

Sports life after anterior cruciate ligament reconstruction

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Abstract

Most athletes who undergo anterior cruciate ligament (ACL) reconstruction surgery plan to return to some level of sporting activity. However, rates of return to pre-injury sport are often less than might be expected and many factors influence whether individuals return to sport after this surgery. They include surgical and rehabilitation factors as well as social, psychological and demographic characteristics. The fate of the younger athlete who sustains an ACL injury is a topic that has received recent attention due to accumulating evidence that younger athletes are at considerable risk for not only one, but multiple ACL injuries. Little is known about how to determine when it is safe to return to sport following ACL reconstruction or how to predict whether an athlete will be able to successfully return. The notion that a set of return to sport criteria can be applied to reduce the risk of further injury has become popular with many different criteria proposed. Another risk of returning to sport following ACL reconstruction is that of sustaining injury to the menisci or articular surfaces, which may in turn increase the risk of developing osteoarthritis. Although there is some evidence that ACL reconstruction reduces the risk of osteoarthritis there is stronger evidence that it does little to protect the knee from long term degeneration. Therefore, it should be recognized that return to sport following ACL reconstruction is associated with a risk of further injury and potential development of osteoarthritis.

The goal for most athletes who sustain an anterior cruciate ligament (ACL) injury and elect to undergo reconstruction surgery is to be able to return to their preinjury sport. However, over the past decade it has become apparent that the rates of return are less than ideal and certainly less than what might be expected from standard activity and impairment-based measures.

An initial systematic review with meta-analysis determined the rate of return to any kind of sports participation as well as the rates of return to pre-injury and competitive sports following ACL reconstruction surgery. Results from 48 studies that reported on outcomes in 5770 patients showed that overall, 82% of patients returned to some kind of sport, but only 63% were participating in their pre-injury sport at follow-up. When competitive sport was considered, only 44% were participating at follow-up. These participation rates contrasted with the finding that around 90% of patients were rated normal or nearly normal on impairment-based outcomes such as strength and knee laxity. This review was updated in 2014 to include a total of 69 studies reporting on 7556 patients. In the update, 81% returned to some kind of sport, 65% returned to their pre-injury sport and 55% returned to competitive sport. The overall message was that return to sport rates are less than might be expected by an athlete undergoing ACL reconstruction.