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Efficacy of Corrective Exercise on Improving Functional Movement within the Tactical Population: A Critically Appraised Topic

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CLINICAL SCENARIO

Police, fire, emergency medical services, and military personnel encompass a tactical population that is considered an emerging setting in athletic training. Due to the occupational demands within this demographic, these patients are experiencing musculoskeletal injuries and injuries that withhold them from career duties at an alarming rate. One of the main contributors to the incidence of musculoskeletal injury is a lack of functional movement.¹⁻³ Incorporating corrective functional movement programs should be a primary goal in treating tactical populations.

CLINICAL QUESTION

P: Tactical Athletes (police, fire, military, emergency response)

I: Corrective Exercise Programming

C: FMS Pre-Post Scores

O: Movement Efficiency

Focused Clinical Question

What criteria are used in a corrective exercise program to aid in the improvement of functional movement in the tactical athlete?

SEARCH STRATEGY

An electronic search was conducted in February 2023 (PubMed Central, EBSCOhost) using the PICO question criteria. Inclusion criteria included: studies that used human subjects, tactical participants, in English or English translated, main findings of pre/post FMS scores, studies published during or after 2018, and level 2B evidence or higher using the Oxford Center for Evidence Based

Medicine.⁹ Exclusion criteria included: studies examining traditional sport athlete populations, studies score <4/10 on the Physiotherapy Evidence Database (PEDro) scale, outcome measures not applicable to the FMS score, and dissertations.

EVIDENCE QUALITY ASSESSMENT

PEDro rating scale was used to determine the quality of research findings. Authors each, independently assessed the selected manuscripts independently of preconceived ratings and came to a consensus for each manuscript. Studies scoring a 5 or higher were considered “moderate to high quality” evidence.

RESULTS OF SEARCH STRATEGY

The search strategy yielded 152 possible studies for inclusion. All 152 were screened for fitness based on title and abstract, additionally two were removed as duplicates leaving 14 for full review to meet inclusion and exclusion criteria. Three relevant studies emerged as meeting all inclusion criteria.

SUMMARY OF KEY FINDINGS

Three studies met the inclusion criteria set forth by authors. Two studies used an 8-week regimented corrective exercise program while one study used a 4-week regimented corrective exercise program. All three corrective exercise programs utilized progressions. All three corrective exercise programs noted statistically significant improvements in Pre-Post FMS Scores.

CLINICAL BOTTOM LINE

Functional movement is essential to effective occupational interventions in tactical medicine and therefore corrective exercise programs should be regimented for a minimum of 4 weeks to show improvement in functional movement. The available level of

evidence to answer this clinical question is set at a minimum of 2B.

STRENGTH OF RECOMMENDATION

The collective findings to answer this clinical question align with a letter B strength of recommendation.

KEY WORDS: *Tactical Medicine, FMS, 8-week Intervention, Tactical Physical Fitness*

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