



DR PETER WALKER

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ALL CORRESPONDENCE TO:

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GUIDE FOR CARE FOLLOWING ACL KNEE SURGERY

The following are guidelines to assist with your recovery until you see Dr Walker post-operatively.

BANDAGE:

If you stay overnight most of the following has already been done for you.

You will either have a bandage or tubigrip on your knee after surgery. A tubigrip is an elasticated tubular bandage that goes over your foot and around your knee.

If you have a bandage, simply remove it the day after surgery, as well as the soft fluffy white material (velband) underneath to expose the dressings, and put on the tubigrip.

DRESSINGS:

Generally with an ACL there are two arthroscopy portals of approximately 1 cm each, and a longer incision of approximately 5 cm where the hamstrings were removed.

The dressings are covering up the wounds. Generally, they are clear plastic, called opsites. Leave these on unless they are peeling off, which they do sometimes. These seem to stick to some people's skin better than others. If they are peeling off and you need to replace them, do so as cleanly as possible i.e. use some sort of antiseptic.

Under the dressing there are generally white strips called steri-strips. Try to keep these on. However, again, if they are peeling off you can replace them.

If the wound is actively bleeding, you should see your GP or go back to the hospital to change. This is rare.

SHOWERING:

You may get the dressing wet in the shower. Do not swim or bath until your review with Dr Walker.

CRUTCHES:

Most people will need crutches. You can fully weight-bear unless Dr Walker specifies otherwise. The crutches are for your own benefit and are generally used anywhere from 1 day to 2 weeks. The average is about 5 days.

EXERCISES AND POST-OP PROTOCOL:

You will be shown some simple exercises by the physio before you leave hospital. Generally formal physio starts at 1 week post-op. If your physio doesn't have a protocol please see the exercises below.

SWELLING AND ICE:

Swelling and some bruising is normal. ICING IS VERY IMPORTANT. Ice roughly 15 minutes every 2 hours until the swelling reduces. Icing varies from a bag of peas to fancy expensive ice machines. Do not ice directly onto the skin as you can get an ice burn. The tubigrip or something of equivalent thickness is good. You will probably have to ice for a week or so.

When sitting place your leg on a stool and when lying place your leg on a pillow.

PAIN:

Pain is to be expected. The anaesthetist will give you analgesics and/or anti-inflammatories. Take these as required. Remember with opioid drugs, you cannot drive or operate machinery, so try and wean off these.

CONCERNS:

If your temperature rises over 38.5 degrees or if you are unwell (i.e. with rigors or shaking) contact Dr Walker or go to an emergency department.

If your wound becomes red please contact Dr Walker.

FOLLOW-UP:

Your check-up is usually 7-14 days after the surgery. Generally, this appointment will be emailed to you. If for some reason you don't hear from us please contact Dr Walker's rooms.

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POST-SURGERY KNEE EXERCISES

After your operation (ACL) the following exercises are necessary to assist in your recovery. *Start these exercises the day after surgery.*

- **To improve knee movement:**



Place your unaffected leg under your affected leg. Gently lower and then raise.

Repeat: 1-2 sessions per day for 2-3 minutes per session.

- **To maintain calf circulation:**



To maintain calf circulation, move your foot up and down for 5 minutes every waking hour.

Continue: for 2-3 days or until you are walking comfortably.

If you are experiencing any difficulties with these exercises, please contact the clinic for advice.

REHABILITATION

Physiotherapy is an integral part of treatment and it's recommended you start as early as possible. Pre-operative physiotherapy is helpful to better prepare the knee for surgery. The early aim is to regain range of motion, reduce swelling and achieve full weightbearing.

The remaining rehabilitation will be supervised by a physiotherapist and will involve activities such as exercise bike riding, swimming, proprioceptive exercises and muscle strengthening. Cycling can begin at 2 months and jogging can generally begin at around 3 months after surgery. The graft is strong enough to allow sport at around 6 months however other factors come into play such as confidence, fitness and adequate training.

Professional sportsmen often return at 6 months but recreational athletes may take 10-12 months depending on motivation and time to put into rehabilitation.

The rehabilitation and overall success of the procedure can be affected by associated injuries to the knee such as damage to meniscus, articular cartilage or other ligaments.

The following is a more detailed rehabilitation protocol useful for patients and physiotherapists. It is a *guide only* and must be adjusted on an individual basis taking into account pain, pathology, work and other social factors.

• ACUTE (0-2 WEEKS)

GOALS

1. Wound healing
2. Reduce swelling
3. Regain full extension
4. Full weightbearing
5. Wean off crutches
6. Promote muscle control

TREATMENT GUIDELINES

1. Pain and swelling reduction with ice, intermittent pressure pump, soft tissue manage and exercise.
2. Patella mobilisation.
3. Active range of motion knee exercises, calf and hamstring stretching, co-contraction (non weightbearing progressing to standing), muscle control and full weightbearing. Aim for full extension by 2 weeks. Full flexion will take longer and will generally come with gradual stretching. Care needs to be taken with hamstring co-contraction and this may result in hamstring strains if too vigorous. Light hamstring loading continues into the next stage with progression of general rehabilitation. Resisted hamstring loading should be avoided for approximately 6 weeks.
4. Gait retraining encouraging extension at heel strike.

• STAGE 2- QUADRACEPS CONTROL (2-6 WEEKS)

GOALS

1. Full active range of motion
2. Normal gaits with reasonable weight tolerance
3. Minimal pain and effusion
4. Develop muscular control for controlled, pain-free single leg lunge
5. Avoid hamstring strain
6. Develop early proprioceptive awareness

TREATMENT GUIDELINES

1. Use active, passive and hands-on techniques to promote full range of motion.
2. Progress closed chain exercises (quarter squats and single leg lunge) as pain allows.
3. Introduce gym-based exercise equipment including leg press and stationary cycle.
4. Water-based exercises can begin once the wound has healed, including treading water and gentle swimming (avoiding breaststroke).
5. Begin proprioceptive exercises including single standing leg balance on the ground and mini tramp. This can progress by introducing body movement whilst standing on one leg.
6. Bilateral and single calf raises and stretching
7. 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- HAMSTRING/QUADRACEPS STRENGTHENING (6-12 WEEKS)

GOALS

1. Begin specific hamstring loading
2. Increase total leg strength
3. Promote good quadriceps control in lunge and hopping activity in preparation for running

TREATMENT GUIDELINES

1. Focal hamstring loading begins and is progressed steadily throughout the next stages of rehabilitation.
 - (a) Active prone knee flexion which can be quickly progressed to include a light weight and gradually increasing weights
 - (b) Bilateral bridging off a chair. This can be progressed by moving onto a single leg bridge and then single leg bridge with weight held across the abdomen
 - (c) Single straight leg dead lift initially active with increasing difficulty by adding dumbbells

With respect to hamstring loading, they should never be pushed into pain and should be carefully progressed. Any subtle strain or tightness following exercises should be managed with a reduction in hamstring-based exercises

2. Gym-based activity including leg presses, light squats and stationary bike, which can be progressively increased in intensity as pain and control allow. It is important to monitor any effusions following exercise and if it is increasing then exercise should be toned down.
3. Once single leg lunge control is comparable to the other side, hopping can be introduced. Hops can be made more difficult by including variations such as forward/back, side to side off a step and in a quadrant.
4. Running may begin toward the latter part of this stage. Prior to running certain criteria must be met.
 - (a) No anterior knee pain
 - (b) A pain free lunge and hop that is comparable to the other side
 - (c) The knee must have no effusion

Before jogging, start having brisk walks, ideally on a treadmill to monitor landing action and any effusion. This should be done for several weeks before jogging properly.

5. Increased proprioceptive manoeuvres with standing leg balance and progressive hopping based activity
6. Expand calf routine to include eccentric loading

• STAGE FOUR- SPORT SPECIFIC (3-6 MONTHS)

GOALS

1. Improve leg strength
2. Develop running endurance, speed and change of direction
3. Advanced proprioception
4. Prepare for return to sport and recreational lifestyle

TREATMENT GUIDELINES

1. Controlled sport specific activities should be included in the progression of running and gym loads. Increasing effusion post running that isn't easily managed with ice should result in a reduction in running loads.
2. Advanced proprioception to include controlled hopping and turning and balance correction.
3. Monitor potential problems associated with increasing loads.
4. No open chain resisted leg extension exercises unless authorised by your surgeon.

• **STAGE FIVE- RETURN TO SPORT (6 MONTHS PLUS)**

GOALS

1. A safe return to sporting activities

TREATMENT GUIDELINES

1. Full training for 1 month prior to active return to competitive sport.
2. Preparation for body contact sports. Begin with low intensity one on one contests and progress by increasing intensity and complexity in preparation for drills that one might be expected to do at training.
3. To improve running endurance leading up to a normal training session.
4. Full range, no effusion, good quadriceps control for lunge, hopping and hop and turn type activity. Circumference measures of thigh and calf to within 1 cm of other side.