

# Editorial Commentary: Returning to High-Impact Sports After Hip Arthroscopy: Are We Shooting Ourselves in the Hip?



Philip J. Rosinsky, M.D., Sarah L. Chen, B.A., and Benjamin G. Domb, M.D., Editorial Board

**Abstract:** There is a clear consensus in the literature that professional athletes exhibit high rates of return to sport following hip arthroscopy. As orthopaedic surgeons, we are well equipped to guide athletes back to the field after intra-articular hip injuries. However, returning to high-impact sports and playing through the pain can have implications on long-term health. Literature suggests that former elite athletes are at greater risk for reinjury and developing hip osteoarthritis compared with non-athletes. While it is incumbent upon us as orthopaedic surgeons to inform and advise our patients regarding the long-term consequences of return to sport after a hip injury, we recognize and enthusiastically support the passion that many athletes feel for the game and the vast benefits that they can derive from returning to the sport they love.

See related article on page 1422

Remember Kerri Strug, the gymnast who landed on one leg en route to an Olympic gold medal? The 400 m sprinter, Derek Redmond, who with a torn hamstring, hopped to the finish line, arm in arm with his father, during the 1992 Olympics? These remarkable jaw-dropping moments ignited the Olympic stadium and drew millions of glassy-eyed spectators to their television screens. These superstar athletes, who overcome seemingly impossible obstacles and continue competing in the face of injuries and pain inspire us to bounce back after setbacks. With awe and enthusiasm, we hang their posters on our bedroom walls.

Westmont, Illinois

The authors report the following potential conflicts of interest or sources of funding: B.G.D. receives support from Arthrex, Medacta, Stryker, American Orthopedic Foundation, Adventist Hinsdale Hospital, Amplitude, DJO Global, Kaufman Foundation, Pacira Pharmaceuticals, Breg, and Orthoamerica, has patents with royalties paid to Arthrex, Orthoamerica, and DJO Global and has an ownership interest in Hinsdale Orthopedics Association, Hinsdale Orthopedic Imaging, American Hip Institute, SCD#3, North Shore Surgical Suites, and Munster Specialty Surgery Center. Full ICMJE author disclosure forms are available for this article online, as [supplementary material](#).

© 2019 by the Arthroscopy Association of North America  
0749-8063/1915/\$36.00

<https://doi.org/10.1016/j.arthro.2019.01.007>

In the study “Performance and Return to Sport after Hip Arthroscopy for Femoroacetabular Impingement in Professional Athletes Differs Between Sports,” Jack II, Sochacki, Hirase, Vickery, and Harris<sup>1</sup> show that professional football, basketball, baseball, and hockey players return to sport at high levels following hip arthroscopy. Despite sport-specific differences and varying demands on the hip, there was similar career length and performance in National Basketball Association, Major League Baseball, and National Football League (NFL) players following arthroscopy compared with the respective players with no history of arthroscopy. National Hockey League players exhibited decreased performance and career length following surgery compared with controls. These findings are consistent with existing literature, which supports high return to sport and good performance in professional athletes following hip arthroscopy.<sup>2-6</sup>

In *The Outliers*, Malcolm Gladwell asserts that it takes 10,000 hours of practice to become an expert in any field.<sup>7</sup> Professional athletes possess an unparalleled amount of determination, will, and resilience, which not only place them in the elite few, but also keep them at the highest level year after year. An injury to an athlete can be life shattering, but our ability as surgeons coupled with an athlete’s relentless devotion to the sport can allow professional athletes to return to the game.

There are a number of additional factors that affect an athlete's ability and decision to return to the field following surgery. Sports provide an incredible platform for athletes to form meaningful relationships with their teammates, coaches, and support staff. Just as military personnel bond in the foxhole, elite athletes who push physical boundaries day-in day-out can connect through the self-sacrifice and perseverance embedded in their profession. Indeed, the thrill of a touchdown, a goal, or a home run after hours of blood, sweat, and tears may surpass anything a professional athlete could experience outside the sport. These social factors can motivate a professional athlete to return to sport as soon as possible. The world's top athletes also have an extensive support system, including a fully staffed training and rehabilitation team, ranging from personal physical therapists to home chefs. LeBron James, for example, invests over 1.5 million dollars each year in maintaining his freakish athletic ability.<sup>8</sup>

Despite its heroism, playing through the pain can have detrimental effects on the physical well-being of an athlete. Domb et al.<sup>9</sup> found that in a group of 65 retired NFL players, the average whole-person impairment was 37%, suggesting the average NFL player had more than 1/3 bodily damage, 3 years after retirement. Cottler et al.<sup>10</sup> studied opioid use among retired NFL players. In their patient population, 7% chronically used opioids and 93% reported pain, with 81% reporting moderate to severe pain. Wiggins et al.<sup>11</sup> reported that athletes under the age of 25 with a history of an anterior cruciate ligament injury who returned to sports were 30 to 40 times more likely to undergo a future anterior cruciate ligament injury compared with uninjured athletes. In addition, studies show that elite-level male athletes are at greater risk for developing hip osteoarthritis and undergoing a total hip arthroplasty compared with non-athletes.<sup>12,13</sup> The risk of developing hip osteoarthritis is 2 to 9 times greater in male athletes than in non-athletes,<sup>12</sup> and the risk of a total hip arthroplasty is 2.5 times greater in former male athletes than in non-athletes.<sup>11</sup> Furthermore, athletes who return to high-impact sports after hip arthroscopy may need a hip arthroplasty at a young age. In Byrd et al.'s<sup>14</sup> work, 5 of 15 (33%) nonprofessional athletes underwent a subsequent total hip replacement within 8 years of their initial hip arthroscopy. The mean age of the group at the time of the initial hip arthroscopy was 31.<sup>14</sup>

As physicians who treat active individuals, we face the dilemma of encouraging athletes to chase their passions and achieve the greatest physical feats possible while simultaneously recognizing the potentially deleterious impact of continuing high-impact sports on long-term health. Some medical conditions, such as certain cardiomyopathies, are clear contraindications for sports participation. In contrast, the

implications for a young hip in the initial stages of cartilage damage are not as straightforward. We counsel caution regarding return to high-impact sports for recreational athletes undergoing hip arthroscopy. Even when preparing professional athletes for hip arthroscopy, we are careful to explain the potential long-term implications of returning to sport after an intra-articular hip injury.

Yet despite the injuries incurred and the accumulated bodily ailments, we bet most professional athletes would play through the pain and choose their sport all over again, even while knowing they will have aching joints long after the buzzer goes off for the last time. Underneath an NFL player's clean-cut jersey and fancy equipment is an eager 8-year-old boy, who is smiling ear-to-ear, as he tackles his father on the backyard lawn. Professional athletes' undying pure love for their sport drives them to return to the field and persevere, regardless of the pain. Nothing can compare to the adrenaline rush of accomplishing a feat others deemed impossible: shooting a game-winning buzzer-beater 3-pointer or hitting a walk-off home run. As fans, we get chills witnessing players soar by the bench, high-fiving their teammates after a marvelous goal, and we cannot help but rally behind these extraordinary athletes. We urge the orthopaedic community to warn athletes of the potential long-term detrimental effects of returning to sport following hip arthroscopy; however, we are the first to stand behind our athletes and cheer from the front row as they return to play after overcoming injury and pursue their greatest passion. After all, who doesn't love a comeback story?

## References

1. Jack RA II, Sochacki KR, Hirase T, Vickery JW, Harris J. Performance and return to sport after hip arthroscopy for femoroacetabular impingement in professional athletes differs between sports. *Arthroscopy* 2019;35:1422-1428.
2. Schallmo MS, Fitzpatrick TH, Yancey HB, Marquez-Lara A, Luo TD, Stubbs AJ. Return-to-play and performance outcomes of professional athletes in North America after hip arthroscopy from 1999 to 2016. *Am J Sports Med* 2018;46:1959-1969.
3. Frangiamore SJ, Mannava S, Briggs KK, McNamara S, Philippon MJ. Career length and performance among professional baseball players returning to play after hip arthroscopy. *Am J Sports Med* 2018;46:2588-2593.
4. Menge TJ, Bhatia S, McNamara SC, Briggs KK, Philippon MJ. Femoroacetabular impingement in professional football players: Return to play and predictors of career length after hip arthroscopy. *Am J Sports Med* 2017;45:1740-1744.
5. Memon M, Kay J, Hache P, et al. Athletes experience a high rate of return to sport following hip arthroscopy. *Knee Surg Sports Traumatol Arthrosc* April 2018. doi:10.1007/s00167-018-4929-z.

6. Menge TJ, Briggs KK, Philippon MJ. Predictors of length of career after hip arthroscopy for femoroacetabular impingement in professional hockey players. *Am J Sports Med* 2016;44:2286-2291.
7. Gladwell M. *Outliers*. Little, Brown and Company, 2008.
8. Scott D. LeBron James takes immaculate care of his body, and the NBA world is in awe of it, <https://www.businessinsider.com/lebron-james-body-care-workouts-diet-insane-2017-10>. Accessed June 3, 2018.
9. Domb BG, Carter C, Finch NA, Hammarstedt JE, Dunne KF, Stake CE. Whole-person impairment in younger retired NFL players: The orthopaedic toll of a professional football career. *Orthop J Sports Med* 2014;2:2325967114534824.
10. Cottler LB, Abdallah AB, Cummings SM, Barr J, Banks R, Forchheimer R. Injury, pain, and prescription opioid use among former National Football League (NFL) players. *Drug Alcohol Depend* 2011;116:188-194.
11. Wiggins AJ, Grandhi RK, Schneider DK, Stanfield D, Webster KE, Myer GD. Risk of secondary injury in younger athletes after anterior cruciate ligament reconstruction: A systematic review and meta-analysis. *Am J Sports Med* 2016;44:1861-1876.
12. Tveit M, Rosengren BE, Nilsson J-Å, Karlsson MK. Former male elite athletes have a higher prevalence of osteoarthritis and arthroplasty in the hip and knee than expected. *Am J Sports Med* 2012;40:527-533.
13. Vigdorchik JM, Nepple JJ, Eftekhary N, Leunig M, Clohisy JC. What is the association of elite sporting activities with the development of hip osteoarthritis? *Am J Sports Med* 2017;45:961-964.
14. Byrd JWT, Jones KS. Hip arthroscopy in athletes 10-year follow-up. *Am J Sports Med* 2009;37:2140-2143.