

## ACL Reconstruction Protocol

For the patients of: Dr. Arthur, Dr. Asp, Dr. Conner, Dr. Gulli, Dr. Hauck, Dr. Kraft, Dr. Lundberg, and Dr. Brian O'Neill

This protocol is to provide a general guideline for the patient and treating Physical Therapy team for activity progression and expected goals to be attained at specific timeframes post operatively. In certain cases there may be specific restrictions in place and the TCO surgeon and his team will provide special instructions in that case.

### General ACL program Phase I (Weeks 1-3) ROM!

An example of our exercise program can be found at our website [www.tcomn.com](http://www.tcomn.com). Scroll down and click on the pink colored circle by Physical Therapy on the right side of the screen under services. This will lead you to a menu with this logo and ask you to enter your unique workout code. Click on this icon and it will lead you to our exercise prescription program Perfect Fit Pro.



Enter code **GSG8069**. These exercises are a good guide to focus on for the first 3 weeks with emphasis on ROM and quadriceps activation. Do not forget about passive knee extension and patient may also start riding the bike ½ revolutions to full revolutions, focusing on higher pedaling speed versus resistance.

Patient should be using immobilizer until they can demonstrate 15 quality straight leg raises. 1 or 2 Crutches should be used until the patient can walk with a smooth, heel to toe gait pattern. Do not allow the patient to limp. Dr. Arthur uses a hamstring autograft for some of his ACL reconstructions. Restrict strengthening of the hamstring for his patients with this graft type until they are 6 weeks post-op.

### Phase II (Weeks 4-8)

Continue working on ROM as a priority, but advance to more closed chain strengthening exercises such as dynamic walking, squatting, lunging, proprioceptive activities and core stabilization as the patient tolerates. Patient can start doing some general conditioning as well on an exercise bike up to 20 minutes/day.

The Workout Code **WCA1548** through Perfect Fit Pro is a good example of Phase II exercises and activities.

The main goals to be met by the end of Phase II are: normal gait pattern, full knee ROM demonstrated by full active knee extension (equal heel off during a quad set compared to the non-involved leg) and equal knee flexion as demonstrated by a full catchers squat. Formal Physical Therapy appointments should be 2 x week until the above goals are met.

### Phase III (Weeks 8-12)

At this point formal Physical Therapy visits should be weekly to reinforce patient's home exercise program and transition to higher level closed chain strengthening activities. At 8 weeks post-op if the above goals are attained pool jogging can be started in chest deep water. If swimming eggbeater, whip or breaststroke kicking need to be avoided. Patient can start to work on aerobic conditioning in a non-impact format such as the elliptical

trainer and rowing machine. The workout code **NKR1673** through Perfect Fit Pro is good example of Phase III home exercise program for the patient. If patient is progressing as expected a return to jogging program can be initiated at 12 weeks post-op. At 12 weeks supported hopping can also be initiated with emphasis on landing alignment and soft landings.

We recommend a visit at 14 weeks post-op to check patient's tolerance to jogging and hopping. Remember at 14 weeks post-op most patients start feeling pretty good, yet they are still a long ways from return to sport at 9 months post-op and still have a lot of skills to work on. This needs to be reinforced, and for a good outcome and ultimately return to sport a lot of work still needs to be done.

Our protocol for our athletic population extends out to monthly "tune-up" visits at this point allowing us to reinforce and check compliance with their home exercise program. We also add more sport specific skills to their home program each month to prepare them to return to sport.

#### **Phase IV Transition to Sport (Months 4-6)**

4 Months: Shuttle runs with a transition from forward running into a back pedal with emphasis on learning acceleration and deceleration techniques. Work on double leg hopping patterns and double leg landings from 8-24" height once again watching alignment and soft landings.

5 Months: Broad jumping and tuck jumping, single leg landings and hopping patterns. Also add in the clock drill running working on change of direction forward/backward and also side to side and diagonal with no pivoting or cutting.

6 Months: Our last "formal physical therapy appointment." Ladder agility work, single leg landings from 12-24" height. Start working on pivoting and twisting with large figure 8 and hourglass running patterns. Set up appointment for our **ACE** program to start at 7 months post-op.

#### **ACE (Months 7-9)**

**ACE** is our eight week, class format program designed to return our athletes to sport. The ACE program includes industry standardized testing to determine if an athlete is safe to return to sport. It is a high level strength and conditioning program with emphasis on agility, proprioception, return to sport and injury prevention. The last ACE session will test the strength and performance of your operated knee versus that of your non-operated knee. This will help your Orthopedic Surgeon make an informed decision if you are safely able to return to sport.

Remember this is a general framework; all activities should be progressed based on your clinical experience and patient tolerance.