

Speed-Endurance Test (6 x 50m) /Speed Test (2 x 25m)

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- Speed-Endurance Test (6 x 50 m)
- Speed Test (2 x 25 m)

Speed-Endurance Test (6 x 50 m)

Rationale: The aim of this test is to assess the ability of the swimmer to sustain near race speed over 6 x 50m intervals. This type of broken swim is often undertaken by coaches to evaluate the 'race readiness' of swimmers through the training season, and in particular, during the final preparation prior to competition. In energetic terms, the 6 x 50m test gives an indirect estimation of the power and capacity of the anaerobic glycolytic system. This energy system is a major contributor of ATP production during maximal effort exercise of 1-3 min in duration.

The protocol for the test is 6 x 50m maximal effort swims. Freestyle and form swimmers should use their preferred stroke, while individual medley swimmers should use their strongest stroke at the coaches discretion. It is recommended that a number of short sprints (25 m) at the expected speed of the 6 x 50m efforts should be undertaken in the warm-up.

Procedure:

1. Each swim utilises a push start. The protocol is 6 x 50m on 60s.
2. With manual timing the first observed movement is used as the starting time, while the finishing time is recorded at the other end of the 50m pool as the swimmer touches the wall. This constitutes a 'wall-to-wall' timing process.
3. Record all times to a tenth of a second.
4. Record stroke rate and count.
5. Record all results on a data sheet. Report both:
 - the average of the six times as the final result for the test, and
 - the decrement from the fastest to the slowest time.

Interpretation: The interpretation of this test is best undertaken on an individual basis. A swimmer's result should be compared to previous results and his or her personal bests in the 200

and 400m events. Coaches may also elect to compare individual results to the group mean and range taking into account the following factors: age, sex, event, distance and immediate training history.

Speed Test (2 x 25 m)

Rationale: The aim of this performance test is to determine maximal swimming speed over 25m from a dive start. In practice, this is a very commonly used method by coaches to assess the maximal speed of a swimmer. In both training and competition, the time for a dive start 25m is a useful indicator of the level of sprint performance. Given the maximal intensity but brief duration of this test (11-15s) it is assumed, in energetic terms, to be largely dependent upon the ATP-PC energy system.

The protocol for the test is 2 x 25m maximal effort swims. Freestyle and form swimmers should use their preferred stroke, while individual medley swimmers should use butterfly (the lead-off stroke). A short course (25m) pool is mandatory for this test. Electronic timing should be used if available. Within the normal warm-up of 1000-1500 m it is recommended that a number of dive starts and short sprints be undertaken before the 2 x 25m test is undertaken.

Procedure:

1. Each swim utilises a dive start.
2. For manual timing the first observed movement is used as the starting time. In a 25m pool, the hand touch on the wall is used as the finishing time. This constitutes a 'wall-to-wall' timing process.
3. Record all times to a tenth of a second.
4. Record stroke rate.
5. Some aerobic swimming (50-200m) is recommended between the two efforts.
6. Record all results on a data sheet. Report the average of the two times as the final result for the test.
 - the average of the six times as the final result for the test, and
 - the decrement from the fastest to the slowest time.

Interpretation: Similar to the 6 x 50m speed-endurance test, the results of the 2 x 25m speed test should be interpreted by comparing individual results to the group mean and range taking into account the following factors: age, sex, event, distance and immediate training history. Again the most valid comparison for a given swimmer is made against their previous results for this test.

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