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QUESTION

WHAT CRITERIA DO YOU USE TO RETURN AN ATHLETE TO SPORT?

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Determination of when an athlete may return to sport can be difficult, and there are many issues involved. There are 2 main issues that must be addressed prior to returning an athlete to sport. The first is biologic and relates to whether the graft fixation is stable and the graft itself has been reincorporated. This is typically accomplished at 5 to 6 months.¹ Bone-to-bone healing of autografts usually occurs by 6 to 10 weeks, but longer bone-to-bone healing rates of greater than 6 months have been reported due to slower incorporation in allografts.^{1,2} There is no evidence that this delay in bone-to-bone healing has any detrimental effect on the strength of the allograft reconstruction. Both autografts and allografts undergo a process of ligamentization, and both initially decrease in strength and then subsequently undergo gradual increases in strength. This entire revascularization process typically occurs over a 5-month period. By 6 months, both grafts resemble normally oriented connective tissue, and histological studies have shown no difference in allograft and autograft bone-patellar tendon-bone grafts at 1 year.³

The second issue is the athlete's range of motion, strength, and coordination. This is very subjective and is also influenced by the level at which an athlete wishes to return to play. In general, in order for an athlete to return to sport, they must have regained full and unrestricted motion with strength equal to at least 85% of the contralateral side (Figure 28-1). Returning to sports participation prior to obtaining full and unrestricted range of motion places the affected extremity at a disadvantage mechanically and may increase the risk for further injury. We allow our patients to return to sports at 5 to 6 months post-operatively, provided that they meet the criteria shown in Table 28-1.

In a survey of members of the American Orthopaedic Society of Sports Medicine, most surgeons released their patients to competition at 6 to 7 months.⁴ We believe that the graft is reincorporated and most patients have regained their motion and quadriceps strength by this time.

