

## Family Guide — ACL Reconstruction

Patient \_\_\_\_\_

Date \_\_\_\_\_

Involved side ☐ L ☐ R

### What to expect after: Anterior Cruciate Ligament (ACL) Reconstruction

ACL reconstruction is an effective and safe surgical procedure to allow return to pre-injury status, including returning to work, recreation, and competitive sports. Our team of rehabilitation specialists at Wake Forest Baptist Health is dedicated to assisting you with all your needs throughout the different phases of recovery after ACL reconstruction. We understand that this can be a long process with many obstacles and pressure to return by a certain date (i.e. the start of the next sports season), so we are providing this Family Guide to help you understand how we progress through the phases of rehab to ensure the highest level of safety while progressing as quickly as possible.

The most important concept to know is that progression from one phase to another, and ultimately return to sports, cannot be based on a calendar date from surgery. Healing takes time, so we may not progress before a certain date, or time frame, from surgery. Physical performance will determine readiness to progress through rehab. We use a variety of standard measurements of joint motion, flexibility, balance, strength, and running/cutting/jumping drills to determine your current level of overall function.

Formerly, the accepted goal to return to sports was around 6 months from surgery; however, recent trends changed expectations for certain populations. Younger individuals are undergoing ACL reconstruction, greatly increasing the number of 6–17 year old patients. Unfortunately, early return to sport in younger patients is linked to an increase in re-injuries to either the same knee or the opposite knee. Here is some recent research that investigates return to sport considerations.

#### RETURN-TO-SPORT RESEARCH

There is a wide range of return to sport time frames. Although some high school, college and professional athletes may return as early as 6 months, the average time to return for most athletes is 10 months (Nwachukwu 2017, Dekkers 2017).

Up to 35% of patients aged 6–17 may suffer a second ACL tear (same or opposite leg). Earlier return to sport (< 9 months) was the only predictor of future risk. (Dekkers 2017).

Returning to sport without passing specific functional tests (<10% deficit) can lead to a 4 times higher incident of re-injury (Kyritsis 2016).

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### Sports Physical Therapy Treatment Guidelines — HIGHLIGHTS

Following, please find some highlights that will help you to understand some of the criteria that we consider as we progress you after ACL Reconstruction. Of course, these are general guidelines and are not comprehensive. Surgeon and Physical Therapist judgement take precedence, and patients will require clearance to progress through each phase of rehab.

#### **Phase I (0–2 weeks) — Protective Phase**

- Primary goals: regain knee extension (knee straight), regain control of the quadriceps muscle (front of thigh), begin bending the knee, and begin walking with weight on the surgical leg.
- There may be some limitations to weight bearing or bending the knee if other procedures were performed during the surgery.
- Regular work on a progressive home exercise program (prescribed by your physical therapist) will be essential to make good progress throughout the rehab process.

#### **Phase II (2–4 weeks) — Walking**

- Patients should gain full passive knee extension.
- Get cleared by PT to transition off of crutches for daily walking.
- Some patients may be able to progress out of the brace and begin driving at this phase, but they must demonstrate sufficient strength and balance.

#### **Phase III (4–8 weeks) — Daily Function**

- Normal walking pattern and nearly full return of knee motion.
- Walking up/down stairs with good strength and control.
- Perform moderate/heavy strengthening without pain.

#### **Phase IV (9–12 weeks) — Progressive Strengthening**

- Progress strengthening, including: knee, ankle, hip, and core.
- Develop aerobic conditioning with non-impact exercises.
- Begin “pre-running” exercises. NO running before 12 weeks.

#### **Phase V (4–6 months) — Pre-Sport Training**

- Focus on building strength and endurance.
- Initial strength test: either single leg 10-rep max or Biodex isokinetic testing comparisons between legs demonstrating < 30% deficit comparing surgical leg to uninvolved leg.
- Land on one leg from a 6 in. box demonstrating correct form.
- Begin straight line jogging program once above goals have been met.
- Begin some controlled sport specific movements, supervised and guided by your physical therapist.

#### **Phase VI (6–12 months) — Return to Sport**

- You can expect to be fit for an ACL knee brace prior to return to sport.
- Strong emphasis on higher level jumping/landing, running, plyometrics, and advanced sport-specific drills.
- Must pass standard functional testing before release for unlimited sports participation, including single leg hop tests <10% deficit and knee isokinetic testing < 10% deficit.
- Due to significant decrease in frequency of PT visits, regular work on a progressive home exercise program (prescribed by your physical therapist) will be especially important to make good progress during this phase.