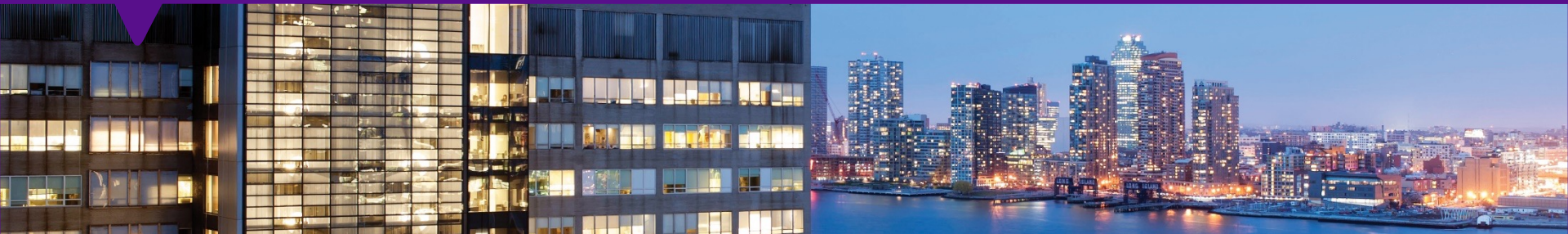


# **Nonsteroidal Anti-Inflammatories Do Not Influence Return to Sports After Arthroscopic Labral Repair**

Zachary I. Li, BA; Sharif Garra, MD; Nathan Huebschmann, BA; Jordan Eskenazi, BS; Jairo Triana, BS;  
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*Division of Sports Medicine, Department of Orthopedic Surgery, NYU Langone Health*



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

All relevant financial relationships have been mitigated.

Disclosure information is available via:

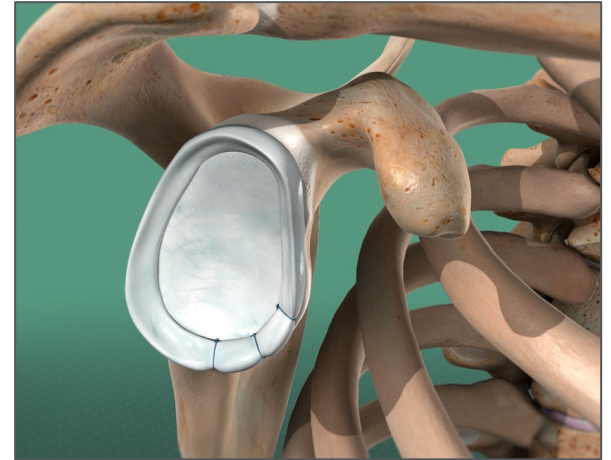
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# Background

1. Arthroscopic labral repair has become an effective procedure for patients with shoulder pain and instability.
2. Important to continue to **reduce reliance on opioids** in postoperative pain control protocols.
3. NSAIDs are promising for multi-modal protocols, though some surgeons remain hesitant.
  - Interference with **cyclooxygenase-mediated inflammatory cascade** and potentially impede healing (use >3 weeks, or selective COX-2 inhibitors)



# Background

- Our group previously performed an RCT investigating opioids alone vs. +NSAIDs among 80 patients undergoing Bankart repair
  - **Significantly less opioid-use** during **1st week post-op**, without differences in pain or satisfaction

ORIGINAL ARTICLE | VOLUME 3, ISSUE 1, E15-E22, FEBRUARY 2021

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## Opioid Use Is Reduced in Patients Treated with NSAIDs After Arthroscopic Bankart Repair: A Randomized Controlled Study

[Kamali A. Thompson, B.S., M.B.A.](#)   • [David Klein, D.O.](#) • [Michael J. Alaia, M.D.](#) • [Eric J. Strauss, M.D.](#) • [Laith M. Jazrawi, M.D.](#) • [Kirk A. Campbell, M.D.](#)

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# Objective

- To compare (1) **patient-reported outcomes**, (2) **return to sport & work**, and (3) **rates of recurrent instability** following arthroscopic shoulder labral repair in patients who received NSAIDs postoperatively versus those who did not.

# Hypothesis

- The hypothesis was that there would be **no significant differences** in these outcomes among patients who did and did not receive NSAIDs as part of their postoperative pain regimen.

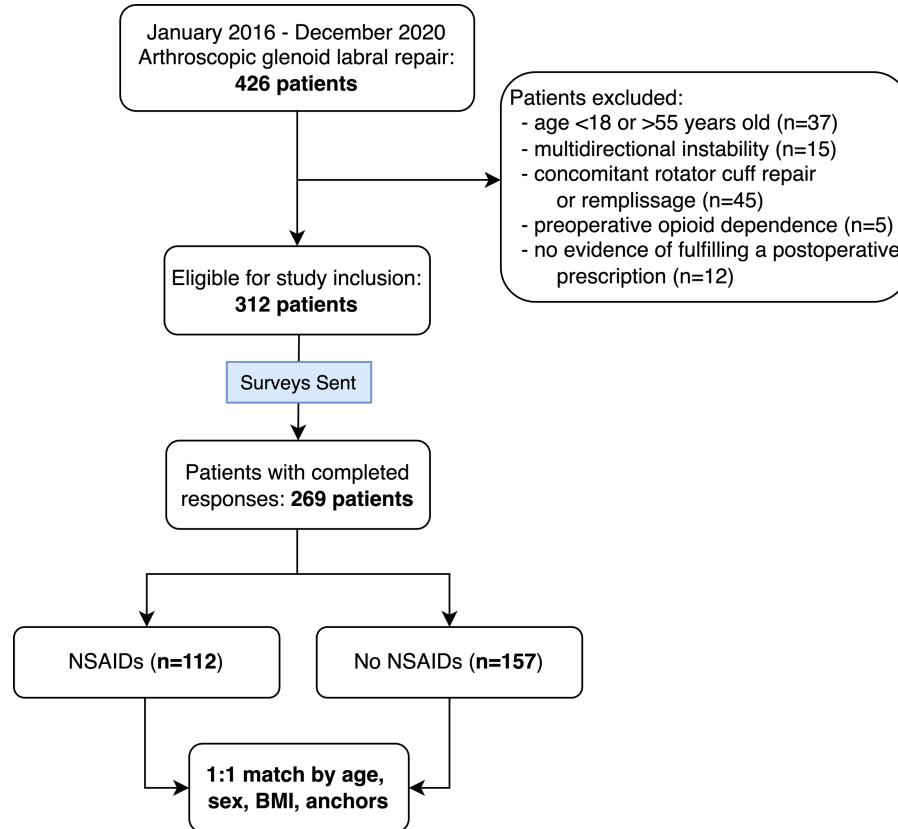
# Methods

- Single-center, retrospective cohort study
- Inclusion criteria
  - Patients 18-55 years old who underwent primary arthroscopic labral repair from 2016 to 2020
  - Minimum 2-year follow-up
- Exclusion criteria
  - Multidirectional instability
  - Concomitant rotator cuff repair or remplissage
  - Pre-op opioid dependence
  - No evidence of fulfilling a post-op prescription in the electronic medical record

## Methods (cont.)

- Matching
  - Propensity matched 1:1 based on **age**, **sex**, **BMI**, and **# of suture anchors**
- Outcomes
  - **Return to sport & work** surveys
  - **VAS pain**
  - **Satisfaction**
  - American Shoulder and Elbow Surgeons Shoulder Score (**ASES**)
  - Simple Shoulder Test (**SST**)
  - Single Assessment Numeric Evaluation (**SANE**) rating
- Statistical analysis
  - T-tests, Fisher's exact tests, multivariable logistic regression

# Patient Flow





# Results - Demographics

Variable	NSAIDs (n=112)	Non-NSAIDs (n=112)	p-value
Age (years)	31.9 ± 10.1	32.5 ± 9.4	0.650
Sex, n (% male)	91 (81.3%)	90 (80.4%)	0.856
BMI	26.0 ± 4.9	26.0 ± 4.2	0.960
Laterality, n (% right)	52 (46.4%)	64 (57.1%)	0.109
No. anchors	3.5 ± 1.1	3.5 ± 1.4	0.392
Labral tear type, n (%)			0.400
SLAP	17 (15.2%)	16 (14.3%)	-
Bankart	73 (65.2%)	75 (67.0%)	-
Posterior	13 (11.6%)	7 (6.3%)	-
Combination	9 (8.0%)	14 (12.5%)	-

# Results – Clinical Outcomes

Patient-Reported Outcomes & Recurrent Instability			
	NSAIDs (n=112)	Non-NSAIDs (n=112)	p-value
VAS Pain	1.2 ± 1.9	1.0 ± 1.9	0.527
Satisfaction	89.7 ± 21.0	88.1 ± 23.4	0.597
ASES	90.8 ± 14.7	89.9 ± 15.9	0.824
Simple Shoulder Test	91.9 ± 16.4	90.6 ± 16.5	0.646
SANE score	83.8 ± 20.7	85.3 ± 17.5	0.550
Recurrent instability, % (n)	6 (5.4%)	9 (8.0%)	0.594
Revision surgery	3 (2.7%)	1 (0.9%)	0.622

# Results – Clinical Outcomes

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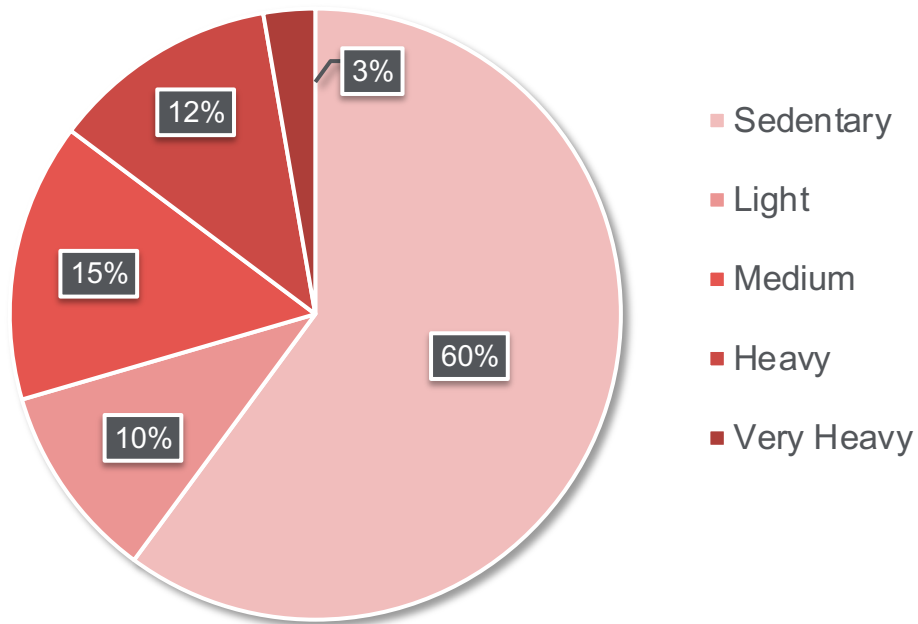
# Results – Return to Sport

Comparison of Rate and Timing of Return to Sport			
Sport Level	NSAIDs (n=91)	Non-NSAIDs (n=99)	p-value
Return to Any Level	76 (83.5%)	77 (77.8%)	0.318
<i>Time to return (weeks)</i>	30.2 ± 20.0	34.7 ± 20.7	0.177
Same or Higher Pre-Injury Level	54 (59.3%)	61 (61.6%)	0.177
<i>Time to return (weeks)</i>	32.9 ± 18.8	31.0 ± 20.1	0.482
No Return	15 (16.5%)	22 (22.2%)	0.318



# Results – Return to Work

Work Physical Activity Level Classification



# Results – Return to Work

Comparison of Rate and Timing of Return to Work			
Work Level	NSAIDs (n=90)	Non-NSAIDs (n=85)	p-value
Return to Any Level	84 (93.3%)	81 (95.3%)	0.617
<i>Time to return (weeks)</i>	10.0 ± 15.9	7.0 ± 10.0	0.148
Same or Higher Pre-Injury Level	78 (86.7%)	71 (83.5%)	0.560
<i>Time to return (weeks)</i>	6.7 ± 10.1	8.1 ± 14.6	0.558
No Return	6 (6.7%)	4 (4.7%)	0.244



## Important Findings

- High rate of RTS (~80%), moderate return to pre-injury level (~60%), without sig. differences between groups
- Return to work >93%
- **Timing** of return to activities was similar between groups
- Similar rates of recurrent instability (5.4% vs 8%) and revision surgery (2.7% vs 1%) at mean 3.4-year follow-up

# Limitations

- Retrospective, non-randomized
- Multiple patterns of labral tears (Bankart > SLAP > Posterior)
- Difficult to confirm whether medications were taken by all patients as prescribed
  - Meticulous chart review; patients without evidence of fulfilling postoperative prescriptions were excluded



# Conclusions

After arthroscopic labral repair, patients taking NSAIDs had similar patient-reported outcomes, return to pre-injury activities, and rates of recurrent instability.

*Additional evidence that...*

1. NSAIDs **do not detrimentally affect short-term clinical outcomes** and **revision rates**.
2. NSAIDs **do not limit and/or delay a return** to preoperative activities.



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