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RISK FACTORS FOR DEVELOPMENT OF LOWER LIMB OSTEOARTHRITIS IN PHYSICALLY-DEMANDING OCCUPATIONS LIKE THE MILITARY: A NARRATIVE UMBRELLA REVIEW

Authors: Ben Schram[1,2], **Robin Orr**[1,2], **Rodney Pope**[2,3], **Joe Knapik, & Elisa Canetti**[1,2]
[1]Faculty of Health Sciences and Medicine, Bond Institute of Health and Sport, Bond University, Gold Coast QLD 4229, Australia
[2]Tactical Research Unit, Bond University, Gold Coast QLD 4229, Australia
[3] School of Community Health, Charles Sturt University. Albury, NSW, Australia.

Aim: To identify and synthesise key findings from previous literature reviews that have examined risk factors for development of lower limb OA in physically-demanding occupations.

Design: A narrative umbrella review

Method: A systematic search was conducted to identify literature reviews examining associations between lower limb OA and occupational tasks. Methodological quality was rated with A MeaSurement Tool to Assess Systematic Reviews (AMSTAR) 2 before key data were extracted and synthesised.

Results: Sixteen reviews were found (knee = seven, hip = four, hip and knee = three, various joints = two) and based on AMSTAR 2, one review was of *high* methodological quality, one of *critically low* methodological quality and the others of *moderate* methodological quality. The selected reviews found moderate to good evidence that heavy occupational lifting (range 10-50kg) was associated with an increased risk of OA at the knee and the hip. Other occupational tasks that may increase the risk of lower limb OA included kneeling, squatting and climbing with previous injuries to joints and overweight and obesity also predictive of lower limb OA.

Conclusion: These tasks and joint injuries are common in military personnel; therefore, it is not, surprising that they experience greater rates of OA than the general population. Efforts to reduce exposure to these tasks, reducing joint injuries, ensuring optimal bodyweight and full rehabilitation of injuries may reduce risks of lower limb OA. Further research is needed to test these interventions.

Key Practice Points:
- This study highlights the potential of the development of lower limb OA in physically demanding jobs.

Proposed impact, if any, on the health outcomes of Aboriginal and Torres Strait Islander people: Aboriginal and Torres Strait Islander people who work in occupations which require heavy lifting, kneeling, squatting or climbing may be at an increased risk of lower limb OA.