

KRAMER ORTHOPEDICS

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ANTERIOR CRUCIATE LIGAMENT (ACL) RECONSTRUCTION

Post Operative Protocol:

Below are guidelines developed to familiarize you with the general protocol following reconstruction of an *anterior cruciate ligament tear*:

After your injury and prior to surgery it is very important to *obtain full knee range of motion*. To achieve this goal, move the knee into full extension and flexion for two or three minutes five to ten times per day. Although this exercise should not necessarily hurt, you should feel the stretch.

Control the swelling by icing, ace wrapping, elevating the leg, wiggling the ankle and foot, and moving the knee as much as possible. These measures will pump the fluid out of the leg and knee. Maintain muscle strength by doing one- or two-legged squats, straight-leg raises, and heel drags. Once the swelling has decreased and the knee has regained almost complete range of motion, a reconstruction can be performed. Crutches should be rented prior to your scheduled surgery date. **Surgery is performed under a general anesthetic on an outpatient basis.** On the day of surgery your knee will be placed in a *brace* locked in a position of full extension.

Depending on your surgery, a CPM machine and/or cold therapy machine may be ordered. If this was not discussed with you then please disregard the following.

On the night of surgery or early the next morning remove only the brace, exclusive of the dressing, and put the leg into a **Continuous Passive Motion (CPM) machine**. Initially the CPM machine will be set from *-5 to 40 degrees*. A good speed is right in the middle setting. The knee goes into full extension in the last 3-5 degrees. It is good to put some pressure on the knee to make sure it becomes perfectly straight and to tighten the front thigh muscle (quadriceps) simultaneously. It is also important to stop the machine once an hour in the *-5 degree* position and push the knee down completely straight several times. The thigh muscle should then be tightened and held for a period of five seconds before relaxing. *This sequence should be repeated ten times every hour*. The position on the CPM machine should be increased five degrees at a time using comfort as your guide. Improvement in motion varies for each patient. It can be as dramatic as reaching up to 100 degrees of flexion within the first day and a half, or it can take as long as five days. When you increase the CPM machine flexion, let it run for five or ten rotations and the initial discomfort and tightness will diminish.

A *cold therapy unit* consists of a pad through which cold water is circulated. The pad is placed under the dressing on top of the knee. A sufficient supply of ice must be available to continuously replenish the machine. This is an excellent adjunct for minimizing the swelling and pain.

Both the CPM machine and the cold therapy unit are usually used for a period of seven to fourteen days after surgery. It is recommended that you stay at home for at least five days after surgery to ensure the swelling has significantly decreased and you have good range of motion prior to returning to work. Many patients take the cold therapy unit to work and continue to use the CPM machine when they return home. You may initially want to consider returning to work on a part-time basis.

Although immediately after surgery you will use crutches, you may progress to full weight bearing with the brace locked at zero degrees as tolerated. In addition to tightening the muscles after surgery (Quad sets), you should begin straight-leg raises within one to three days, after surgery. Twenty to one hundred raises daily should be performed with your brace on. Once you have obtained good quadriceps control (able to do 30 leg raises) and are walking with full weight, the brace can be unlocked or removed completely and you can begin to walk more normally. This milestone can be expected one to two weeks after surgery.

Physical therapy will be instituted and sutures will be removed anytime between five and ten days after surgery. Showering with assistance is permitted at approximately five days after surgery. An ACL sports brace will be fitted at three to four months postoperatively when the size of the thigh has returned to almost normal. Most patients resume sports five to six months after surgery when good muscular control is present.

Every patient has a different knee problem and therefore will require some modification to the above-referenced guidelines depending on associated injuries.