Combined knee ligament sprain

Description
A combined knee ligament sprain is a sprain (tear) of multiple (two or more of the four) major ligaments of the knee. The four knee ligaments are the anterior cruciate ligament (ACL), posterior cruciate ligament (PCL), medial collateral ligament (MCL), and lateral collateral ligament (LCL).

Ligaments are structures that help keep the normal relationship of the femur (thigh bone) and the tibia (leg bone). They allow motion up to certain extremes; any motion beyond these extremes results in ligament strain. Injury to multiple ligaments results in difficulty in performing sports and often with day-to-day living. Injury to the ACL and MCL is the most common combined knee ligament injury.

Common signs and symptoms
- One or more pops heard or felt at the time of injury
- Inability to continue after the injury; knee swelling noticed within 6 hours after the injury
- Possibly deformity of the knee
- Inability to straighten knee
- Knee gives way or buckles and often becomes swollen
- Occasional locking when there is also an injury to the meniscus cartilage
- Occasionally, there is injury to nerves (numbness, weakness, paralysis) or discoloration or coldness (due to artery injury) of the foot and ankle

Causes
Combined knee ligament sprains are caused by a force that exceeds the strength of the ligaments. Usually this is the result of a severe injury, although it may be caused by a non-contact injury (such as stepping in a hole in the ground, hyperextending the knee, and twisting it).

Risk of further injury
- Sports that require pivoting, jumping, cutting or changing direction (basketball, gymnastics, soccer, volleyball) or contact sports (football, rugby); sports on uneven terrain (cross-country running, soccer)
- Poor physical conditioning (strength and flexibility)
- Improper equipment
**Initial treatment**
Consists of medications and ice to relieve pain and reduce the swelling of the affected knee. Sometimes walking with crutches until you walk without a limp is recommended. Range-of-motion, stretching and strengthening exercises may be carried out at home, although referral to a physical therapist or athletic trainer may be recommended. Occasionally your physician may want you in a brace or immobilizer or crutches to protect the joint.
Surgery is often recommended as definitive treatment and is performed arthroscopically. After surgery or immobilization, stretching and strengthening of the injured, stiff, and weakened joint is essential. These may be done with or without the assistance of a physical therapist or athletic trainer.

**Pain control:**
Nonsteroidal anti-inflammatory medications such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.

Stronger pain relievers may be prescribed as necessary by your physician. Use only as directed.

**Swelling control:**
Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage. Use Ice for the first 72 hours after the initial injury.

**Knee exercises**

**Quadriceps sets**
- Tighten muscles on top of the thigh by pushing knee down into the table or surface.
- Hold for 5 seconds.
• Repeat this exercise about 15-20 times every hour.

**Straight leg raises**

• Tighten muscle on the front of the thigh, and then lift your leg up about 8-10 inches off of the surface. Make sure that you keep your leg straight and knee locked.
• Hold for 5 seconds, then lower to the surface *slowly*, once your leg rests back on the table relax, then repeat.
• Do 3 sets of 15 for 2-3 sessions per day.
• Make sure that you perform this exercise on both legs.
Heel slides
- Lie on your back with injured leg extended on the wall.
- Concentrating on the heel of the painful knee, slowly slide the heel down as far as you can tolerate.
- Hold for 5 seconds.
- Slowly slide the heel back up to the starting position.
- Do 3 sets of 5-10 for 2-3 sessions per day.
Wall slides
- Leaning on wall, slowly flex your knees into a squatting position.
- Do not go past the point were your thighs are parallel with the ground.
- Hold the squatting position for 3 seconds then extend your knees sliding up the wall to the starting position.
- Do 3 sets of 10-15 for 2-3 sessions per day.
Please call 859-323-5533 with questions or for more information.