Reliability and Validity of New Test to Measure Anaerobic Power

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Purpose: Creation of new test to measure anaerobic power metabolism.
Research Study Design

• Collected data on 4 participants with the goal of 30 total male subjects.
  • Participants conducted two tests measuring anaerobic power. The Wingate Anaerobic test (WAnT) and the Bounding Jump test (BJT).
  • 5 Trials were performed of the Bounding Jump test that distance (m) and time were recorded.
  • Participants performed three forward bounding jumps on two feet, reaching for the most distance possible and maintaining their landing position.
  • Pearson Correlation between new test BJT and Wingate Test (criterion) used to establish validity ($r= 0.93$)
Results

Power was calculated for the jumps in watts (w) using the formula of \((m \times v / T)\).

\[
y = 4.0803x - 53.089
\]

\[R^2 = 0.9305\]

WAnT vs BJT Power