

# **Outcomes and Performance Following Posteromedial Elbow Debridement in Major League Baseball Players**

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# Disclosures

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- The authors have no financial disclosures



# Background

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- **Overhead athletes are susceptible to elbow valgus extension overload syndrome and development of pathologic changes in the posteromedial elbow**
- **Previous concern has been expressed regarding destabilization of the valgus restraint provided by posteromedial bony overgrowth**
- **Though arthroscopic debridement/osteophyte resection is frequently performed, few studies have analyzed the outcomes of this procedure in professional level athletes**

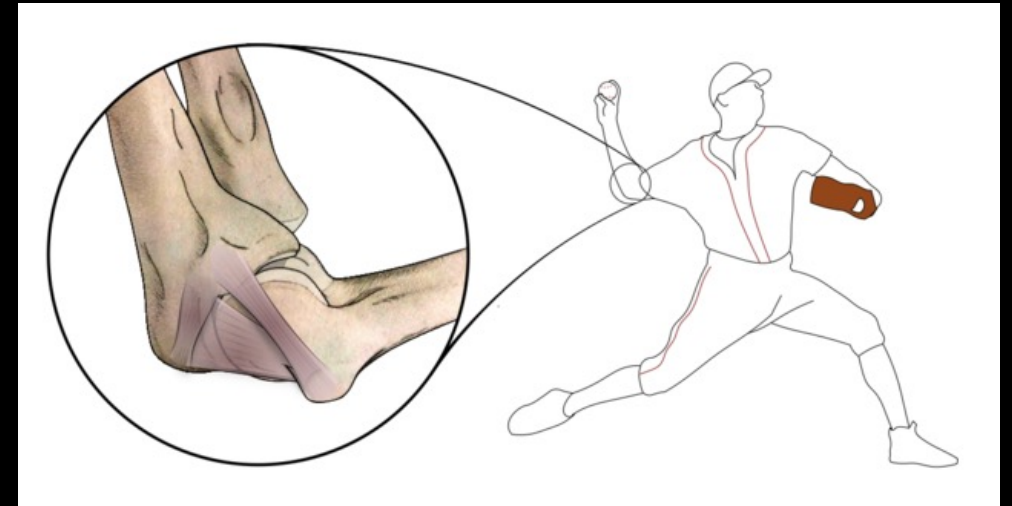


# Hypothesis

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**MLB Athletes following posteromedial elbow debridement will...**

- 1. Exhibit a higher rate of UCL reconstruction than baseline incidence**
- 2. Decline in pitching performance**



# Methods

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- **Using publicly accessible websites, MLB athletes undergoing posteromedial elbow debridement from 2008 to 2021 were identified.**
- **Demographic data collected**
  - ✓ procedure details
  - ✓ return to play (RTP) information
  - ✓ return to the disabled/injured list
  - ✓ subsequent UCL reconstruction
- **Pitching Metrics Analyzed**
  - ✓ Earned Runs Average (ERA)
  - ✓ Walks Plus Hits Per Inning (WHIP)
  - ✓ Innings Pitched
  - ✓ Fastball Velocity



# Methods

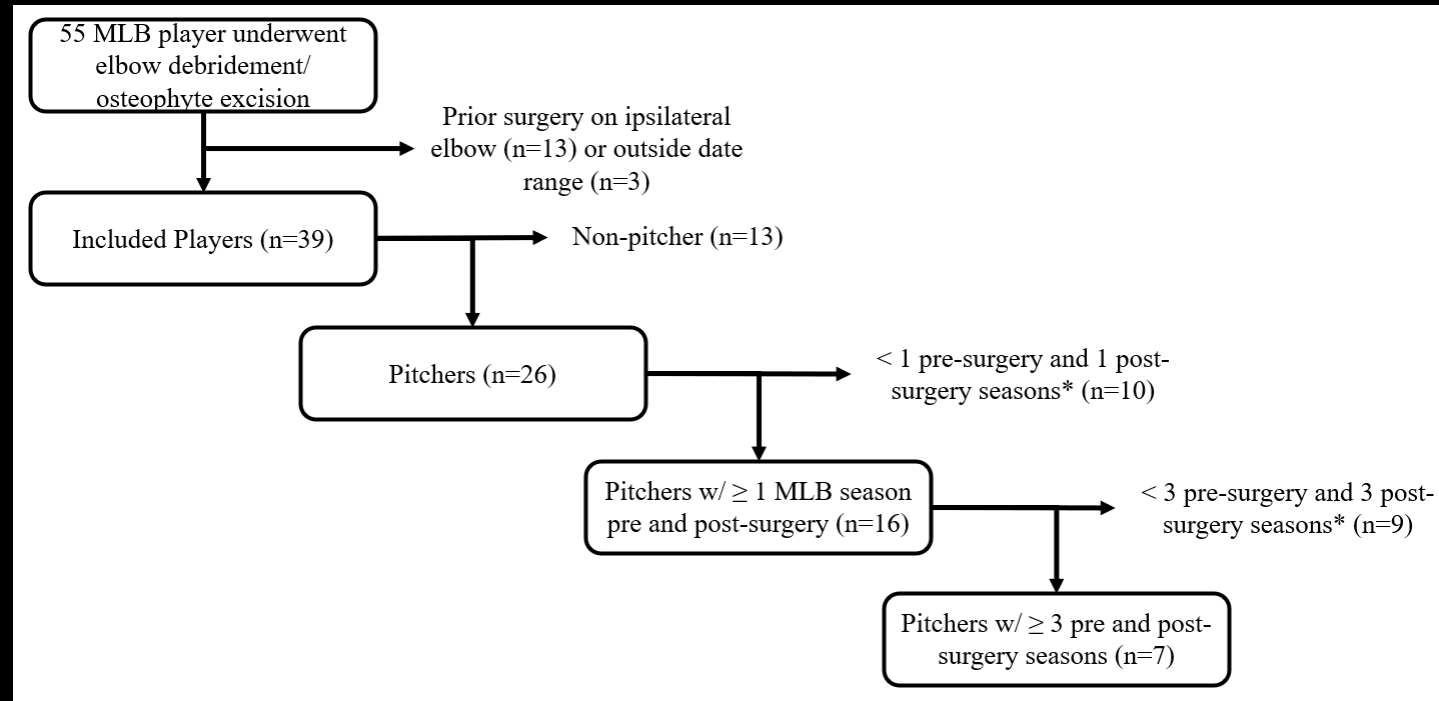
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- **Inclusion Criteria**
  - ✓ **MLB athlete**
  - ✓ **Posteromedial arthroscopic elbow debridement between 2008-2021**
  - ✓ **If pitcher... Available pitching data at least one season before injury and one season after injury**
- **Exclusion Criteria**
  - ✓ **Prior history of ipsilateral elbow surgery**
  - ✓ **Minor league athletes**



# Results - Demographics

- **39 players w/ mean age of 28.1**
- **RTP**
  - ✓ **All players: 82.1%**
  - ✓ **Pitchers: 76.9%**
- **Return to DL/IL**
  - ✓ **All players: 28.2%**
  - ✓ **Pitchers: 38.5%**
- **Subsequent UCLR**
  - ✓ **All players: 12.8%**
  - ✓ **Pitchers: 19.2%**



# Results – Pitching Performance

Table 2. Pitching Performance for **one** season prior to surgery and **one** season after RTP

	Pitchers (n=16)		
	Preoperative	Postoperative	P Value
<b>Earned Runs Average (ERA)</b>	4.29	4.16	0.76
<b>Walks Plus Hits Per Innings Pitched (WHIP)</b>	1.36	1.39	0.61
<b>Innings Pitched</b>	85.58	76.97	0.31
<b>Fastball Velocity</b>	93.73	93.47	0.26

Table 3. Pitching Performance for **three** seasons prior to surgery and **three** seasons after RTP

	Pitchers (n=7)		
	Preoperative	Postoperative	P Value
<b>Earned Runs Average (ERA)</b>	3.50	3.57	0.85
<b>Walks Plus Hits Per Innings pitched (WHIP)</b>	1.21	1.20	0.83
<b>Innings Pitched</b>	89.13	78.42	0.65
<b>Fastball Velocity</b>	94.44	92.84	0.02





# Conclusions

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- **First Study analyzing Posteromedial Elbow Debridement outcomes in MLB Athletes**
- **Hypothesis refuted**
  - ✓ **Rate of UCL reconstruction following posteromedial elbow debridement was 19.2% among pitching cohort**
    - **Compared to baseline rate of 25% among MLB pitchers**
  - ✓ **No significant difference found between pre-op and post-op pitching performance**
    - **There was a small (insignificant) decline in pitching performance over the three-year period**

