# Dr. Vince Dalton with West End Orthopaedics Accidents, ACLs and Ambulatory Surgery

*Article written in 2008 for* MD News

By Katie O'Rourke

## HOW TO SUSTAIN AN ACL INJURY

Her injury was sustained during a recent skiing vacation in Deer Valley, UT. On the final day of her winter getaway, Stephanie Sommers, 36, single mother of three, publisher and avid skier, decided to make one last run down the slopes.

As Sommers describes it, "Just before I took off, I realized how fatigued I was. I'd been really hitting it hard during my last day on the slopes. For some reason, I had a bad case of vertigo. Perhaps it was the 7,000-foot altitude, but I had been fine all week, so I dismissed it. My fiancé, who practices emergency medicine, encouraged me to take the lift down. Well, I really wanted to ski this final run with my kids." And she did. Sort of.

Sommers recalled the circumstances of the accident. "From what I can remember," she said, "it was snowing hard and visibility was limited. I was skiing, and then suddenly my skis crisscrossed, which abruptly caused me to stop, twist and fall. As I fell, I heard a cracking sound coming from my left knee.

"My fiancé immediately came over and suggested we call for the paramedics. Well, at that point I was a little shaken up, but I didn't feel any pain, so I decided to go ahead and ski down to the bottom of the run. When we returned to the house in Utah, I experienced some discomfort, so we iced the knee and I took a pain killer."

Sommers didn't realize it at the time, but she had just sustained a torn anterior cruciate ligament (ACL). Once she returned to Richmond, Sommers was experiencing a great deal of pain. Her ED physician/fiancé immediately referred her to Dr. G. Vincent Dalton, M.D., at the West End Orthopaedic Group.

## DIAGNOSIS — SOMMERS IS ONE OF 200,000 ACL PATIENTS PER YEAR

Prior to her doctor's visit, Sommers was a little concerned. "It had been a few days since the accident, I was in tremendous pain and I was worried about cartilage damage to my knee because I had done a lot of walking during the interim." Sommers' condition was more common than she realized. An estimated 200,000 ACL-related injuries occur annually in the United States. Another 95,000 injuries are ACL ruptures. This translates into orthopaedic surgery for approximately 100,000 ACL reconstructions each year.

During her consultation with Dr. Dalton at the West End Orthopaedic Group, Sommers felt reassured by his thorough evaluation, his diagnosis (reinforced by MRI test results) and his encouraging prognosis for her recovery. Sommers' confidence was well placed. The 50-year-old Dr. Dalton has 17 years experience as an orthopaedic surgeon and has successfully treated hundreds of ACL related injuries.

Dr. Dalton is board certified in orthopaedics, specializes in sports medicine and total joint replacements. He also has a master's degree in physics from Emory University, which serves him well in the operating suite, since today's state-of-the-art technology now requires surgeons to think "three dimensionally" during most procedures.

According to Dr. Dalton, ACL tears are primarily involved in "pivoting" sports such as soccer, tennis, basketball … and skiing. "This type of injury generally occurs as the result of an athlete suddenly 'planting and pivoting' his body during a game or a workout. Approximately 50% of the patients who sustain ACL injuries also have meniscal tears, which was the case with Stephanie."

As an avid soccer player and coach, Dr. Dalton has firsthand knowledge of the pitfalls of "planting and pivoting" mishaps on the playing field. "Initially, the injury can be very painful, however, many people can continue to walk, even with torn cartilage and isolated torn ligaments," said Dr. Dalton.

The prevailing treatment protocol is that if the discomfort subsides, then it is reasonable not to operate on a patient who plans to modify their exercise regime with less-strenuous activities such as swimming, yoga and moderate workouts. Nevertheless, if these individuals elect not to undergo ACL reconstruction, Dr. Dalton said patients are informed that they will most likely be prone to more knee-related injuries in the future.

Dr. Dalton stressed that more than 90% of ACL reconstruction patients are capable of resuming their previous level of activity. While some patients may continue to experience chronic pain or instability, most of the time a decrease in activity is due to the patient's choice rather than as a result of the surgery.

According to statistics, there is a much higher incidence of ACL injuries in women. Considering that their frequency of participation per week is roughly equal to male athletes, women sustain a higher prevalence of injury than men. Some estimates indicate women incur ACL injuries three to nine times more often than their male counterparts.

Part of the explanation for the disparity may be that baby boomer women were some of the first to significantly increase participation in professional and amateur sports. Women are still "getting their legs" in the athletic arena, which may explain the higher incidence of injury. While hormonal differences between men and women have long been considered as a possible factor in female ACL tears, a recent study has determined that ACL laxity does not vary with the menstrual cycle, thus dismissing this possible etiology.

Dr. Dalton speculated that differences in the anatomy of the inside of the female knee and significant evidence that women tend to land differently than men may create a predisposition for ACL injuries. "Women are just built differently," he said. "And this is a good thing! Women athletes tend to excel over men in sports such as figure skating, gymnastics and diving." One school of thought suggests that athletes with a lower center of gravity (primarily women), experience greater levels of success in primarily "nonpivoting" sports.

## ACL RECONSTRUCTION SURGERY — AN OUTPATIENT PROCEDURE

ACL surgery is generally performed on an outpatient basis using either "conscious sedation" or general anesthesia. The surgical procedure normally takes one to two hours. Occasionally, the surgeon will recommend an overnight stay, however, the entire process usually takes no longer than five hours. By then, the patient, with the use of crutches, is able to walk and is discharged from the outpatient center.

Today, the ACL reconstruction procedure is performed using an arthroscope, which is inserted into one of two small surgical incisions located in the knee. The arthroscope is equipped with fiberoptics that transmit camera-like images to a television monitor in the operating room. Since the monitor is situated within the surgeon's line of site at all times, he is able to operate three dimensionally: 1) physically on the patient's knee, 2) visually incorporating the use of "real-time" images and 3) envisioning each step of the procedure in his mind.

Once the arthroscope has been inserted and the knee has been prepared, the surgeon takes the replacement tissue (autograft or allograft) and "pulls" it through two tunnels created earlier in the upper and lower leg bones. Dr. Dalton explained the graft acts as a "scaffolding" for new, healthy tissue to grow onto. After the graft is secured using either screws or staples, the incision is closed with stitches or tape. The knee is then bandaged and the patient is moved to the recovery room for approximately three hours. When asked about postoperative results, Dr. Dalton said, "Upwards of 95% of patients will have clinically stable knees following ACL reconstructive surgery."

## THE POSTOPERATIVE EXPERIENCE

Once the patient is awake and alert, she/he is encouraged to walk, with the aid of crutches, as soon as possible. Patients are instructed to walk and bear weight (only partially on the surgically treated leg) by using crutches for the first seven to 10 days after surgery. Patients may stop using crutches when they feel comfortable and are relatively "stable" in their gait. After a month or so, the patient will need to undergo physical therapy for approximately six weeks.

Dr. Dalton recommends that patients return to sports after a three-month hiatus. "It is important for ACL patients to understand the importance of allowing enough time for their body to heal," he said. "New nerves need time to grow onto the graft. These are nerves they use to establish communication with the brain, whether they are walking or playing basketball. Athletic patients are impatient, however, I also explain the need to allow time for proprioception or accurate spatial awareness of your body and its movements."

Interestingly, with the advent of two and three-inch platform shoes as a fashion statement, more women will be visiting orthopaedic surgeons, presenting with sprains and broken ankles. Most of the time, the culprit will be a loss of proprioception due to the platform, which makes it almost impossible for the foot to feel surfaces such as rocks, curbs and gas pedal, as the wearer of the shoe walks. This phenomenon was initially seen and identified during the first platform shoe trend during the 1970s.

## SOMMERS AFTER SURGERY

Sommers' postoperative experience included a great deal of discomfort. "I recall Dr. Dalton recommending I stay overnight, but I was anxious to get home," said the determined mother of three. "On the way home I remember just feeling a lot of pain and anxiously waiting for the pain medication to take affect. My mom was great. She came over and I just paid attention to managing my pain level for the first few days home."

As are many athletic patients, Sommers was impatient to at least return to her normal activities of daily living. "I really didn't have a choice," she said. "I really had no business doing as much as I did as soon as I did, but I have three active boys and a job that needed attention."

Sommers credits her premature activity level to a faster recovery time. She said, "One thing that helped me was the fact that I just resumed most of my normal daily schedule. I didn't allow myself much down time, very little lying around and I feel as though I'm getting stronger faster.

"I knew from the research that I had done that I would heal faster the sooner I was up and moving. I have to say, Dr. Dalton and the West End Orthopaedic Group are 'all over' their patients. Whether it is pain management, recovery issues or just a request for something to drink, the staff are amazing people. Thanks to them, I am getting better every day and I am really another one of their success stories."

## SUMMARY

When asked what he thought was the cornerstone to successful treatment, Dr. Dalton replied, *"With respect to injuries, particularly sports injuries, quality physician preparation is of tremendous importance. Spending the necessary time with patients, thoroughly explaining their options to them so they can make an informed decision, customizing treatment to each patient's needs … all of these are essential to practicing good medicine.*

*"It is critical to listen to the patient. Ninety percent of all diagnoses come from a thorough patient history and physical. Once we understand what the problem is, we can determine the best course of action for the patient. We have so many options today. Orthopaedics has just exploded with options. There are different types of knee replacements including the rotating plastic knee for younger patients, partial knee replacements and hip replacements that offer the option of using either metal, ceramic or plastic. All of these improvements serve to enable us to provide the highest level of patient care possible."*

Quite a human approach from a physician with a physics degree.

*The West End Orthopaedic Clinic is accredited by the American Association of Ambulatory Health Care, the Joint Commission on the Accreditation of Hospitals and is a member of the Medicare certification program. For further information, contact (804) 560-5595 or visit their website at www.weoc.com.*