

## **Physical Fitness Predictors of a Proposed Combat Readiness Test**

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Combat readiness is defined as the ability to accomplish missions on the battlefield, and physical fitness is one of the key element. The U.S. Army recently proposed a new physical fitness test called the Army Combat Readiness Test (ACRT) to replace the three-decade-old Army Physical Fitness Test (APFT). Determining which physical fitness components are essential to performing well in the proposed ACRT can help U.S. Army Soldiers to attain the physical fitness required for carrying out their duties. Currently, there are no studies that have examined the relationship between the proposed ACRT performance and the components of physical fitness. **PURPOSE:** to identify the underlying and modifiable components of physical fitness for the proposed ACRT performance. **METHODS:** Forty-three healthy and physically active male subjects (age:  $21.5 \pm 2.9$  yrs; height:  $177.9 \pm 7.7$  cm; mass:  $77.8 \pm 11.1$  kg) participated in one field test session and one laboratory test session. Subjects were assessed with the proposed ACRT in the field test sessions and physical fitness measurements in the laboratory test sessions, which included muscular strength and endurance, postural stability, aerobic capacity, anaerobic capacity, flexibility, body composition, fat-free mass, and agility. Backward stepwise linear regression analysis was performed to establish a multivariate model to predict time to completion of the proposed ACRT using the physical fitness measurements. **RESULTS:** Muscular endurance, aerobic capacity, body composition, fat-free mass, and agility contributed to a model that predict time to completion of the proposed ACRT ( $R^2 = 51.78$ ,  $p < 0.001$ ). **CONCLUSION:** The proposed ACRT assess a combination of physical fitness components consisting of muscular endurance, aerobic capacity, body composition, fat-free mass, and agility.

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