Contact Us: +61 8 8463 0745

DR SHANNON SIM
ORTHOPAEDIC SURGEON

ACL Reconstruction Rehab Protocol

0 – 2 WEEKS

Goals

- Decrease pain and swelling
- Restore full extension (i.e. getting the knee fully straight) * Quadriceps (front of thigh muscle) activation
- Gait training (i.e. learning to walk properly WITHOUT limping)

Exercises Suggestions

- Your first physio appointment should be within 3 days after surgery.

ROM & Flexibility

- Remember it is important to restore and maintain range of motion early, especially full extension. This is not harmful to the graft or its stability.

Gait

- Use two crutches until you can walk WITHOUT a limp. Then try with one crutch. You can stop using crutches once you walk WITHOUT a limp.

3 – 6 WEEKS

Goals

- Achieve near of full ROM in knee flexion and extension
- Normal gait pattern
- Quad activation
- Full knee extension is needed for normal gait

Driving

- You can consider driving if:
    - You are off strong prescription pain killer (Endone)
    - You are OFF your crutches
    - You have GOOD leg control (e.g. you are able to simulate and emergency braking manouvre in a stationary car without any PAIN in the knee)

DO NOT PROGRESS TO STAGE 2 UNTIL ALL GOALS ARE MET

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6 – 9 WEEKS

Goals

- Full and pain free knee range of motion
- Functional quad strength

Exercises Suggestions

Hydrotherapy/Pool

- Knee ROM
- Walking forward/backward, static lunge, lunge walking squats, side shuffles, step up/down, calf rises (2-1 foot)
- Hip extension/flexion, adduction/abduction
- Deep water: stride walking, cycling, flutter kick

Cardiovascular Fitness

- Stationary bike
- Swim – Flutter kick only
- Treadmill – walking

9 – 12 WEEKS

Goals

- Continue flexibility/stretching exercises
- Quadriceps strength progression

Exercise Suggestions

Hydrotherapy/Pool

- Increase time, speed and repetitions of exercises
- Pool running

Cardiovascular Fitness

- Bike – Increased resistance and time parameters
- Treadmill – Walk +/- incline – quick walk

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12-16 WEEKS

Goals

- Continue with flexibility exercises for the lower chain
- Continue strengthening (including hamstrings) of all leg muscle

Exercise Suggestions

Cardiovascular Fitness

- Bike – time and resistance
- Treadmill – time + incline

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4 – 6 MONTHS

Goals

- Quadriceps, hamstrings and other leg muscle strengthening.
- Proprioception training (i.e. learning to sense movement within joints AND the joint's position)
- Adequate cardiovascular fitness
- Running: Progression to running may only occur once a smooth and normal pattern has been attained to prevent abnormal tissue/joint loading in the knee. Running should NOT be initiated if swelling, loss of motion or pain is present.

Exercises Suggestions

- Continue upper body strengthening

Muscle Strength and Endurance

- Continue with lower extremity strengthening with specific emphasis on specific deficits.

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6-8 MONTHS

Goals

Agility

- Agility drills should commence by introducing proper footwork, timing and speed.
- Once you are able to successfully and appropriately run in a straight line, without difficulty, then you can progress to drills/activities where change in direction is required.
- These drills should commence by introducing large angles and low speeds i.e. large figure 8s) and progress to more advance drills with sharper angels and increasing speeds.

Cardiovascular fitness

- Increase distance, duration or intensity with bike, treadmill
- Treadmill: running – Sprinting: assess springing form – should have normal pain-free rhythmic stride
- Cycling outdoors
- Swimming – no whip kick / breast stroke kick / frog leg kick

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ACL Reconstruction Rehab Protocol

8-9 MONTHS

Goals

- Plyometrics
- Return to sport skills on own practice with minimal risk of injury

Plyometrics

- Plyometrics are exercises that enable a group of muscles to reach maximal strength in as short a time as possible. They help bridge the gap between speed and strength training.

Examples

- 2 and 1 foot hopping with control
- Forward and lateral hop with control and comparable distance L&R * Single limb hop for distance (within 15% of uninvolved side)
- Single limb vertical power hop (within 15% of uninvolved side)
- Single limb drop landing (within 15% of uninvolved side)

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ACL Reconstruction Rehab Protocol

> 9 MONTHS

Return to competitive sport once all goals achieved

AND

Physiotherapy and surgeon have declared you fit to do so

BRACES

- There are neither MANDATORY nor NECESSARY whilst playing sport if you have satisfactory completed the rehab program.
- You may consider a knee sleeve for personal “confidence” if required

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