



Shelbourne Knee Center
at Methodist Hospital
Specialized Care for Knee Injuries

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Timing of surgery in acute anterior cruciate ligament tears on the return of quadriceps muscle strength after reconstruction using autogenous patellar tendon graft. Shelbourne KD, Foulk DA: *Am J Sports Med* 23:686-689, 1995

To determine if patients who delayed anterior cruciate ligament reconstruction until a convenient time regained quadriceps muscle strength allowing them to return to sports participation at a different rate than patients who had early surgery for anterior cruciate ligament reconstruction, we studied 143 patients who had the same surgical procedure and postoperative rehabilitation program. Group I delayed surgery at a mean of 40 days after injury; Group II had early surgery at a mean of 11 days after injury. Statistically, Group I patients had significantly better mean quadriceps muscle strength at 2 months ($P = 0.017$) and at 4 months ($P = 0.0055$) postoperatively. At least 65% quadriceps muscle strength was achieved by 40 of the 50 patients (80%) tested in Group I at 2 months, allowing the patients to progress to sport-specific rehabilitation. Only 35 of the 66 patients (53%) tested in Group II were able to progress toward sports activities at 2 months. By 6 months, 29 of the 40 patients (73%) tested in Group I compared with 27 of the 58 patients (47%) tested in Group II had 80% quadriceps muscle strength. This study demonstrates that the return of quadriceps muscle strength was faster for our patients who delayed anterior cruciate ligament reconstruction than for our patients who had early reconstruction. Thus, despite delaying their early reconstructions, Group I was able to progress sooner from the date of surgery to sport-specific rehabilitation.