



# Effect of Patient History Factors on Meniscus Repair Outcomes

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# Disclosures

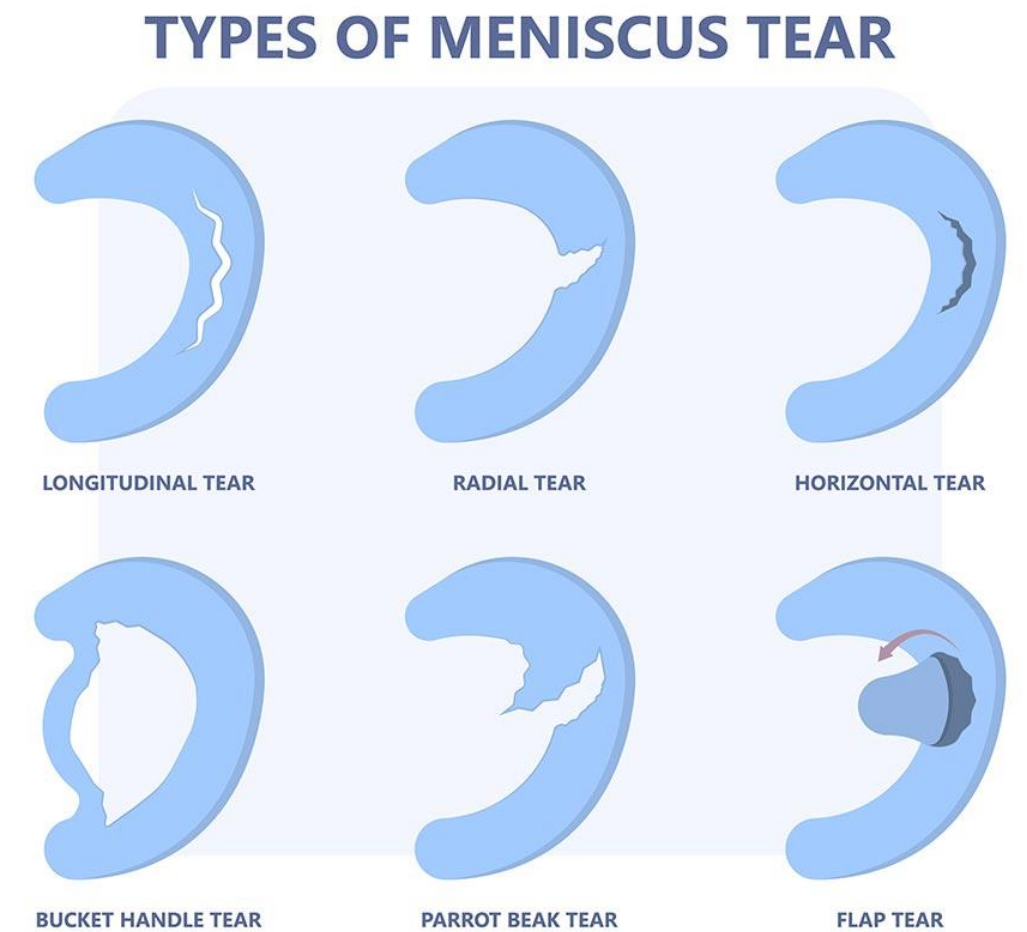
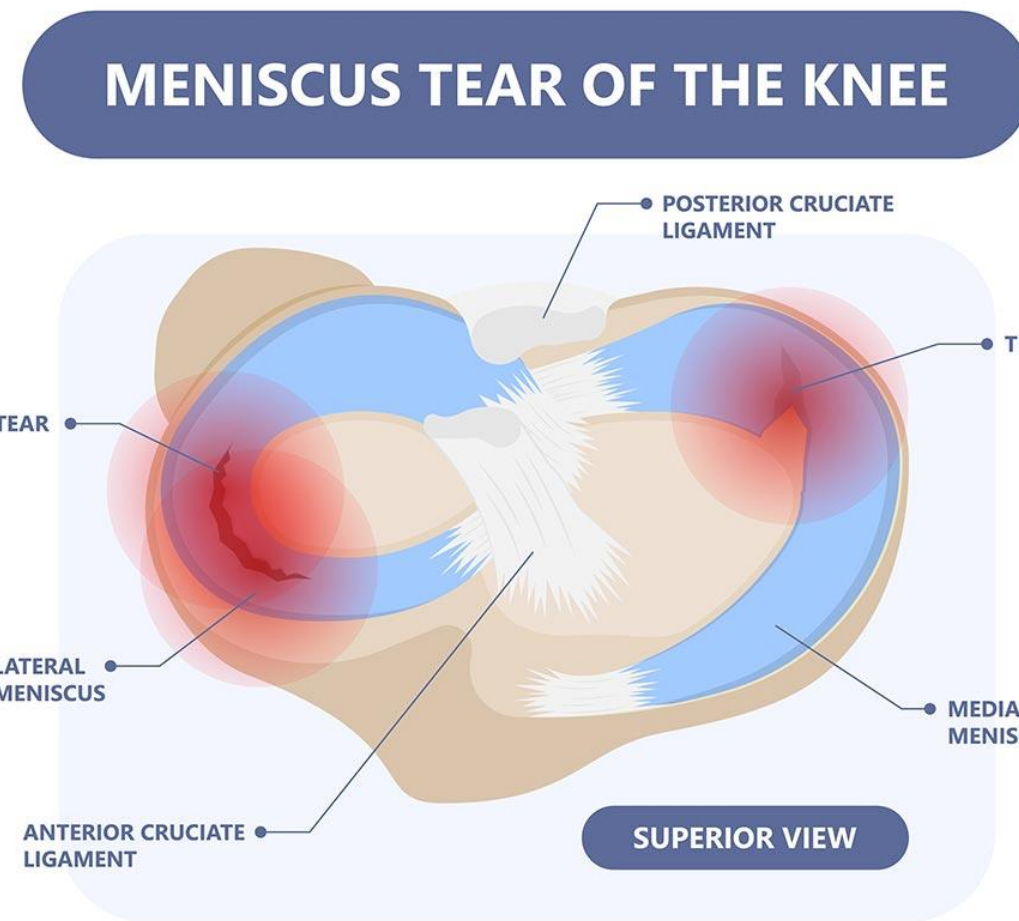
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# INTRODUCTION

- Meniscal injuries are one of the most common knee injuries: 10% to 20% of all orthopaedic surgeries and 80,000-160,000 patients annually<sup>[3,10]</sup>
- Multiple factors affect surgical outcomes. These include:
  - Location of the tear <sup>[21]</sup>
  - Amount of time between injury and surgery<sup>[21]</sup>
  - The type of rehabilitation following surgery <sup>[21]</sup>
  - Smoking <sup>[20]</sup>



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# PURPOSE

- To identify demographic and socioeconomic factors that may influence patient outcomes after meniscus repair.
- **Hypothesis: income can impact meniscus repair outcomes.**



# METHODS

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- A retrospective chart review with IRB approval
- Inclusion Criteria:
  - Primary meniscus repair between 2009 and 2018
  - Lived in the Columbus metropolitan area
  - International Knee Documentation Committee (IKDC) score and Knee Injury and Osteoarthritis Outcome Score (KOOS) available

# METHODS

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- Data collected included:
  - Patient demographics
  - Time to return to normal function
  - Re-injury rate
  - Surgery failure rates
  - KOOS and IKDC scores
- An independent t-test was used to determine the difference in scores between the two groups.

# RESULTS

<b>Table 1 Patient Demographics</b>		
	<b>High Income Zip Codes</b>	<b>Low Income Zip Codes</b>
<b>Females (%)</b>	52.3%	56.5%
<b>Males (%)</b>	47.7%	43.5%
<b>African American (%)</b>	4.5%	39.1%
<b>White (%)</b>	84.1%	52.2%
<b>Asian (%)</b>	6.8%	4.3%
<b>Other (%)</b>	2.3%	4.3%

# RESULTS

<b>Table 2 Comparison of Average KOOS and IKDC Scores Between High and Low Income Zip Codes</b>			
<b>Mean Scores</b>	<b>High Income Zip Codes</b>	<b>Low Income Zip Codes</b>	<b>P - Value</b>
<b>KOOS Pain</b>	92.3 (SD 9.0)	84.2 (SD 17.0)	0.020
<b>KOOS Symptoms</b>	87.6 (SD 15.5)	77.0 (SD 22.2)	0.025
<b>KOOS ADL</b>	96.4 (SD 6.9)	88.4 (SD 16.8)	0.019
<b>KOOS Sport / Rec Function</b>	82.7 (SD 21.7)	65.4 (SD 34.0)	0.017
<b>KOOS Knee-Related QOL</b>	73.2 (SD 20.0)	60.1 (SD 28.9)	0.031
<b>Subjective IKDC</b>	83.8 (SD 14.5)	71.1 (SD 23.9)	0.013

ADL: Activities of Daily Living, IKDC : International Knee Documentation Committee, KOOS: Knee Injury and Osteoarthritis Outcome Score, SD: Standard Deviation, QOL: Quality of Life



# RESULTS

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- 67 patients met inclusion criteria
  - 23 patients from low-income zip codes
  - 44 patients from high income zip codes
- Patients from low - income compared high income zip codes
  - Significantly lower KOOS and IKDC scores( $P < 0.05$ )
- Socioeconomic factors limited patient access to care in the postoperative from the poorer zip codes (21.74%).
  - 40% reported lack of access to physical therapy (insurance coverage)
  - 60 % reported due to lack of transportation, inability to take time off work, and personal or family problems.

# DISCUSSION

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- Patients from lower socioeconomic backgrounds may have significant barriers in their access to care and recovery.
- Common Barriers Identified leading to poor functional outcomes
  - Physical therapy was denied or limited sessions
  - Inability to take time off work to recover and/or attend physical therapy.
- Poor surgical outcomes in African Americans compared to Caucasians have been documented [15].

# CONCLUSION

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- **In conclusion, socioeconomic status may significantly impact outcomes following meniscus repair.**
- Further work with a larger dataset would provide more insight into this important question and allow for controlling of potential confounding variables.
- Future directions of study include patient surveys to gauge potential barriers to recovery in the pre or perioperative period. These could help the care team identify barriers and create patient specific recovery plans that integrate appropriate resources to help decrease disparities.

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