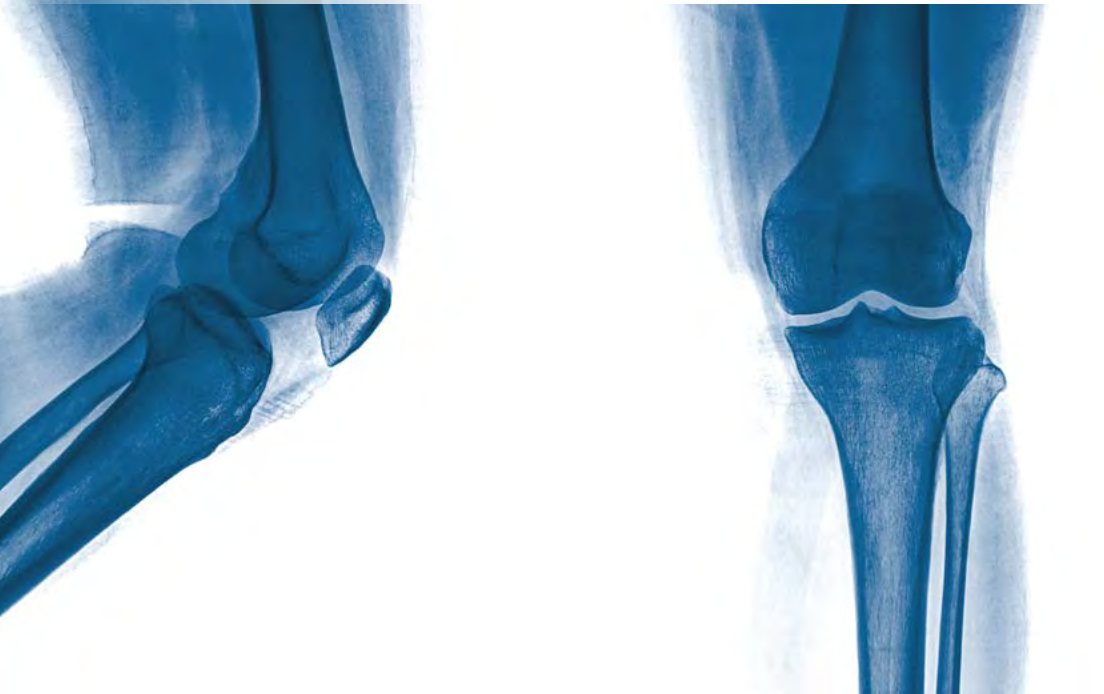
Baylor College of Medicine

SPORTS MEDICINE

ACL RECONSTRUCTION PATIENT GUIDE



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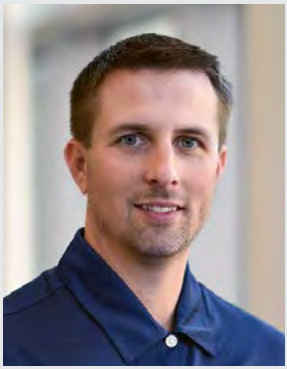
YOUR ORTHOPEDIC **SURGERY TEAM**

Dr. Theodore Shybut, M.D.

Theodore B. Shybut, M.D. is Assistant Professor at Baylor College of Medicine. He is board-certified orthopedic surgery by the American Board of Orthopedic Surgery (ABOS). He holds an additional Subspecialty Certificate in Orthopedic Sports Medicine from the ABOS signifying his expertise in sports medicine surgery. He specializes in arthroscopic and reconstructive surgery of the knee, shoulder, and elbow, including complex reconstructions and revision surgeries when prior procedures have not achieved the desired outcome.

Wendi Martin-Stewart, PAC

Wendi is an experienced orthopedic and sports medicine PA who has provided care for athletes at all levels including professionals from the NFL and NBA. Wendi performs clinical evaluations and assists Dr. Shybut in surgery. In addition, she has performed thousands of joint and soft tissue injections; platelet rich plasma (PRP) injection, viscosupplementation, and corticosteroid injections, when indicated. She was faculty for many years at the Baylor College of Medicine PA School, one of the nation's top Physician Assistant programs.



Jonathan Mayes, ATC, LAT

Jonathan is a clinically focused athletic trainer who assists with all aspects of patient care. He sees patients in clinic with Dr. Shybut, works with the medical assistant(s) in clinic on dressings, medication, and imaging orders, and is training to assist Dr. Shybut in surgery in the future. He is also a contact for school athletic trainers, coaches, parents, physical therapists and patients themselves and has extensive experience including prior work with Rice University athletics.

Melanie McNeal, PT, OCS

Melanie is the manager of Physical Therapy/ Occupational Therapy (PT/OT) for BCM. She has over 17 years of experience treating athletes of all levels including professionals from the MLB, Mexican National Soccer team, NBA, and NFL. Melanie became a certified orthopedic specialist in 2015. She is also certified in Sportsmetrics, dry needling, graston, active release (lower extremity), TRX, and kinesiotaping. Melanie specializes in knee, shoulder, and foot and ankle rehabilitation. She has spoken at numerous conferences as well as developed the knee/shoulder/ankle protocols for top sports physicians in Houston.

Meghan McKay, M.Ed., ATC, LAT

Meghan is an athletic trainer who provides sideline and event coverage for sports teams and events in the Houston area. She assists in clinical care of patients, particularly in providing education about rehabilitation from injuries and surgery. She is involved in the sports medicine education of orthopedic residents. She has extensive experience with team, sideline, and event coverage and has served as the athletic trainer for the Wales National Lacrosse team.

Ingrid McCain coordinates Dr. Shybut's surgical schedule, handling all aspects of organizing surgical procedures. She also assists in arranging perioperative care, including arranging for medical equipment such as braces and CPM machines, and arranging post-operative follow up. Other members of the BCM Ortho/Sports Medicine clinical staff also assist with medical equipment, post-operative medications, appointment scheduling, etc.

Rokeshia Holmes assists Dr. Shybut in clinic with the clinical care of patients including all aspects of the office visit: medication and imaging prescriptions, dressing changes and suture removal, referrals to other specialists, brace and medical equipment orders.

MEDICATIONS TO STOP **BEFORE SURGERY**

Seven days prior to surgery please stop taking any aspirin or anti-inflammatory products such as Advil, Ibuprofen, Motrin, Aleve, Mobic, meloxicam, etc.

Stop all **supplements** (tumeric, ginko biloba, fish oil, etc) or any nutraceuticals containing Vitamin E.

Alert the office if you are **diabetic**, taking any regular medications for **high blood pressure** or any other cardiac condition, or are taking any type of medication that is a **blood thinner**, i.e., Coumadin, Plavix, Xarelto, etc. Special conditions exist for these medications and medical conditions that may require prior approval from your ordering physician or an internal medicine physician.

Inform the office if you are taking any **diet pills or herbal supplements** regardless if it is a prescription or over-the-counter product. You must stop taking any diet pills at least 14 days prior to your surgery. If do not stop taking these products, your surgery may be postponed or cancelled secondary to risk of problems with anesthesia that may arise during surgery.

HOW TO PREPARE **FOR SURGERY**

Scheduling staff will call the day before surgery with your **surgical time**.

Call and get your first **physical therapy appointment** scheduled – knee patients generally should attend your first session within two days of surgery unless otherwise instructed.

Make sure your first **post-op appointment** is scheduled. This appointment should be within a week of surgery. Typically the first postop appointment will be with PA Martin-Stewart.

Make sure we have your **pharmacy** information. We will often call in medications for you to pick up in advance of surgery or on the way home. Narcotic prescriptions for surgical pain will be given on the day of surgery.

DO NOT eat or drink anything after midnight the night before your surgery. This includes water, coffee, tea, gum, candy, breath mints, cough drops, etc.

If you are currently taking medication for high blood pressure, you may take this early on the morning of your surgery with a very small sip of water.

You should not have any **dental work** done for at least six weeks following surgery. Having dental work done increases the risk of infection after surgery.

PRE-OP **EXERCISE PROGRAM**

THINK OF YOURSELF AS A KEY MEMBER OF YOUR HEALTH CARE TEAM

For the best possible outcome going into surgery, you want to be able to do the following:

1. **Fully straighten your knee**
2. **Lift your leg up without your knee bending**
3. **Have as little swelling as possible**
4. **Walk normally**

The following exercises will help you attain this goal; you can also watch how these are performed by visiting the following BCM YouTube channel: **www.bcm/sportsmedicine.edu**

1. HAMSTRING STRETCH

Can perform either by looping a towel around the ball of your foot and lying on your back pulling your leg up until you feel a stretch along the back of your leg/knee OR by sitting on the edge of a table and leaning forward until you feel the stretch. Hold 30 seconds and perform three times.

2. SEATED CALF STRETCH

Loop a towel around the ball of your foot, pull your foot towards you as far as you can, sit up tall and lean forward at the waist until you feel a strong pull at the back of the knee. Hold 30 seconds and perform three times.

3. QUAD SETS

Squeeze your quad by pushing your knee down and tighten as hard as you can. Tighten both sides simultaneously to help get carryover from uninjured side and to make sure you are performing correctly. Hold 10 seconds, repeat 30 times.

4. STRAIGHT LEG RAISE

Perform a quad set and keep your knee fully straight as you lift your leg 10 inches, hold five seconds, lower back to table. Try to touch the back of your knee before your heel as you lower your leg back down. This assures that your quad is tight throughout the exercise. Perform three sets of 10. Work to hold each rep for 10 seconds. Add ankle weights when gets too easy.

5. HEEL SLIDES

Loop a towel around your foot and relax your knee, pulling to bend it using your arms. Slide your heel towards your buttocks as far as you can, hold 5 seconds. Repeat for five minutes gradually increasing the amount you bend as much as you can.

WHAT TO EXPECT THE **DAY OF SURGERY**

- You will need to show up **several hours before** the posted start time for your surgery in order to be ready.

- **DO NOT eat or drink** anything after midnight the night prior your surgery. This includes water, coffee, tea, gum, candy, breath mints, cough drops, etc. If you are currently taking medication for high blood pressure, you may take this early on the morning of your surgery with a very small sip of water.

- **Medications** you will be given before surgery:
  - Lovenox and Xarelto are strong anticoagulants (blood clot preventative medication) given to patients who will be having knee surgery who are at high risk of blood clots afterward.
  - Dr. Shybut recommends aspirin to prevent blood clots and will indicate the proper dosage. You will not need a prescription to purchase aspirin as it is available over the counter.

- Please **wear** shorts, sweats, or other loose fitting clothing. You will have a bulky **post-op dressing** and possibly a **post-operative brace**. Your clothing must allow for these conditions.

- If you have **crutches** please bring them with you the day of your surgery or they will be provided for you.

- If the patient is a **minor** (under the age of 18), he or she must be accompanied by a parent or legal guardian. The guardian only has to provide insurance information and date of birth.

- You **cannot drive** yourself home from the hospital or outpatient surgical center. Please make arrangements to have a parent or guardian or someone over the age of 18 take you home after surgery. ■

AFTER YOUR SURGERY

- Narcotic pain medication will be prescribed after surgery to control pain. Take one or two pills every four to six hours as needed for pain.
- If you have had regional block anesthesia you should still take a dose of pain medication before falling asleep the night of surgery so you are not awakened by pain when the block wears off.
- It is recommended that you take the pain medication with food as it may cause nausea if taken on an empty stomach.

Common side effects of pain meds and how to treat:

CONSTIPATION: Take an over the counter stool softener or laxative if needed and drink lots of water. Eat high-fiber foods. Get up and move around (with crutches, brace, within limitations of your rehab program).

ITCHING: Take Benadryl.

HEADACHES: Drink plenty of water and try to reduce your pain medication.

NAUSEA: Take the pain meds on a FULL stomach. Dr. Shybut will generally prescribe ondansetron for nausea to take as needed.

INABILITY TO URINATE: Drink plenty of water and try to relax. If you cannot void within 12 hours of discharge from the hospital, go to the ER. If you have had urinary retention after surgery in the past, let us know before surgery.

DO NOT drive or operate heavy equipment when taking your prescription pain medication.

Resume other normally prescribed medications as instructed.

Dr. Shybut will frequently prescribe adjunct medications to help post-op, including medication for nausea, a short-term muscle relaxer or sleep aid, and in some cases other non-narcotic agents for pain.

NSAID medications like Advil/ibuprofen, Aleve/naproxen and Mobic/meloxicam **should be avoided** if you have had a soft tissue repair or reconstruction as the anti-inflammatory actions of these medications may slow your body's healing response.

To avoid **BLOOD CLOTS**, Dr. Shybut may recommend taking aspirin for 1 week after surgery, starting one day post-op. For patients at high risk Dr. Shybut may prescribe a strong blood thinner, such as Lovenox or Xarelto. Some risk factors for blood clots, called deep vein thrombosis (DVT), include:

- History of DVT (or blood clots)
- Previous leg surgery within the past six months
- Usage of birth control or hormones
- Anyone considered to be obese in weight
- Anyone over the age of 61

Lovenox is typically given in a series of one or two subcutaneous injections per day depending upon your specific medical condition. Xarelto and aspirin can both be taken by mouth.

If you are travelling by plane or long car trip after surgery, even if you are not at high risk of clots, Dr. Shybut advises you take aspirin prior to and during travel as a precautionary measure. If you are planning to travel within a month of surgery you should discuss this with Dr. Shybut as he may prescribe medication for you to take. ■

PHYSICAL THERAPY

It is vital that you initiate therapy within a day or two of your surgery. This will decrease your overall recovery period significantly.

Your therapist should be familiar with treating ACL injuries, and should educate you about which activities are and are not safe to perform.

Attending therapy increases your confidence and mental fortitude as you consistently reach new milestones.

Additionally, your treating PT should be familiar with the following protocol (also available on Dr Shybut's website).

CRYOTHERAPY/ICE

Cryotherapy or **cold therapy** is used to control pain and swelling. The use of ice or other cryotherapy device such as the Squid, GameReady, or Cryo-Cuff should be constant for the first 24 hours.

- To reduce the likelihood of your initial post-op dressing getting wet, **place a barrier** of saranwrap or a plastic ziplock bag between the device and your dressing.
- After the first day, use cryotherapy for 10 to 20 minutes **every two to three hours.**
- Always use cryotherapy after physical therapy and home exercises to help with **swelling and pain.**
- If you do not have a cryotherapy device, use bags of **frozen peas** on the knee and calf to reduce swelling
  - Fill up and freeze a gallon sized ziplock freezer bag with frozen peas until it's about an inch thick.

REHABILITATION PROTOCOL- **FOR YOUR PT**

ANTERIOR CRUCIATE LIGAMENT (ACL) RECONSTRUCTION ACCELERATED REHAB

This rehabilitation protocol has been designed for patients with ACL reconstruction who anticipate returning to a high level of activity as quickly as safely possible after surgery. The ACL Rehabilitation protocol for Patellar Tendon, Quad Tendon, and Hamstring autografts is similar, with exceptions noted in the protocol.

The following may be exclusionary criteria for this protocol and have separate protocols:

- ACLR with concomitant meniscal repair (per Dr. Shybut)
- ACLR with concomitant ligament reconstruction
- ACLR with concomitant patellofemoral realignment procedure
- ACLR revision reconstruction (per Dr. Shybut)
- MRI evidence of severe bone bruising or articular cartilage damage noted

The protocol is divided into phases according to postoperative weeks. Each phase has anticipated goals for the individual patient to reach. The overall goals of the reconstruction and the rehabilitation are to:

- Control joint pain, swelling, hemarthrosis
- Regain normal knee range of motion
- Regain a normal gait pattern and neuromuscular stability for ambulation
- Regain normal lower extremity strength
- Regain normal proprioception, balance, and coordination for daily activities
- Achieve the level of function based on the orthopedic and patient goals

Physical therapy is to begin first or second day post-op. It is extremely important for supervised rehabilitation to be supplemented by a home fitness program where the patient performs the given exercises at home or at a gym facility.

Important abnormal post-op signs to monitor:

- **Unusual erythema and effusion of the involved lower limb with complaints of constant pain, and a positive Homan's indicated DVT. Physician should be contacted immediately**
- Abnormal pain response, hypersensitivity

- Avoiding any weight bearing even with assistive device by the 3rd post-op day unless concomitant procedure was performing and patient is NWB or PWB status
- Lack of 90 degree ROM by post-op day 10

Return to activity requires both time and clinic evaluation. To safely and most efficiently return to normal or high level functional activity, the patient requires adequate strength, flexibility, and endurance. Isokinetic testing and functional evaluation are both methods of evaluating an athlete's readiness to return to sports activity. Criteria for "clearance" for return to sports is an area of evolving research in orthopedic sports medicine. Dr. Shybut recommends athletes undergo functional movement evaluation by an experienced sports physical therapist and/or athletic trainer. Specific exercises may be modified, substituted, or added where clinically appropriate at the discretion of an experienced sports physical therapist or athletic trainer who has expertise in sports surgery rehabilitation.

Prevention of future ACL injury requires ongoing dedication to correcting functional movement deficits identified during rehabilitation. There are several injury prevention programs that have demonstrated efficacy. Dr. Shybut recommends athletes, therapists, and trainers utilize these programs and incorporate them into their ongoing conditioning. Two such programs are FIFA 11+ (shown to reduce soccer injuries by 50%) and the PEP progam. For more information see:

http://f-marc.com/11plus/home/
http://smsmf.org/smsf-programs/pep-program

WHY DO FEMALES HAVE THREE – EIGHT TIMES HIGHER INCIDENCE OF ACL TEARS THAN MALES?

It is a well-known fact that females suffer more ACL injuries than males in the same sport. This has been attributed to numerous factors including the following differences between males and females.

ANATOMY

- Females have a wider pelvis, increased flexibility, narrower femoral notch, increased genu valgum, and increased tibial torsion.
- Females often have weaker gluteal/core musculature lending to faulty mechanics when cutting and landing from a jump.
- Females have a decreased sense of proprioception – knowing where their body is in space lending to incorrect postural adjustments and increased risk for injury.

NEUROMUSCULAR FUNCTION

- Females have difficulty recruiting their hamstrings to provide co-contraction with the quads for dynamic stabilization – this can be seen when landing from jumps (females land with three times less knee flexion than males) and during cutting maneuvers.
- Females have longer electromechanical delay compared to males.
- Females require more time to produce force levels compared to males.
- Females generally have increased recurvatum (hyperextension), which puts the hamstrings at a mechanical disadvantage to provide stability.
- Hormonal: Females' knees are more lax than males and this laxity increases 50% during the menstrual cycle.

Many of these factors can and should be addressed in therapy. Proprioception/balance training will improve body awareness and decreases incidence of ACL injury by 7 times. Strength training of the hips and core should begin immediately and progress through each phase of rehab increasing in intensity. Training prepares the athlete for improved muscle recruitment and optimal firing patterns during agility and plyometrics. In addition, sports specific training prior to returning to the desired sport is mandatory and has been shown to reduce the risk of injury by 88%.

A NOTE ON ALLOGRAFTS: Multiple studies have shown that tissue incorporation and graft maturation takes longer in allografts as compared to autograft tissue. As a general rule Dr. Shybut recommends delaying return to high level cutting/pivoting/agility activities until at least 9 months postoperatively. Assuming appropriate rehabilitation has been done up to that point, phases 4 should be delayed 4+ weeks, and phase 5 should be delayed an additional 4+ weeks, to allow greater time for graft incorporation and maturation. Hamstring autograft precautions, as above, are not necessary with allograft ACLR.

EACH PATIENT WILL PROGRESS AT HIS/HER OWN PACE AND THERAPY SHOULD ADJUST ACCORDINGLY. THESE ARE GUIDELINES. CLEAR COMMUNICATION AMONG THE ATHLETE, M.D., PT, ATC, AND SPORTS TEAM IS CRITICAL TO SUCCESS.

PHASE I: WEEK 1-2

ROM/FLEXIBILITY

- Seated heel slides (passive only for four weeks of Hamstring Graft used)
- Patella mobilization
- Seated Gastroc stretch with towel/strap
- Standing Gasroc/soleus stretch
- Seated/supine Hamstring stretch (avoid if HS graft)
- Supine wall slides
- Prone hangs if lacking full extension

AEROBIC

- BIKE: Begin when can flex to 110° (do not adjust bike seat to increase/force motion at any time)

STRENGTH

- Quad sets with Biofeedback (10x10 second-hold every hour and perform B with upright posture)
- Straight leg raise: supine until can perform with NO extensor lag then progress to sitting and/or add ankle weights (only if can maintain full extension)
- Abduction/Adduction/Extension leg raises: maintain quad contraction
- Standing calf raises
- Total Gym/Shuttle/Leg press: double limb only
- NO ACTIVE HAMSTRING FOR 4 WEEKS POST OP IF HSG

GAIT

- Cone walking with crutches (out of brace)
- Gait will continue with B crutches in brace until N gait pattern is achieved
- Can move to single crutch as confidence increases and full extension during stance is achieved
- Post-op brace is to be worn for 6 weeks or until notified by surgeon

BALANCE/PROPRIOCEPTION

- Weight shifts side to side
- Single limb stance with knee slightly flexed on stable surface
- Wobble board (double leg only)

MODALITIES

- Ice 10-15 minutes
- Biofeedback/NMES to VMO

BRACE

- To be worn at all times except in therapy for four-six weeks or until N gait is achieved
- Initially locked at 0°; therapist may unlock to 90 when quad tone/strength allows for full weight bearing without apprehension

HEP

- Quad sets, SLR, Heel slides, HS/calf stretch, core strengthening, Ice 10-15 min

GOALS TO ADVANCE TO PHASE II

1. Full Extension
2. Flexion to 110°
3. Voluntary VMO/Quad activation
4. Reduce effusion and pain
5. Initiate gait training with crutches

PHASE II: WEEK 2-4

ROM/FLEXIBILITY

- Continue Phase I exercises
- Flexionator/Extensionator if motion not improving
- Initiate gentle HS stretch if HSG at postop week 4

AEROBIC

- Bike: high RPM (over 60-80), increase time as able then increase Intensity
- Elliptical: initiate only if trace/mild effusion and symptom-free

STRENGTH

- Continue Phase I exercises: increase Intensity as able
- Leg press/shuttle: B and single leg
- Squat to chair: 90° max
- Step ups
- Wall squats
- Step downs (weight through heel to avoid PF compression)
- Side-lying clams with theraband resistance
- TRX: assisted squats
- Core

GAIT

- Discharge crutches when N gait is achieved
- Cone walking: forward and lateral

BALANCE/PROPRIOCEPTION

- Continue Phase I exercises
- Advance to unstable surfaces as able for SL stance: Airex, dynadisc, wobble board
- Wobble board mini squats (double limb)

MODALITIES

- Ice 10-15 min following treatment and at end of day
- Biofeedback /NMES to VMO
- Ultrasound to portals if needed

HEP

- Bike (increase time; Intensity as high as possible maintaining 60-80 RPM)
- Strengthening ex as able at home/gym INCLUDE CORE as able
- Ice as needed post exercise and/or when effusion is present

GOALS TO ADVANCE TO PHASE III

1. Minimal effusion present
2. ROM 0-125
3. Equal extension/hyperextension B
4. N gait
5. Improve strength
6. Single limb balance on stable and unstable surface

PHASE III: WEEK 4-12

FLEXIBILITY

- Continue previous stretches
- Slant board gastroc/soleus stretch
- Quad stretch: prone or standing
- Foam roller for ITB/quad

DYNAMIC WARMUP (Week 10): prior to jogging, 10-20 yards of each of following:

- Walking straight leg kicks
- Walking arabesque
- Walking quad stretch
- Walking butt kicks
- Hip opening
- Hip closing
- Walking lunge with twist
- Side to side lunge
- A skips

AEROBIC

- Bike: double and/or single leg; continue to progress time 45-60 min
- Elliptical
- Treadmill/AlterG: Jogging Week 10-12 (perform dynamic warmup immed before)
  - Criteria: able to perform SL squats with good mechanics – no glut compensation
  - Jog progression

- 1-2 min jog / One min walk up to 10 min
- Progress as symptoms allow two min jog / One min walk to 20 min
- Increase interval time jogging by one-two min every other session as long as no increase in pain/effusion
- Jogging should be on TM or soft surface such as track
  - AlterG: begin at BW% in which patient can jog with comfortable, N gait

BRACE

- PT will be measured for functional brace when ready to initiate jogging
- Brace to be worn with all lateral movements, jogging, agility, plyometrics, functional drills and with return to sport

STRENGTH

- Continue previous (D/C quad sets when patient demonstrates good VMO tone)
- Initiate active and resistive hamstring strengthening if HSG
- Lateral heel touch
- Multi-hip/Cable column Fl/Abd/Add/Ext
- Bridge progression: single limb, on swiss ball/slide board
- Lunges: in place, reverse, walking, lateral (week eight)
- Smith press squats
- Single leg squats
- Hamstring curls: seated or prone
- Sidestep and monster walk with TB
- Dead lifts: double progress to single limb
- Sled push/pull
- TRX SL squats
- Core strengthening: planks, total gym core trainer, supine strengthening

BALANCE/PROPRIOCEPTION

- Continue previous advanced difficulty levels
- BOSU: both sides, double and single limb balance and squats
- Y balance
- C column four-way on Airex/dynadisc
- Plyotoss
- Sports cord sidestep over cones

MODALITIES

- Ice following activity 10-15 min
- Biofeedback to VMO
- US as needed

HEP

- Jog program is every other day as long as no increase in effusion/pain
- Cycling/elliptical/rowing can be performed daily
- Strength exercises to be performed every other day at gym/home

GOALS TO ADVANCE TO PHASE IV

1. Full ROM by week 8 (0-135°)
2. Improve strength/endurance: perform 10 single leg squats with good mechanics
3. Improve balance/proprioception
4. Initiate lateral movements (week 6-8)
5. Initiate functional activities (week 10-12)

PHASE IV: WEEK 12-16

FLEXIBILITY

- Continue previous: HS, quad, calf stretches and dynamic warm-up prior to jogging

AEROBIC

- Continue with jogging progression on TM or soft surface such as track; no running on asphalt
- Continue bike – single and double limb
- Swimming
- Golf (if released by MD)

STRENGTH

- Continue previous increasing intensity as able to build strength
- Progress sled push/pull speed/intensity
- Biodex flexion/extension at 180°/sec, and 300°/sec

BALANCE/PROPRIOCEPTION

- Continue previous adding perturbation or removing vision to increase difficulty level
- Y balance: goal is <4cm difference involved vs uninvolved in anterior direction

FUNCTIONAL TRAINING

- Slide board
- Ladder drills
- Initiate shuffles, carioca, figure 8 at submax speeds
- Initiate Part 1 of FIFA11+ http://www.f-marc.com/downloads/posters_generic/english.pdf

GOALS TO ADVANCE TO PHASE V

- 80% On single leg squat test side to side with good mechanics
- Confident with side to side drills
- Patient subjective report of 75-80% recovered
- Less than 6cm difference in reach on Y balance when testing involved vs uninvolved

PHASE V: WEEK 16 TO DISCHARGE

FLEXIBILITY/STRENGTH/BALANCE

- Continue previous

FUNCTIONAL TRAINING

- Continue previous advancing speed and intensity
- Initiate Sportsmetrics jump training
- Advance to all three parts and all phases of FIFA11+ **http://www.f-marc.com/downloads/posters_generic/english.pdf**
- Advance sports specific training

GOALS OF PHASE V

- Unrestricted return to sport
- 85-90% on isokinetic testing
- <4cm side to side reach on Y balance
- Subjective reports of readiness to return to sport
- 90% on all strength and balance testing comparing involved to uninvolved
- Patient should be able to complete home maintenance core/ agility program and understands importance of continuing maintenance program because he/she is at greater risk risk of re-injury or contralateral injury by virtue of having torn an ACL! ■

PRECAUTIONS

- **DO** wear your brace at all times except in PT and when doing exercises
- **DO** sleep in the brace for first 14 days post-operatively
- **DO NOT** get your knee/dressing wet until after your first post-op visit
- **DO NOT** drive until you are no longer taking narcotics (if L knee) and until you have adequate quad control if R knee, AND you are able to safely get in and out of the car while adhering to your prescribed activity restrictions.
- **DO NOT** put a pillow under your knee after surgery even though it feels good! Work to get your knee fully straight. Put the pillow under your calf/heel so gravity helps bring your knee into a fully straight/extended position.
- **DO NOT** remove your post-op bandages.

FAQS
(READ BEFORE CALLING OFFICE)

When do I take the dressings off?
Three days following surgery. Cover the steri-strips and incisions back up with gauze. DO NOT handle or touch the incisions directly. Be aware that keeping the dressing on may prevent excessive swelling.

When do I take the pain pump off?
48 hours after surgery. You will be directed by the anesthesia team. If you have problems with the pump, call provided number – if you cannot reach someone, call the hospital and ask for the anesthesiologist on call to help you.

When can I shower or bathe?
You can shower after your first post-op visit but do not submerge your knee in water; prior to this, wrap your knee in saran wrap to avoid getting the dressing wet. Once your incisions have healed COMPLETELY, you can submerge your knee in water.

What if I get my dressing/knee wet?
Take off the top dressing and let it dry

What if I am having problems sleeping?
If you have difficulty sleeping, Dr. Shybut can prescribe Ambien, a sleeping pill. (Note: you *cannot* take Ambien if you are also taking OxyContin).

What positions can I sleep in?
For the first 2 weeks, you will sleep in the brace to protect the reconstruction. Initially the brace should be locked at 0° but can progressively be unlocked to 30°, 60°, and 90° as needed. As long as the brace is on, you can sleep in any position.

What should I do if I think my joint is infected?
Signs and symptoms of infection are intense pain, fever ≥101.5, redness and/or swelling. Contact Dr. Shybut's office immediately or go to an Emergency Room.

How much weight can I put through my leg after surgery?
You should be weight bearing as tolerated (WBAT) using crutches and a brace (locked in full extension) unless otherwise instructed. As you get more confident and your quadriceps muscle gets stronger, your therapist will progressively unlock your brace to 90° to allow for a normal gait pattern. You will move to using one crutch and then when you can walk normally, you can stop using the crutches.

What if my leg swells after surgery?
Effusion/swelling is extremely common following surgery and often extends into the foot/ankle. Applying ice 10-15 min every hour for the 1st two days following surgery will help. Swelling typically increases as you start feeling a little better and become more active, spending more time on your feet. Wearing a knee wrap or compression garment, taking frequent rest breaks, building quad tone/strength, icing for 10-15 minutes after exercise/activity, and performing ankle pumps while elevating your leg above your heart will all help decrease effusion. If you have significant swelling accompanied by coolness or warmth that does not go down after ice and elevation, contact Dr. Shybut's office or go to a local ER.

Will I have bruising after surgery?
Bruising is very common following surgery and often doesn't manifest until days after surgery. Bruising is more common if your hamstring was used for your ACL graft. It is not uncommon for the bruising to extend down the leg to the foot/ankle. Bruising should generally resolve within 2-3 weeks.

What should I expect my activity level to be?
Each patient progresses at a different rate. You are able to bear full weight using your crutches and brace immediately following surgery unless otherwise instructed by Dr. Shybut. Let pain and swelling be your guide – if you feel a significant increase in pain and/or swelling, rest. As your quadriceps strength improves, you will be able to stand/walk for longer periods.

Now that I am no longer requiring narcotic pain medication, what can I take if I should experience discomfort?
You can take Aspirin or Tylenol, no anti-inflammatories. Dr. Shybut can prescribe other non-narcotic agents to help manage post-op discomfort.

Is it normal to hear clicking in my knee after surgery?
Yes, in fact, it's abnormal if you do not hear clicking when walking after surgery, and this may last for some time. It may be due to effusion or your kneecap (patella) not tracking correctly in its groove as a result of the quad shutting down immediately after surgery. This is due to your quad shutting down and is expected. This is why attending therapy within a day or two of surgery is important. As your swelling goes down and your quad gets stronger, the clicking usually goes away.

What about using a hot tub or whirlpool?
Once your incisions have healed COMPLETELY, you can submerge your knee in water. This is usually not until 1 month after surgery. ■

WHEN TO CALL DR. SHYBUT'S OFFICE:

- Fever about 101.5 consistently
- Increased drainage or swelling
- Pain not controlled by pain medication
- Inability to bear weight on your operative leg
- Severe insomnia
- Swelling in foot or calf that is accompanied by coolness or decreased sensation in foot
- Confusion or disorientation

MCNAIR CAMPUS

7200 CAMBRIDGE ST, SUITE 10A
713.986.6016 OR 800.545.ORTH (6784)

HOSPITAL AND PHYSICIANS' INFORMATION

ST. LUKE'S O'QUINN MEDICAL TOWER
6624 FANNIN ST.
9TH FLOOR
HOUSTON, TX 77030

Type of Surgery _____

Orthopedic Surgeon _____

PHONE_____

Hospital _____

PHONE_____

Office Staff _____

PHONE_____

Primary Care Doctor_____

PHONE_____

Physical Therapist _____

PHONE_____

Pharmacy _____

PHONE_____

Additional Specialists _____

PHONE_____

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PHONE_____

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PHONE_____

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ACL RECONSTRUCTION PATIENT GUIDE

Baylor College of Medicine

SPORTS MEDICINE