# Midterm Outcomes and Return to Sport of Staged Bilateral Hip Arthroscopy in High-Level Athletes


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# Disclosures

I (and/or my co-authors) have something to disclose.

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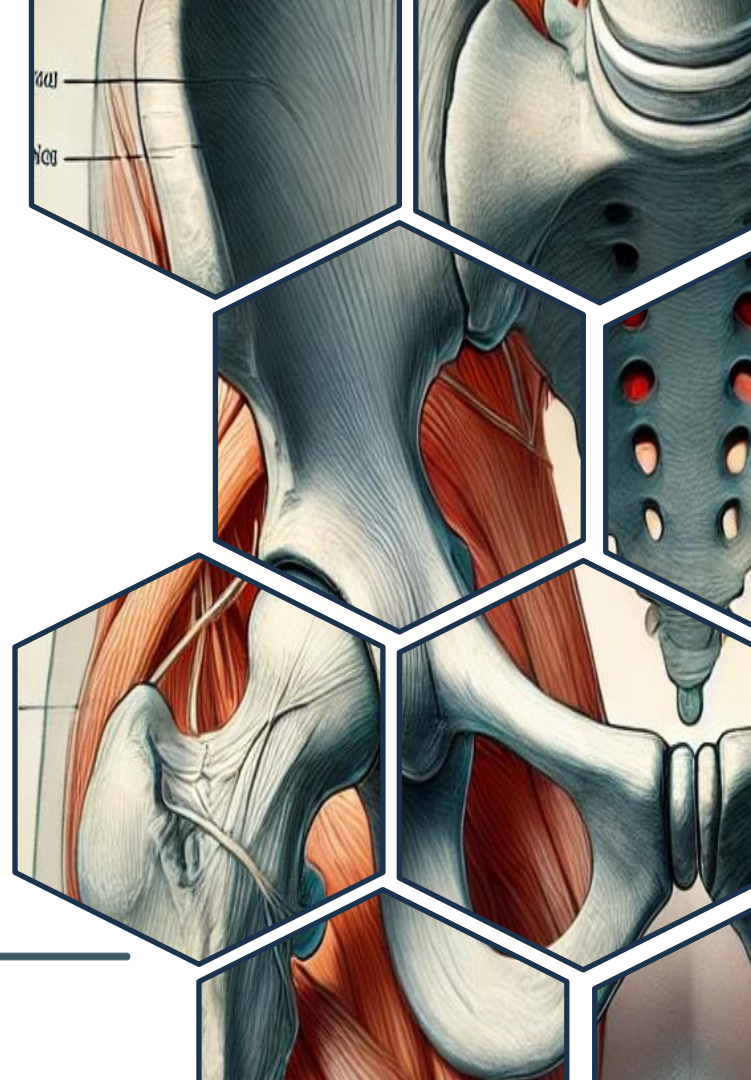
# Background

- **Athletic Demands**: High-level athletes place significant stress on both hips.
- **High RTS Rates After Hip Arthroscopy**
- **Limited Data for Bilateral Cases**:



# Purpose

evaluate mid-term PROs and RTS rates of staged bilateral primary hip arthroscopy in high-level athletes with minimum 5-year follow-up

# Methods

Retrospective review of hip arthroscopy cases (July 2009 – Jan 2019)

high-level athletes with staged bilateral hip arthroscopy, labral treatment, and ≥5-year follow-up for at least one PRO

Excluded: prior hip surgery, dysplasia, Tönnis grade ≥1, specific hip pathologies, or worker's compensation

# Methods

Matched to unilateral hip arthroscopy athletes using propensity score

BMI, age, sex, Tönnis grade, follow-up time, labral/capsular treatment, pre-op competition level, Outerbridge score

PROs: mHHS, NAHS, HOS-SSS, VAS, iHOT-12

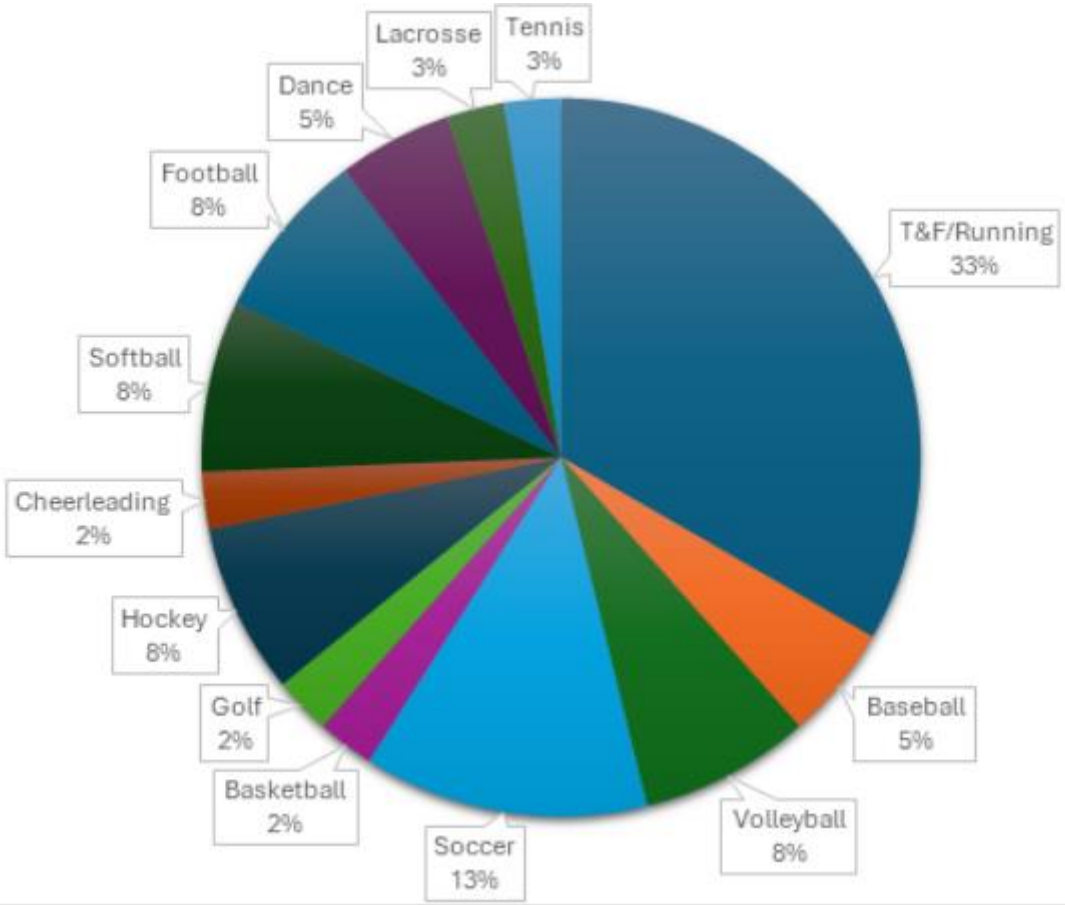
RTS: defined as return to any level of sport after second surgery

MCID, PASS, SCB calculated using standard thresholds

# Results

Tables and Figures

| | Bilateral (n=58) | | Unilateral (n=58) | P-value |
|---|---|---|---|---|
| | First Side | Second Side | | |
| **Sex** | | | | |
| **Female** | 29 (63.0%) | | 32 (69.6%) | 0.460 |
| **Age at surgery** | 17.9 ± 3.3 (13.2 – 32.8) | 18.5 ± 3.4 (14.6 – 33.0) | 18.0 ± 2.4 (14.4 – 26.4) | 0.479 |
| **Body mass index** | 23.0 ± 4.5 (16.3 – 37.9) | 23.3 ± 4.8 (16.3 – 42.9) | 23.5 ± 5.1 (17.8 – 42.8) | 0.947 |
| **Follow-up time, mo** | 87.8 ± 28.9 (37.3 – 131.8) | 90.1 ± 28.8 (60.0 – 130.2) | 91.4 ± 30.9 (12.3 – 136.7) | 0.903 |
| Preoperative Competition Level | | | | 0.971 |
| **High School** | 34 (73.9%) | 33 (71.7%) | 31 (67.4%) | |
| **College** | 11 (23.9%) | 12 (26.1%) | 14 (30.4%) | |
| **Professional** | 1 (2.2%) | 1 (2.2%) | 1 (2.2%) | |


Lacrosse 3%
Tennis 3%
Dance 5%
Football 8%
T&F/Running 33%
Softball 8%
Cheerleading 2%
Hockey 8%
Golf 2%
Basketball 2%
Baseball 5%
Volleyball 8%
Soccer 13%

# Results

| | Bilateral | | Unilateral | P Value |
|---|---|---|---|---|
| | First Side | Second Side | | |
| **HOS-SSS** | | | | |
| **Preoperative** | 49.2 ± 17.8 (13.9 – 83) | 45.3 ± 24.4 (2.8 – 94) | 41.8 ± 19.2 (0 – 92) | 0.260 |
| **Postoperative** | 85.0 ± 21.3 (2.8 – 100) | 83.3 ± 20.0 (16.7 – 100) | 88.4 ± 20.5 (0 – 100) | 0.184 |
| **P Value** | **<0.001** | **<0.001** | **<0.001** | |
| **Δ** | 35.4 ± 24.8 | 37.6 ± 29.3 | 46.8 ± 25.7 | 0.081 |
| **mHHS** | | | | |
| **Preoperative** | 64.8 ± 12.5 (46 – 96) | 70.8 ± 15.2 (45 – 97) | 66.0 ± 14.4 (19 – 85) | 0.159 |
| **Postoperative** | 89.9 ± 14.4 (28 – 100) | 91.8 ± 11.0 (48 – 100) | 92.7 ± 14.4 (30 – 100) | 0.392 |
| **P Value** | **<0.001** | **<0.001** | **<0.001** | |
| **Δ** | 24.7 ± 17.8 | 20.9 ± 15.9 | 26.4 ± 18.6 | 0.307 |
| **NAHS** | | | | |
| **Preoperative** | 64.7 ± 17.3 (23.8 – 93.8) | 69.3 ± 18.3 (26.3 – 96.3) | 65.2 ± 17.3 (23 – 91.3) | 0.399 |
| **Postoperative** | 88.1 ± 16.1 (17.5 – 100) | 90.6 ± 11.3 (66.3 – 100) | 92.0 ± 14.4 (20 – 100) | 0.664 |
| **P Value** | **<0.001** | **<0.001** | **<0.001** | |
| **Δ** | 23.0 ± 21.2 | 21.3 ± 18.1 | 27.1 ± 18.9 | 0.311 |

| | Bilateral | | Unilateral | P Value |
|---|---|---|---|---|
| | First Side | Second Side | | |
| **VAS** | | | | |
| **Preoperative** | 5.5 ± 2.4 (0 – 9) | 4.2 ± 2.6 (0 – 9) | 5.6 ± 2.2 (1.1 – 10) | **0.012** |
| **Postoperative** | 1.8 ± 2.3 (0 – 10) | 1.6 ± 1.8 (0 – 7.1) | 1.7 ± 2.2 (0 – 10) | 0.960 |
| **P Value** | **<0.001** | **<0.001** | **<0.001** | |
| **Δ** | -3.7 ± 3.2 | -2.6 ± 2.9 | -3.9 ± 3.3 | 0.108 |
| **iHOT-12** | | | | |
| **Postoperative** | 82.7 ± 21.7 (6.3 – 100) | 84.5 ± 17.2 (42 – 100) | 85.4 ± 20.7 (6.7 – 100) | 0.593 |
| **Patient Satisfaction** | 8.7 ± 1.6 (4 – 10) | 8.4 ± 2.1 (0 – 10) | 8.5 ± 1.9 (0 – 10) | 0.758 |

# Results

| | *First Side* | *Second Side* | *Unilateral* | *P Value* |
|---|---|---|---|---|
| ***MCID*** | | | | |
| *mHHS (6.3, 7.6, 7.2)* | 38 (84.4%) | 36 (78.3%) | 35 (83.3%) | .716 |
| *NAHS (8.6, 9.2, 8.7)* | 35 (77.8%) | 34 (73.9%) | 37 (88.1%) | .236 |
| *HOS-SSS (8.9, 12.2, 9.6)* | 37 (88.1%) | 37 (84.1%) | 35 (87.5%) | .818 |
| *VAS (1.2, 1.3, 1.1)* | 37 (82.2%) | 32 (69.6%) | 31 (73.8%) | .365 |
| ***PASS*** | | | | |
| *mHHS (83.6)* | 33 (73.3%) | 36 (78.3%) | 36 (85.7%) | .364 |
| *HOS-SSS (80.9)* | 29 (64.4%) | 29 (64.4%) | 32 (78.0%) | .584 |
| ***SCB*** | | | | |
| *mHHS (94.4)* | 26 (57.8%) | 28 (60.9%) | 32 (76.2%) | .160 |

# RTS

- Both bilateral and unilateral athletes returned at a high rate (**88.6% and 87.2%,** respectively)

- **75.9%** of bilateral athletes and **85.7%** of unilateral athletes were still participating in their sport at minimum 5-year follow-up

# Conclusion

High-level athletes who underwent bilateral hip arthroscopy showed:

**Favorable** return-to-sport (RTS) rates

**Sustained** sports participation

**Improved** patient-reported outcomes (PROs) at ≥5 years follow-up

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