

## Return to Play – A Personal Perspective

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**R**eturn to play issues are at the heart of sports medicine and frequently present significant challenges to the sports physician. In their editorial which appears elsewhere in this volume, Best and Broolinson provide an excellent overview of the general issues relating to return to play. Whereas theirs is a North American perspective, the issues are universal and can be as troubling to a middle-aged Australian physician caring for a variety of athletes and teams in an array of settings as they are to those practicing in a highly charged, performance-oriented US college or professional sport environment. Sleepless nights can be the lot of physicians in many parts of the globe!

Concussion has always been a source of controversy. Many of us grew up playing, and then practicing, in the era of mandatory rest periods following a concussion. I remember being concussed one weekend and being prevented from playing the following week despite being totally asymptomatic all week. In my early days as a team doctor in professional football (one of the many Australian varieties!), I remember insisting that a concussed player stand out a week when the coach, the player and I, although not admitting it at the time, knew that the player was fully recovered. During that era interest was growing in neuropsychological testing as a more objective measure of recovery from concussion. Over the past two decades of pen-and-paper, and more recently, computer-based neuropsychological testing, we have come to understand that clinical assessment of recovery parallels the neuropsychological tests.

We have moved away from mandatory recovery periods and now treat each individual case on its merits. We know that when our patients are totally asymptomatic then they are ready to resume light activity and, in the absence of symptoms associated with graduated increases in activity, can return to contact sport. The Vienna and Prague guidelines have given physicians excellent frameworks for decision making.<sup>1,2</sup> I don't lie awake at night over concussion any more!

Muscle strains, in particular hamstring strains, have also been known to cause me disordered sleep! Hamstring strains occur frequently and have a high recurrence rate. The timing of return to play for an athlete with such an injury, professional or otherwise, who is desperate to return to play in the shortest possible time, is a difficult dilemma. It is a matter of striking a balance between rapid return to play and the risk of recurrence. At what stage does that risk become acceptable? There are many factors which may affect that decision. Do we have objective approaches that will guide our decisions?

Previously we relied heavily on isokinetic strength testing with mandatory strength requirements eg, strength level that is 95% of the uninjured leg being a prerequisite for return to sport.<sup>3</sup> More recently some have advocated the use of the appearance on MRI as a major determining factor with the size of the lesion and its location (biceps femoris strains appear to take longer to recover) being the important factors.<sup>4</sup> Others recommend functional field testing which is not without associated risks.<sup>5</sup> Probably some combination of these methods is ideal. Alternatively we could heed the words of a wise old football coach who once said "wait until the hamstring seems 100% - then wait another week!"

The final return to play issue I would like to address is, I believe, one of the most important issues in sports medicine today. It relates not to the timing of return to play, but whether sportspeople after sustaining significant injuries to weightbearing joints should return to play at all.

Prior to the 1970s an athlete sustaining an ACL rupture in a pivoting sport would in all likelihood have retired as there was no appropriate treatment available. ACL reconstruction

has enabled most of those sustaining this injury to resume their sport after an interval of 4–12 months.

Unfortunately there are nearly always other structures damaged when the ACL is torn. The high incidence of meniscal injuries is well documented and since the advent of MRI we have become aware of the frequency of bone bruising as well as the more obvious articular cartilage defects.<sup>6</sup> As a result of these accompanying injuries, degenerative change is an almost inevitable consequence of an ACL rupture. Initially it was hoped that reconstruction of the ACL would reduce the incidence or severity of osteoarthritis (OA) by providing increased stability, but it would appear that reconstruction does not affect the incidence of OA.<sup>7,8</sup> The question that those of us dealing with these injuries must ask is whether our skill in reconstructing the ligament and rehabilitating the athlete to his or her pre-injury state to enable return to play is actually accelerating the development of OA?

Prospective studies need to be performed to answer that question, but in the meantime is it our duty to inform patients with ACL rupture (and this may also be relevant for severe ankle sprains with talar dome damage as well as other similar conditions) of the potential risk of accelerating development of OA? It may be that after receiving that information the athlete, particularly the elite or professional competitor, will still decide to return to play. Those for whom sport is not their livelihood may opt to retire and take up a non weight-bearing form of activity. But it is our responsibility to contextualize their injury, and its potential sequelae, in an understandable and relevant way. At present we encounter too many recently

retired sportspeople bemoaning the fact that they can't jog or kick a football with their children and lining up for joint replacement surgery only to be told that they will have to wait because they are too young! It is an issue that we as a profession must address.

Decisions regarding return-to-play have never been easy. Rigorous, evidence-based criteria for return-to-play decisions were not a feature of the past. They will, hopefully, become a part of our future.

## REFERENCES

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