

Anaerobic capacity
power endurance and
fatigue index using a
repeated jump test
0...



Anaerobic capacity/power endurance and fatigue index using a repeated jump test on a force platform

Anaerobic Capa 2. The mean power across the four blocks exhibited a gradual reduction from the value in the second block to the fourth block. Block 1 value was not considered because it contained the lowest values recorded during the test. The mean jump height was directly proportional to the mean power, as the values gradually reduced across the blocks. This phenomenon shows the relationship between mean power used by the participant and the mean jump height achieved. This proves that an athlete will achieve less jump height with time because of the reduction in the power exerted during the subsequent jumps or activities (Wilmore, 2010 Pg. 26).

3. The jump test is most suitable for athletes whose main activity involves a high occurrence of flight. The objective of the test is to estimate the validity and accuracy of the jump test on athletes that take part in sports that involve flight. The most suitable athletes or sports professionals for this test are basketballers or volleyballers. The use of this anaerobic drill is a measure of fitness among the players engaged in the aforementioned sports. The test or drill is, based on its use as a measure of anaerobic power, a popular conditioning measure in the aforementioned sports. The high test reliability and its relevance to specific performance makes the anaerobic power test a preferred choice for both coaches and exercise scientists. Although the test is reliable, further investigations should be done to assess how reliable it is in relation to both audio and visual stimulus.

4. In sports, fitness and performance testing of athletes, is a vital component during designing of the training drills or programs (Tomchuk, 2011 Pg. 45).

These tests are used to analyze an athletes' progress during the training program. In sports that involve jumping, such as, basketball and volleyball, excellent performance is a result of numerous fitness components. These components that are cardinal to successful performance must be tested on a regular basis in order to ascertain the fitness levels of the athletes. This can be done using a number of testing methods including vertical jump test or the Wingate test. The vertical jump test is preferred because of the ease of execution. The test can be done in a court unlike the Wingate test which requires a laboratory. The jump test unlike the Wingate test answers questions concerning accessibility and specificity of the muscle activity pattern. The disadvantage of the test is that it can only test one athlete at a time (Wilmore, 2010 Pg. 67). This makes it hard for one to adopt the results adduced from the test because of the small sample size it employs.

5. The first part of the protocol is essential because of many reasons. The protocol involves performing several consecutive jumps that are used to sum the flight time of the single jumps. The continuous jumps are used to measure or estimate the maximal power that is used by the leg muscles when they extend. During this protocol, lateral and horizontal displacements are standardized in order to avoid subjecting the athlete to unnecessary work.

References

Tomchuk, D. (2011). Companion Guide to Measurement and Evaluation for Kinesiology. New

York: Jones & Bartlett Learning.

Wilmore, J. H. (2010). Physiology of sport and exercise. London: Routledge .

<https://assignbuster.com/anaerobic-capacitypower-endurance-and-fatigue-index-using-a-repeated-jump-test-on-a-force-platform/>