Health and Fitness Status of Australian Paramedics: A Cause for Concern


Abstract

Purpose: Paramedics are among the most frequently injured health professionals in Australia, performing duties that require awkward and heavy manual handling tasks interspersed with periods of sedentary behaviour throughout a shift. However, few data are available on health and fitness profiles or how to monitor and facilitate paramedic fitness levels to reduce occupational injury risk. Methods: A group of regional Australian paramedics (n=140; 78 male; mean±SD 37.6±10.2 years; BMI 28.5±5.5 kg/m²) underwent health and fitness assessment. Measures included resting blood pressure (BP; Omron HEM-7322, Japan), body composition (body fat % by bioelectrical impedance; Inner Scan V, Tanita, Japan), upper, lower and core-body muscular strength (maximum push-ups (modified for females), single-leg (SL) wall squat (total of left and right; sec) and prone plank hold; sec) and flexibility (sit and reach; cm). Outcomes were compared between sex using multivariate ANOVA and against ACSM norms. Results: Males had higher mean BP vs. females (p<0.01): 136 (95% CI 133-139)/86 (84-89) mmHg vs. 122 (118-126)/80 (77-83) mmHg (both pre-hypertensive); less body fat (p<0.001): 23.6 (95% CI 21.6-25.5) % (poor) vs. 35.0 (32.6-37.3) % (very poor); greater upper body strength (p<0.05; push-ups): 23 (20-25) (very good) vs. 18 (14-21) (good); similar lower body strength (SL wall squat): 35.2 (29.5-40.9) sec vs. 29.0 (22.2-35.7) sec (both below average); similar core strength (plank hold): 88.0 (77.6-98.4) sec (average) vs. 74.0 (61.6-86.5) sec (below average); and less flexibility (p<0.01; sit and reach): 20.4 (17.9-22.9) cm (poor) vs. 27.4 (24.4-30.4) cm (fair). Conclusion: Insufficient core and lower body strength and flexibility coupled with demanding manual handling tasks may increase the risk of work-related musculoskeletal injuries in paramedics. High body fat and pre-hypertensive BP levels suggest increased cardiometabolic disease risk in this population.

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