

Inland Orthopaedic Surgery & Sports Medicine Clinic

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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.

Physical therapy should begin **within 2 weeks** following surgery. Your rehabilitation will be a supervised program by a physical therapist and a home program as directed by your therapist.

Primary goals of the procedure and rehabilitation are: 1) Control joint pain and swelling 2) Regain normal knee range of motion and strength 3) Regain normal gait pattern and neuromuscular stability for ambulation 4) Regain normal proprioception, balance, and coordination for daily activities 5) Achieve the level of pre-injury function based on the orthopaedic and patient goals.

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.

I. POST-OPERATIVE INSTRUCTIONS:

- 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 (4-5 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. **The first night after surgery take pain medication before going to bed as the nerve block will often wear off during the night.**
- 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 ibuprofen if needed, making sure to follow the dosage as recommended on the bottle. Use ice max 20 min/hour. Place a towel between skin and ice to protect skin.
- f. You will be placed into a brace after surgery. The brace will allow for **range of motion from 0-90 degrees**. Do not bend beyond 90 degrees of knee flexion for 6 weeks or until you are told to advance your motion. You may remove the brace for showers.
- g. After surgery you will be non-weight bearing on the operative extremity. **Use the crutches for walking at all times. You will be non-weightbearing x 6 weeks.**
- h. After surgery, the first few days are generally spent recovering and resting. When resting, work on calf pumps (moving your ankle up and down) several times per hour. This helps reduce swelling in the leg and

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decrease the chance of blood clots.

- 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 surgery was on your right leg, it is not safe to drive until the brace is off and you are full weightbearing.

II. Rehabilitation Protocol 0-6 Weeks Post-Op

- a. **Range of motion goal:** 0-90 (minimum) by two weeks post-operatively. **Emphasize full extension of the knee.** Goal is 500 reps of bending and straightening per day.
 - i. Heel slides
 - ii. Prone Hangs
- b. **Non Weight Bearing: Use crutches for walking x 6 weeks.**
 - i. **Weeks 0-6, you are 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. You may remove the brace for physical therapy and showering.
- d. Progress bilateral closed chain strengthening using resistance less than patient's body weight
- e. Hip/Core progressive resistive exercises
- f. Patellar mobilization emphasize superior glides
- g. Gastroc-soleus stretch
- h. Modalities: cryotherapy, electrical stimulation, edema control, etc.

III. 6-12 Weeks Post-Op

- a. **Range of Motion:** advance range of motion as tolerated. Goal is full extension and **full bending by 8 weeks.**
- b. **Weight bearing:** wean off crutches, weight bearing **as tolerated.**
- c. **Brace:** None required. May consider 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. **NO squats, lunges**
- g. Begin stationary bike when knee flexion is > 110 degrees
- h. Begin proprioception program
- i. Continue edema control/modalities/patellar mobilization

IV. 12-20 Weeks Post-Op

- a. **Screw Removal may be considered in this timeframe.** After screw removal will go back into brace for 2 weeks and use crutches as needed.
- b. Continue all exercises from earlier protocol
- c. Advance bilateral and unilateral closed chain exercises
- d. Isokinetic quadriceps exercises
- e. **May begin jogging at 4-5 months**
- f. Progress proprioception/balance activities
- g. Incorporate stairs at 4-5 months post-op

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V. 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

VI. 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.