

## Reconstructing Ruptured ACLs – Donor Grafts Avoid ‘Robbing Peter to Pay Paul’

*by Frank R. Heckl, M.D.*



Anterior cruciate ligament (ACL ) tears are now often reconstructed with graft tissue taken from the patient or are rebuilt with the use of donor grafts. Both achieve stable knee function, but there is less postoperative pain and a quicker recovery period when donor grafts are used.

Lack of ACL stability limits or prevents participation in reactive sports that require sudden stops, starts, jumps, and kicks such as soccer and basketball. ACL reconstruction re-establishes stability and potentially allows return to full activity.

### Allograft vs. Autograft

At New Mexico Orthopaedics, I prefer the use of an allograft — sterilized, frozen tissue from an organ donor — instead of an autograft from the patient because it avoids the “robbing Peter to pay Paul” syndrome that can result in more potential problems for the patient.

In this procedure, the surgeon first removes the torn ACL using an arthroscope, a device that enables the physician to see inside the joint without surgically removing layers of muscle and connective tissue.

After the torn ligament is removed, the allograft is implanted in an outpatient procedure that generally lasts 45 to 60 minutes. Before the graft reaches the operating room, it has been methodically screened for possible infection with HIV, hepatitis, syphilis, and any other infectious agents.

In addition, a donor medical history and behavior risk assessment have been completed, involving discussions with family members and physicians before the tissue is considered for transplantation.

Next, the tissue is thoroughly cleansed with antiseptic agents and treated with gamma irradiation to ensure complete sterility. The allograft is frozen and packaged in a plastic pouch until ready for implantation by the surgeon. In general, the success rate of this type of procedure is more than 90%.<sup>1</sup>

All tissues used in this manner are treated with utmost care, and we are grateful to donor families because of their willingness to make this type of surgery possible. In practically all cases, this procedure is covered by patients’ health insurance.



## Recovery

Within a few days after surgery, the patient begins “closed chain” rehabilitation at our physical therapy clinic. Exercises with the feet firmly planted are used to avoid knee strain. Studies have shown that accelerated rehabilitation with full weight-bearing and full range-of-motion exercises leads to an early resumption of normal daily activities and engagement in sports.<sup>2</sup>

The type of ACL reconstruction surgery performed at New Mexico Orthopaedics generally does not require the use of braces or narcotic painkillers. Instead, we offer a therapy approach to pain management that provides the patient with an ice cooler operated by a small electric motor to relieve postoperative pain in the joint.

With this approach, most patients can return to their normal daily activities within a few weeks and resume sports within a few months.

## References

1. Cluett J, MD. ACL reconstruction. Available at: <http://www.orthopedics.about.com>. Accessed April 25, 2006.
2. ACL reconstruction surgery and rehabilitation. Available at: <http://www.sportsinjurybulletin.com>. Accessed April 25, 2006.