ACL RECONSTRUCTION

Educational Information

SANTA MONICA ORTHOPAEDIC
AND SPORTS MEDICINE GROUP

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V. WHAT ARE THE RISKS OF SURGERY?

It is our responsibility to make sure that you have a realistic understanding of the risks and potential complications. They are the following:

1. ***Risks of Anesthesia*** **-** As a general rule all anesthesia options are safe and effective. Regardless of the option selected, complication rates are generally low. The most important issue is making sure that you are healthy and the there are no underlying medical conditions that can influence this. In many situations you will be asked to see your general physician for a "preoperative medical History and Physical Exam" that defines these issues. You will review these again with our anesthesiologists.

2. ***Infection*** **-** Probability approximately 1/200-300. To minimize this risk potential you will receive pre and post-operative antibiotics.

3. ***Recurrent laxity and graft failure*** **-** 2-5/100

4. ***Chronic Stiffness*** **-** 1-2/100

5. ***Re-operation*** - 5/100 for any reason which can include pain, decreased range of motion, hardware problems.

6. ***Nerve and/or Blood Vessel injury*** - 1/500

7. ***Deep Vein Thrombosis or blood clots*** 1/500

VI. MAKING YOUR DECISIONS

It is usually a difficult process to understand exactly what you have done to your knee and what to do about it. This is something that we do all of the time; however, you have little or no experience in these matters. This is the main reason we have created this manual. These are some important principles to guide you:

A. There is absolutely no rush to make a decision!
B. It is important that you understand each option in full detail. If you don't, ask again if this is necessary?
C. Timing is an important issue.

Regardless of the option that you ultimately select it is important to start the following protocol:

1. You will be given a brace by our staff to support the knee through a range of motion. This should be worn when you are up and around and not in bed.
2. You will start leg lifts, quad setting, and range of motion exercises immediately. The first major objective is to achieve a full range of motion. In most individuals, insurance permitting, we will have you work with the Physical Therapists.
3. To alleviate swelling and pain we recommend that you ice your knee with an ice bag or a bag of frozen peas as much as possible. Early on, this can be at all times; thereafter, 15 minutes 4 times a day. In addition, we recommend a non-steroidal, anti-inflammatory such as Advil 2 tabs 3x/day, Aleve 2 tabs 2x/day, Naprosyn 500mg 2x/day, or whichever medicine you prefer or tolerate the best. Remember that each of these medications can effect your stomach. If previously you have had ulcers or similar problems, make sure you tell us. If while you are taking these medicines you have stomach problems, stop at once and call us!

VII. THE TIMING OF SURGERY

Once you have made a decision to proceed with surgery, we must define the optimal time. There have been several studies that suggest that it is optimal to wait 3 weeks after injury for ACL reconstruction. As a general policy, this is our practice. There are exceptions to this rule and they include:

1. The elite, high level, or professional athlete. It is in this group that the time from injury to full return is vitally important.
2. In the situation where there is a displaced meniscus tear that won't allow a full range of motion.

VIII. THE PRE-OPERATIVE VISIT

The purpose of this visit is to:

1. further help you understand your options.
2. review the risks of surgery and to complete your informed consent form.
3. review all logistical issues.
4. provide prescription medications including:

- Vicodin for pain. This is an excellent pain reliever that is a combination of a codeine analogue plus Tylenol. You can take up to 2 tablets every 4 hours as necessary. Since we have been using the present protocol of local anesthesia, patients require much lower amounts.
- Keflex. This is an antibiotic to be taken as a prophylactic or preventive medicine 4x/day for 2 days.

- Naprosyn or the anti-inflammatory of your choice. In recent years we have been using these medicines 4-6 weeks after surgery to help minimize soreness, aching, and swelling.

5. Make sure that we have adequately screened you medically with respect to physical exam, blood, and other tests

6. Provide follow-up appointment dates and times.

IX. ANESTHESIA OPTIONS

1. Local with sedation. This option is reserved for those individuals to have arthroscopy with meniscus care only.
2. Spinal/Epidural. Widely accepted and used for ACL Reconstruction.
3. General. Also widely accepted and used for ACL reconstruction.

X. THE DAY OF SURGERY…WHAT TO EXPECT

All patients have a level of nervousness in the days prior to surgery. It is not uncommon to wake-up dreaming about the procedure. The best thing to do about all of these reactions is to talk with friends, family, and us. We have been there many times, and we want to make this as enjoyable as we can.
There are some important rules that you must follow:

1. Do not eat or drink after midnight. There are some situations when you can, but we will tell you if it is OK!
2. Make sure you have someone to take you to the Surgical Center and pick you up. The staff will review for you the best times.

3. Read all the materials we have given you once again the night before surgery. Make sure you understand all logistics, your options, the risks, and benefits in full detail. If there are any questions, it is important you ask. Remember the key to an optimal result is information, comfort, and confidence.

XI. YOUR SURGERY HAS BEEN COMPLETED

You are in the Recovery Room. Perhaps you are groggy and just waking up or still somewhat sedated from the regional anesthesia. In this period it is essential that we :

1. have minimized pain and nausea.
2. initiate an active exercise program that allows gentle early active range of motion. You will be asked to do the following exercises:

    - straight leg lifts/10 repetitions times 15-20 sets in the first day and thereafter.
    - range of motion exercises 0 degrees to 100 degrees/10 repetitions times 15-20 sets in the first day and thereafter.
    - start to pedal our Pedlar bicycle for 10 minutes every hour for the first day and thereafter. You can increase the resistance but all of that will be reviewed for you as you go.
    - ice your knee to minimize swelling and pain. In most patients we will use a special machine that circulates ice water to the knee. In others this may not be necessary or feasible due to insurance issues. In these situations ice packs will be placed on your knee at all times.
    - identify the drain (a small tube that will stay in the knee for 1-2 days to remove blood and fluids/ this volume can be up to 400cc). The Nurse will show you and describe how to empty it as necessary.
    - when you are feeling good enough to go home, you will be discharged. The Nurse, once again, will review all issues including exercises, icing protocols, medications, drain care, Home Health nursing, visits, and follow-up appointments.

XII. THE NIGHT OF SURGERY

1. Pain Control - Our goal is to minimize or eliminate pain with this procedure. You will have prescriptions for:

    - Vicodin…you can take 1-2 tablets every 3-4 hours if you need. In most just try 1 tablet every 6 hours. As most pain subsides, you can just take Tylenol 2 tablets every 4-6 hours. This in conjunction with…
    - a non-steroidal anti-inflammatory, such as Naprosyn, 2 tablets 2 times a day should be all that you need. Make sure you do take the Naprosyn with food. If this bothers your stomach, try Advil or Motrin 2 tablets 3 times per day with food. If you have ulcers or gastritis, it is imperative that we be careful with these medicines.
    - Home Health Nurse visit for Toradol shot.

2. Antibiotic Prophylaxis - Keflex 500 mg 4 times a day for 2 days only. This is in addition to the Ancef 1 gram IV given prior to surgery.

    a. Important specific potential problems include:

    - ***Penicillin Allergy***…You must review for us what this means. Have you had a severe allergic reaction? If so, we will modify these medications as necessary.
    - ***Heart Murmurs or Valvular Heart Disease***...If you know about this consult, ask your general physician as to exact recommendations, since you may require a different method of prophylaxis!!

XIII. THE POST-OPERATIVE VISIT

Welcome back! This visit we will:

1. Make sure medications are effective and not causing problems.
2. Change your dressings and remove the drain.
3. Review the basic exercises again.
4. Review the operative findings, procedures, photos, and Video.
5. Schedule Physical Therapy visits. We will give you the referral and appropriate authorizations as needed.
6. Schedule follow-up visits in approximately 7-10 days. After this the interval varies from 3-4 weeks.
7. Make sure you have all necessary notes and documentation for school or work.

XIV. THE ACCELERATED ACL REHABILITATIVE PROGRAM: PRINCIPLES

1. Stable fixation of the graft allows early exercise and weight-bearing within a ***safe zone***. Our goal is to keep you there.
2. Early exercise and weight-bearing has been proven to be ***safe and effective*** without any decrement in result or graft ligament laxity. In fact we have found the contrary.
3. It is important to focus on the patient/athlete as a whole. Incorporating all ***dimensions of performance*** including aerobic and anaerobic fitness, power, strength, agility, and specific athletic function. We must have a clear cut functional objective and develop a program and a strategic plan that realistically allows us to achieve that goal.
4. At all levels of rehabilitation, conditioning and return to sport is a progression. We more specifically describe this as a ***cyclical progression***. It is for every increase in activity…it is followed by a decrease at all levels...at all times!. This is the formula for safe programmatic progressions.
5. During the program exercise is essential ***6 days a week***. The specifics will be broken down individually.

- It will be stressed that you ride a bike 6 days a week for at least 1 hour per day. If you are a professional or an elite athlete, you will be expected to cycle 2 hours /day.
- Swimming is a perfect sport for cross-training. The freestyle is ideal. Breaststroke should be avoided due to additional stresses on the knee.
- Aqua jogging with a belt or vest and water therapy is also excellent.
- Stair master is acceptable later in the program due to the high potential forces on the knee.
- Jogging can start at week 6-9 depending on the individual progress.

    a. The running progression starts by walking with no limp,
    b. then walk x30 minutes with no pain or limp,
    c. then walk 5 minutes and jog for 5 minutes,
    d. then walk 5 minutes and jog for 10 minutes,
    e. then walk 5 minutes and jog for 15 minutes and so on.
    f. Remember the cyclical progression of increases followed by decreases!

- Agility Progressions…The Box.

    1. This is essential to start early. The box is set up with 4 cones 5 yards apart making a box. The box is initially walked slowly, then walked rapidly, then jogged, then sprinted. Initially, the box is at 5 yards, but progressions to 10, 20, and 40 yards ensue. Successful execution of this progression allows you to restore agility, proprioception, and functional return to sports.

        a. The first leg of the box is run forward,
        b. the second leg is side left in a counterclockwise direction,
        c. the third leg is backward,
        d. the fourth leg is side left.

XV. RETURN TO SPORTS…THE ULTIMATE GOAL

This once again is a very individual transition. Every patient/athlete is different. The return to sport is always a progression. It can never occur without attention to the details of the sports progression. Each sport is different and has a specific protocol for that sport, for example:

1. Soccer - the athlete starts on the field progression early on in conjunction with the box. This will be done with and without the ball.
2. Basketball - the athlete will start in the gym about the 2nd week. It is very therapeutic to start walking around the court, shooting foul shots, and shagging balls. The box progression starts early.
3. Skiing - when the athlete is about at 80% the experienced skier after clinic progressions can start on the mountain progressions. This is not full activity but limited to skiing the “blues” for only 1-1 1/2 hours /day and then progressed appropriately.
4. Tennis - at about the 2nd week the athlete starts to begin to hit balls against the wall by themselves. This early step is important to re-acquaint eye-hand-body coordination. The progression will continue in a gradual systematic manner.
5. Volleyball - at about the 2nd week the athlete will begin gently hitting. The progression will continue.

XVI. CRITERIA FOR RELEASE & FULL RETURN TO COMPETITIVE SPORTS (Based upon):

1. Strength
2. Agility
3. Aerobic and Anaerobic fitness
4. Sports specific issues

5. Vertical leap
6. Joint stability
7. Quadriceps muscle bulk
8. Speed

This is the last step in achievement of your goals. Testing will determine when and to what level you can return.

If there are any questions at any time, please ask! Remember that the purpose of this document is to educate and help you understand the complexities of this elaborate program. Call at ***310-829-2663.***

The Santa Monica Orthopaedic and Sports Medicine Group