

# Dr Aziz Bhimani

HIP & KNEE SURGEON

www.wollongongorthopaedics.com.au

## Post-Operative Instructions Anterior Cruciate Ligament Reconstruction

1. Remove crepe bandage 24 hours after your surgery. Leave the dressings intact and keep clean and dry until your post-operative appointment.
2. Wear the long thigh high compression stocking on the affected leg for at **least 2 weeks** post-surgery to help reduce the swelling in your knee. Please remove before going to sleep and put on each morning.
3. Elevate your leg when resting to help reduce swelling.
4. Use an ice pack on your knee 3 or more times a day for 10-20 minutes to assist with swelling and pain.
5. You may weight bear as tolerated. Crutches can be discarded as soon as you can walk comfortably and confidently.
6. Rehabilitation begins the day after your surgery. You should have an appointment already booked with your Physiotherapist who will guide you through your exercise program. Attached is Dr Bhimani's physiotherapy protocol for your reference, these are not meant to be strict and your progress may be faster or slower depending on the response of your knee.
7. Take your pain medication. You will have had some local anaesthetic in your knee from surgery, however when this wears off you may experience pain. You will have been given a prescription for pain medication. Have this filled before going home so you have it on hand when you need it. Dr Bhimani also advises his patients to take regular Paracetamol and an anti-inflammatory such as Ibuprofen for the first **2 weeks** even if comfortable. Taking adequate pain relief will assist you with your exercise and return to normality.

### Post-operative appointment

Please call **02 42299116** to make a follow up appointment 10-14 days from the day of surgery. At this appointment your sutures will be removed, your progress assessed and expectations discussed.

### Warning Signs

Please contact Dr Bhimani's office or seek medical advice if you experience any of the following:

Fever, chills, persistent discharge from your incisions, increasing pain or excessive bleeding.

## Anterior Cruciate Ligament Reconstruction Protocol for Physiotherapists

This program is a guide for physiotherapists, it should be adjusted to the individual taking into account pain, pathology, work and other social factors.

Dr Bhimani advises that supervised Physiotherapy should commence the day after surgery. If you have any concerns please do not hesitate to contact Dr Bhimani through his office on 02 42299116.

**NOTE: ALL EXERCISES MUST BE COMFORTABLE AND NOT CAUSE AN INCREASE IN SWELLING.**

### Acute (0-2weeks)

#### Goals:

- Wound healing
- Reduce swelling
- Reduce pain (prescribed analgesia advised for 2 weeks post op to assist with exercises). Excessive pain can be due to spending too much time on feet before quads have been adequately strengthened.
- Regain full extension
- Full weight bearing
- Wean off crutches
- Promote muscle control

#### Treatment Guidelines

- Pain and swelling reduction with ice, compression stocking, intermittent pressure pump, soft tissue massage and exercise.
- Patella mobilisation
- Encourage range of movement. Try to gain full extension by two weeks. Full flexion will take longer and will generally come with gradual stretching. Care needs to be taken with hamstring co contraction as this may result in strains if too vigorous. Light hamstring loading continues into next stage with progression of general rehabilitation. Resisted hamstring loading should be avoided for approximately 6 weeks.
- Gait retraining encouraging extension at heel strike.

## Stage 2 (2-6 weeks)

### *Goals:*

- Full active range of motion
- Normal gait with reasonable weight tolerance
- Minimal pain and effusion
- Develop muscular control for controlled, pain-free single leg lunge
- Avoid hamstring strain
- Develop early proprioceptive awareness

### *Treatment Guidelines*

- Daily scar massage
- Use active, passive and hands-on techniques to promote full range of motion.
- Progress closed chain exercises (quarter squats and single leg lunge) as pain allows.
- Introduce gym-based equipment including leg press and stationary cycle.
- Water-based exercise exercises can begin once wound healed, including treading water and gentle swimming (no breaststroke).
- Begin proprioceptive exercises including single leg balance on the ground and mini tramp. This can progress by introducing body movement whilst standing on one leg.
- Bilateral and single calf raises and stretching.
- Avoid isolated loading off the hamstrings due to ease of tear. Hamstrings will be progressively loaded through closed chain and gym based activity.

## Stage 3 (6 -12 weeks)

### *Goals*

- Regain proprioception
- Improve strength and muscle control
- Promote good quadriceps control in lunge and hopping activity in preparation for running.
- Avoid patella tendonitis

### *Treatment Guidelines*

- Increased closed quadriceps exercises with increased resistance. This includes half squats, leg presses and lunges. Beware of anterior knee pain. Step work is also very useful at this stage.
- Increase cycling
- Work on proprioception. Begin with stepping from one foot to another. Hitting a tennis ball against a wall with a racquet is beneficial. Mini trampoline and wobble boards are appropriate.
- Commence jogging around 12 weeks post operation if strength and swelling are satisfactory.

#### Stage 4 (3-6 months)

##### *Goals*

- Improve leg strength
- Develop confidence in the knee
- Regain proprioception and agility

##### *Treatment guidelines*

- Increase strength by step work with resistance, leg presses, squats and weights
- Progress through half speed, three quarter speed and stop/start running. (Do not attempt full speed running, pivoting or side stepping). Progress to large figure 8s and gentle zigzags. Avoid stepping and jogging down hills.
- Work on mini trampoline for proprioception.
- Swimming and cycling should continue.
- Avoid open chain quadriceps exercises.

**NOTE: If returning to sports will need to have all mile stones met and be cleared by Physiotherapist and/or Dr Bhimani.**

#### Stage 5 (6 months plus)

##### *Goals*

- Preparation for a safe return to sporting activities.

##### *Treatment Guidelines*

- Increase strength by open chain leg extensions. Increase by 3 kg as progress is made. Aim to reach 25kg for high grade athletes.
- Progress to full running, pivoting, side stepping, cutting and jumping.
- Work on fitness, power and endurance.
- Plyometric exercises.
- Quadriceps 100% strength
- Hamstrings 80-90% strength
- Begin limited sports practice sessions. If coping with 2 full practices return to full sport.

**NOTE: Most patients take approximately 12 months to rehabilitate well enough to return to sport although some patients may return earlier with a dedicated rehabilitation program.**