

Anterior Cruciate Ligament (ACL) RECONSTRUCTION

Your surgery is only a part of the process in helping you to return to a more active lifestyle. In order to achieve maximal function, it is vitally important that you take on an active role in your rehabilitation program.

AFTER SURGERY

Guidelines to Follow After Surgery

1. Prior to leaving the hospital, you will be fitted with a knee brace.
 - For the first two weeks, you are required to use the brace 24 hrs/day, with the exception of performing your home exercise program and showering.
 - At two weeks after surgery, you can remove the brace **only during sleep and at rest.**
 - Continue to use the brace for 4-5 weeks or until otherwise advised by your surgeon or therapist.
2. Prior to leaving the hospital, you will also be provided with a cold therapy unit.
 - Use the cold therapy unit continuously, or as directed by your surgeon, for the first 3 to 7 days except when walking, performing your exercises, and sleeping.
 - The cold therapy pad should never be in direct contact with your knee. Always utilize an ace wrap under the pad to protect your skin from excessive exposure to the cold.
3. Prior to leaving the hospital, you will also be fitted with crutches and instructed in their use.
 - When using your crutches and brace, you may put as much weight on your operated leg as comfortable, **unless directed otherwise by your surgeon.** Start off with partial weight bearing and progress to full weight bearing.
 - **You must continue to use your crutches and brace for 4-5 weeks.** Your brace must be **locked in extension** when you walk.
4. The first week it is important to minimize the swelling after surgery. Therefore, you should not be up any more than needed. Most of the time should be spent lying down or sitting with the leg elevated. Your ankle should be elevated higher than the knee and the knee higher than the hip. It is okay to be up to go to the bathroom or move from the bed to a chair.

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5. You may remove your bandages 4 days after surgery. If there are steristrips (small pieces of tape) over the incision, they may be left in place. If the incisions are dry at that time, you may shower. You may get your incisions wet, **but do not soak your knee in the tub**. Initially, you should use a patio chair in the shower to make bathing easier, rather than attempting to balance on one leg. Put bandaids over the incision sites after showering. You may then rewrap the knee with the ace bandage.
6. Your first follow-up appointment with your Orthopedic Provider should be scheduled 7-10 days after surgery. Please make sure you have this appointment made when you see the surgeon at the pre-op visit.
7. Within 2 weeks following your surgery, you will have your first outpatient Physical Therapy appointment. You will attend therapy 1-2 times per week to have your exercises progressed accordingly.

Home Exercises

Days 1 to 7

Your rehab program begins the day of your surgery with a home exercise program. **The primary goal you should strive to obtain within the first two weeks after surgery is full knee extension (full "straightening").** Failure to achieve full extension within the first few weeks after surgery will allow scar tissue to develop and become a permanent block to full straightening. Therefore, although you will need to perform all of the following exercises listed, **you must particularly attend to the exercises that emphasize straightening out the knee.**

1. Ankle Pumps

Slowly pump your foot forward and back, as if pushing on & off gas pedal.

Repeat 20x every hour.

(See Figure 1)

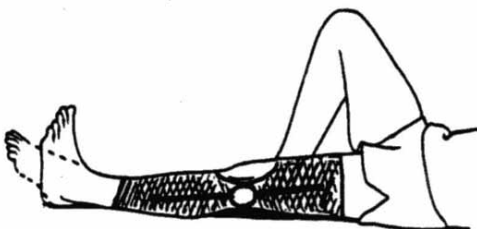


Figure 1

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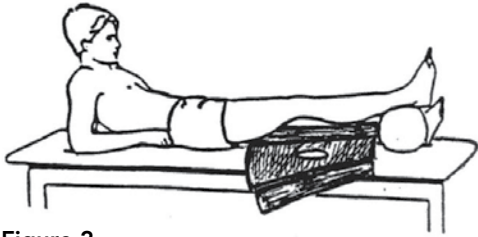


Figure 2

2. Knee Extension Over Towel Roll

Sit with your leg extended and place a towel roll below your ankle. Remove brace and relax leg. Allow knee to straighten without support under the knee. Perform x 10 minutes every hour.

(See Figure 2)

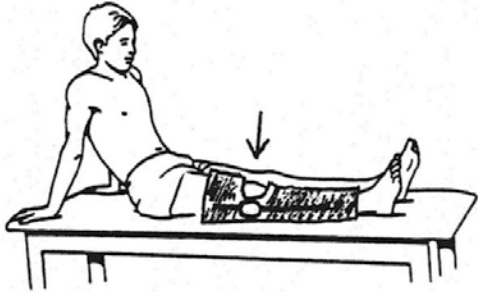


Figure 3

3. Quadriceps Sets

Tighten the muscles on the top of your thigh by pushing your knees down toward the floor.

Hold x 10 seconds. Repeat 10 times.

Do every hour.

(See Figure 3)



Figure 4: Brace on & unlocked

4. Assisted Heel Slides

In a long sit position, place hands under operated knee. Use your hands to help bend your knee and slide your foot toward your buttocks.

Hold x 10 seconds, then slowly return to start position.

Repeat 10 times.

Do every hour..

(See Figure 4)

Home Exercises

After Day 7

7 to 10 days after your surgery, progress to the following exercises on your own (if not already instructed to do so).

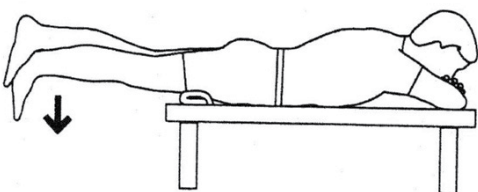


Figure 5

5. Prone Extension Stretch

Lie on your stomach with your lower legs & knees hanging off the edge of the bed.

Remain in this position x 2 – 5 minutes.

Do 3 sessions per day.

(See Figure 5)

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Figure 6

6. Patellar Mobilization

With your knee extended, gently pull your kneecap inward, outward, upward, & downward.

Perform x 5 minutes.

Do 3 sessions per day.

(See Figure 6)



Figure 7

7. Assisted Prone Knee Flexion

Lying on your stomach with the uninvolved leg under & helping the operated leg, slowly bend your knee and bring your heel towards your buttocks as far as is comfortable.

Hold x 10 seconds. Repeat 10 times.

Do 3 sessions per day.

(See Figure 7)

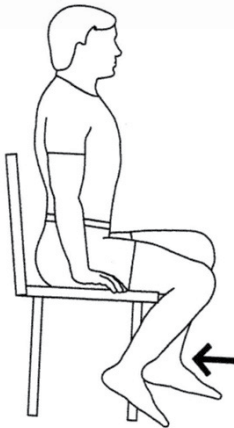


Figure 8

8. Seated Knee Flexion Stretch

Bend your knee as far as possible, and then use your other leg to apply a gentle push back until a stretch is felt.

Hold x 10 seconds. Repeat 10 times.

Do 3 sessions per day.

(See Figure 8)

Common Questions After ACL Reconstruction

1. Is it normal to have bruising and numbness after surgery?

Yes, bruising is caused by normal bleeding after surgery and will usually resolve in a couple of weeks. Numbness around the incision occurs because small superficial skin nerves are unavoidably cut during surgery. Sensation to this region improves over a period of a year but there may always be a small area of numbness next to the incision.

2. Do I need to exercise?

It is absolutely essential that you begin your home exercise program starting the day of your surgery. Initially, your knee will hurt when you perform the exercises, but be assured that this is normal and will not harm the surgery that was done to your knee.

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3. How often do I need to work out?

Workout Guidelines

- Workout 3-4x/week
- Work up to 3 sets of 10-15 repetitions
- Ice after workouts for 15-20 minutes
- No seated knee extensions with weights
- No deep knee squats

4. When can I return to work?

It may depend, so double check with your doctor, but general guidelines are as follows:

Type of work	Timeframe after surgery
Desk work/student	7 – 10 days
Moderate work: standing, walking, stair climbing, lifting	6 – 12 weeks
Heavy work: construction, firefighting, police work	3 months +

5. When can I begin driving?

If surgery was on your right leg, you won't be able to drive for approximately 6 weeks.

If surgery was on your left leg, you will be able to drive as soon as you feel comfortable and have the ability to get in and out of your car independently.

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ACL Reconstruction Goals

Week 1-2	<ul style="list-style-type: none"> ■ Obtain full knee extension. ■ Control swelling. ■ Increase knee flexion gradually as tolerated (obtain at least 90 degrees). ■ Gait: Partial weight bearing with crutches and brace. ■ Outpatient physical therapy to begin 7 – 14 days post-op.
Week 3	<ul style="list-style-type: none"> ■ Maintain full knee extension. ■ Gradually increase knee flexion (should obtain 110 – 120 degrees). ■ Continue partial weightbearing/full weightbearing as tolerated with brace and crutches.
After Week 4	<ul style="list-style-type: none"> ■ Gait without crutches and brace (when cleared by the doctor or therapist).
Week 5	<ul style="list-style-type: none"> ■ Maintain full knee extension. ■ Increase flexion as tolerated (should have close to 125 – 130 degrees). ■ Demonstrate good quadriceps tone. ■ Gait with minimum to no deviations.
Week 6	<ul style="list-style-type: none"> ■ Your graft will be at its weakest tensile strength. Therefore, although your knee may be feeling particularly well, you should take extra precautions to protect it from excessive stress during this timeframe (6 to 12 weeks post-op). ■ Begin light/gentle strengthening exercises as instructed by your therapist.
Week 7	<ul style="list-style-type: none"> ■ Gait: independent without deviations. ■ Full range of motion. ■ Continue with endurance and light strengthening exer Full and painfree range of motion
Month 3	<ul style="list-style-type: none"> ■ Full and painfree range of motion ■ Normal gait. ■ Concentrated progression of closed chain exercises (those exercises strengthening machines involving pushing through the bottom of your foot). ■ Progress and improve quadriceps and hamstring strength. ■ Improve proprioception and balance.
Month 5	<ul style="list-style-type: none"> ■ You can expect to begin a gradual jogging program, provided your therapist feels your operated leg is strong enough.
Month 6	<ul style="list-style-type: none"> ■ Return to running and side to side movements.
Month 8	<ul style="list-style-type: none"> ■ Safe and gradual return to athletic participation if your operated leg possesses 80% strength of your opposite leg. ■ Maintain strength, endurance, and function

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Activity Timeline

	WEEK								MONTH							
	1	2	3	4	5	6	7	8	3	4	5	6	7/8	9/12	13/24	
IMMOBILIZATION Brace in extension	■	■	■	■												
PROTECTION Crutch ambulation Weightbearing as tolerated	■	■	■	■												
HOME EXERCISES																
Exercises # 1-4 (see pages 2-3)	■	■	■	■	■											
Exercises # 5 – 8 (see pages 3-4)		■	■	■	■	■										
Stationary Bicycle (ROM)			■	■	■	■										
Hip Workout			■	■	■	■	■	■	■	■	■	■	■	■	■	■
Upper body/trunk workout			■	■	■	■	■	■	■	■	■	■	■	■	■	■
Wall sits (1/4 squats)				■	■	■	■	■	■	■	■	■	■	■	■	■
Unassisted Leg Curls (prone)					■	■	■	■	■	■	■	■	■	■	■	■
Stationary Bicycle (with resistance)					■	■	■	■	■	■	■	■	■	■	■	■
GYM WORKOUT																
Recumbent Stepper		■	■	■	■											
Sitting Hamstring Curls			■	■	■	■	■	■	■	■	■	■	■	■	■	■
Leg Press						■	■	■	■	■	■	■	■	■	■	■
¼ Squats and Step Ups						■	■	■	■	■	■	■	■	■	■	■
Stair Master and Rowing Machine						■	■	■	■	■	■	■	■	■	■	■
Hip Abduction/Adduction Machine							■	■	■	■	■	■	■	■	■	■
Calf Raises & Lunges								■	■	■	■	■	■	■	■	■
Low Impact Aerobics								■	■	■	■	■	■	■	■	■

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Activity Timeline

	WEEK								MONTH						
	1	2	3	4	5	6	7	8	3	4	5	6	7/8	9/12	13/24
GENERAL GUIDELINES TO BEGIN SPECIFIC ACTIVITIES															
Walks without aid				■											
Swim / run in the water						■									
Street bicycling						■									
Fast walking									■						
Jump rope									■						
Treadmill / track jog										■					
Agility drills												■			
Running												■			
Running Sports												■			
Cutting sports														■	
Jumping sports														■	