats

- g. Begin stationary bike when knee flexion is > 110 degrees
- h. Begin proprioception program
- i. Continue edema control/modalities/patellar mobilization

III. 12-20 Weeks Post-Op

- a. Continue all exercises from earlier protocol
- b. Advance bilateral and unilateral closed chain exercises
- c. Isokinetic quadriceps exercises
- d. **May begin jogging at 4-5 months**
- e. Progress proprioception/balance activities
- f. Progress cardio, elliptical, stair climber exercises

IV. 20 Weeks Post-Op and Beyond

- a. **Progress slowly through lateral movement exercises**
- b. Continue advanced strengthening
 - i. Full arc progressive resistance exercises-emphasize quads
- c. Progress treadmill/swimming program
- d. Progress plyometrics program
- e. Progress sport training program
- f. Progress neuromuscular/functional program
- g. Agility drills

V. Return to competitive sports and full speed cutting activities

- a. You need to be cleared by Dr. Hazelwood and your physical therapist/athletic trainer
- b. In general return to sports and cutting activities is allowed after the patient achieves adequate flexibility, strength and endurance of the knee that is equal to at least approximately 90% of the other side **and there is full healing**. This generally is allowed around 6 months after surgery.