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The Impact of Two Different Conditioning Programs on Fitness Characteristics of Police Academy Cadets

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Introduction

- Tactical athletes serve in a physically demanding occupation\(^1\)
- Adequate conditioning is needed as preparation for occupational duties\(^1\)
- Trainees have an increased risk of injury\(^2,3,4\)
  - Recruiting and training a new police officer: $85k\(^9\)
- Used adhoc /randomised PT
- Would a structured periodised program be better?
Methods

• Design
  – Retrospective data of Police Cadet training collected pre- and post- training programs

• Intervention
  – 6 month voluntary physical fitness training
  – 2 programs
    • Random, “workout-of-the-day,” 4 classes (n = 65)
    • Periodised, 1 class (n = 25)
Methods

• Anthropometric Measures
  – Body weight / Fat mass / Lean body mass

• Muscular Fitness Measurements
  – Bench press 1RM
  – Push-up reps and Sit-ups in 1 min
  – Vertical jump height / Power production

• Metabolic Fitness Measures
  – Anaerobic sprint (300 m) / Aerobic run (2.4 km)
Methods

• Statistics
  – Paired t-test within group changes
  – Independent sample t-tests for between group differences
  – ANOVA for between individual RTG and the PG differences

• Ethical approval provided by:
  – UCCS IRB (15-074)
  – BUHREC (RO 1927)
Results

- 4 RTG (n=65),
  - age=28.96±6.34 yrs
  - weight=79.44±18.06 kg
  - LBM=63.41±15.45 kg

- 1 PG (n=25),
  - age=21.76±5.37 yrs
  - weight=83.15.66 kg
  - LBM=67.55±11.62 kg
Results
Results
Results
Results
Discussion

• RTG and PG approaches both resulted in improvements
  – In general RTG > PG

• Previous research has shown periodised programs to be of greater benefit than a traditional basic training program in a military population\textsuperscript{5,7}
  – Push-up and sit up repetitions, long distance runs
  – Injury rate, attrition rate, and pass rate on a specific aggregated military fitness testing standard
Conclusion

- Standard Periodised programs may not be as effective for tactical athletes who are required to perform across a spectrum of activities.

- PT programs – regardless of format – can improve the physical fitness of tactical personnel.
  - PT is of benefit to new trainees and should remain part of their initial training.
References


References


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