

Bond University
Research Repository



To investigate relationships between upper-body and trunk fitness measures used in law enforcement agencies

Wooland, Jennifer; Orr, Rob Marc; Schram, Ben; Lockie, Robert G.; Holmes, Ryan; Kornhauser, Charlie; Dawes, Jay

Published: 19/10/2019

Document Version:

Publisher's PDF, also known as Version of record

[Link to publication in Bond University research repository.](#)

Recommended citation(APA):

Wooland, J., Orr, R. M., Schram, B., Lockie, R. G., Holmes, R., Kornhauser, C., & Dawes, J. (2019). *To investigate relationships between upper-body and trunk fitness measures used in law enforcement agencies*. 320. Abstract from TRANSFORM 2019 Physiotherapy Conference, Adelaide, Australia.
https://transform.physio/wp-content/uploads/2019/09/Abstract_Book_Adelaide_2019.pdf

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

For more information, or if you believe that this document breaches copyright, please contact the Bond University research repository coordinator.

TO INVESTIGATE RELATIONSHIPS BETWEEN UPPER-BODY AND TRUNK FITNESS MEASURES USED IN LAW ENFORCEMENT AGENCIES

Wooland J², Orr R^{1,2}, Schram B^{1,2}, Lockie R³, Holmes R⁴, Kornhuaser C⁴, Dawes J⁵

¹Tactical Research Unit, Bond University, Robina, Australia, ²Physiotherapy Program, Bond University, Gold Coast, Australia, ³California State University Fullerton, , United States of America, ⁴Colorado State Patrol, Colorado Springs, United States of America, ⁵Oklahoma State University, Stillwater, United States of America

Aim: To investigate relationships between upper-body and trunk fitness measures used in law enforcement agencies (LEAs).

Design: A retrospective cohort study.

Method: Retrospective data were collected from two LEAs (LEA1 n=165; LEA2 n=633). The data of LEA1 included: age, weight, 1-minute push-up (1PU) and sit-up (1SU) repetitions, 1-repetition maximum bench press (1RM Bench) and bench press ratio (BPR). LEA2 included age, weight, 1PU, 1SU, grip dynamometer (GRIP) and prone plank (PLANK). A Pearson's correlation was used to calculate relationships between each of the fitness measures.

Results: 1PU were strongly correlated to 1SU (LEA1 r=0.660; LEA2 r=0.590) and BPR (LEA1 r=0.762), moderately to 1RM Bench (LEA1 r=0.652); and weakly to GRIP (LEA2 r=0.138). 1SU were moderately correlated to BPR (LEA1 r=0.572) and PLANK (LEA2 r= 0.578) and weakly to 1RM Bench (LEA1 r=0.394).

Conclusion: Police trainees and officers who present with higher levels of physical capability are suggested to perform better in a range of different physical fitness and job-specific tests. However, while there were some correlations between the upper-body and trunk fitness performance measures, the relationships were not strong enough to warrant replacing one measure with another.

Key Practice Points:

- Given the diverse fitness requirements of police officers, the conditioning and reconditioning of a diverse range of physical fitness measures must be developed as part of return-to-work planning.
- Even though time may be limited and there are relationships between some of these potential outcome measures, police trainees and officers should be assessed using a variety of fitness assessment measures.

Proposed impact, if any, on the health outcomes of Aboriginal and Torres Strait Islander people: The results of this research are likely to have no greater impact on the Aboriginal and Torres Strait Islander population above that of the non-Indigenous population

INFLAMMATORY ARTHRITIS IS ASSOCIATED WITH IMPACTS ON INTIMATE RELATIONSHIPS AND SEXUAL FUNCTION

Restoux L¹, Dasariraju S¹, Ackerman I², Van Doornum S³, Romero L⁴, Briggs A¹

¹Curtin University, School of Physiotherapy and Exercise Science, Perth, Australia, ²Monash University, School of Public Health and Preventive Medicine, Melbourne, Australia, ³University of Melbourne, Department of Medicine, Melbourne, Australia, ⁴Alfred Medical Research and Education Precinct, Melbourne, Australia

Aim: To explore impacts on intimate relationships and sexual function in people with inflammatory arthritis (IA).

Design: Systematic review; PROSPERO registration: CRD42017074189.