

The Role of the Meniscus in Knee Joint Health: Insights and Innovations

Nicolas Piozzi*

Department of Orthopaedic, Duke University Hospital, USA

Abstract

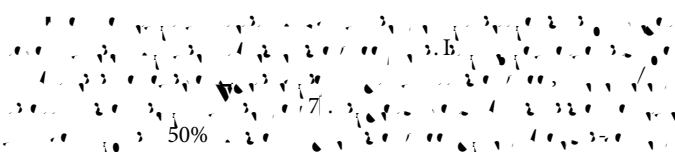
The meniscus, a crescent-shaped cartilage in the knee, plays a critical role in maintaining joint health and function. This paper explores the multifaceted functions of the meniscus, including load distribution, shock absorption, and joint stability. We discuss the anatomical and biomechanical properties of the meniscus, highlighting how its unique structure contributes to the overall functionality of the knee joint. Recent advancements in imaging techniques and

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Introduction: Meniscus injuries can lead to pain, swelling, and reduced mobility, significantly impacting an individual's quality of life. Meniscus tears can predispose the knee to further complications, such as osteoarthritis, highlighting the need for timely diagnosis and appropriate management. Recent advancements in imaging technology have improved the detection and understanding of meniscus injuries, enabling more precise diagnoses and tailored treatment approaches. Surgical interventions, including arthroscopic techniques and meniscus repair or transplantation, are also exploring new avenues for preserving knee function. In addition, emerging innovations in regenerative medicine, such as tissue engineering and stem cell therapy, hold promise for enhancing meniscus repair and promoting cartilage regeneration. These advancements could transform the management of meniscus injuries and improve long-term outcomes for patients. This review aims to provide a comprehensive overview of the meniscus's role in knee joint health, examining its functions, common injuries, and the latest insights into prevention and treatment, integrating current research and clinical practices. The goal is to inform healthcare professionals and patients about the importance of the meniscus in maintaining overall knee health and functionality.

*Corresponding author: Nicolas Piozzi, Department of Orthopaedic, Duke

Results and Discussions



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Conclusion

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