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Can I Swim and Talk comfortably?

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INTRODUCTION:
Subjective methods to measure exercise intensity, such as the Talk Test (TT), have been shown to be practical alternatives of prescribing exercise in healthy individuals and athletes. Despite the TT is widely used in several sport such as cycling and running, no study has yet investigated its conceptual validity in swimming. Therefore, this study aimed to describe the variability of the land and water-based version of the TT.
METHODS:
One elite male breaststroker swimmer (age: 24 years; height: 184 cm; weight: 84 kg) participated in the study. Three incremental treadmill running talk test (RTT) and 3 incremental swimming talk test (STT) sessions were performed. RTT consisted of 3-min warm-up with a slope of 1% (fixed for the test), with subsequent speed increase of 1 km/h every 2-min. For the STT, individual target times for each incremental bout were calculated based on the seasonal competitive personal best. STT consisted of 200m incremental bouts with the first bout set at 30s greater than the personal best, whereas all successive bouts' target time were set at 5s less than the previous bout. During each testing session, subject was required to rate his perceived exertion (RPE) on a 0-10 scale. At the end of each stage/bout the subject was also required to recite the Olympic Oath. Immediately after reciting the speech, subject was asked if he "Could speak comfortably" with three possible answers: "Yes", "Not sure" or "No". The last "Yes" answer was coded as last positive (LP), the first "Not sure" as equivocal (EQ) and the first "No" as negative (NEG). RPE values were then associated with LP, EQ and NEG stage for each TT. Tests were stopped if volitional fatigue was reached or "No" was given as answer. The two-standard deviation (SD) band method was used to describe the variability of the LP, EQ and NEG answers between the land- and water-based version of the tests, by using the RTT values as baseline mean and SD.
RESULTS:
Significant differences were found between RPE RTT and STT LP values with at least 2 STT sessions (2nd STT: 4.5 AU; 3rd STT: 5.5 AU) over 2 SD of the baseline RTT (LP: 4.2 AU). Trivial significant differences were found for the EQ values, with all STT sessions (1st and 2nd STT: 5.5 AU; 3rd STT: 6.5 AU) higher than the RTT SD upper limit of 5.4 AU. No significant difference was observed for the NEG, with only one STT session higher than the upper band of the RTT 2 SD (STT NEG: 8.0 AU > RTT 2 SD upper band: 7.5 AU).
CONCLUSION:
TT protocol might be applied in swimming for measuring exercise intensity, especially at higher intensities such as the ones above the ventilatory and respiratory compensation thresholds. The higher STT RPE values found might be related to the test specificity, and therefore further studies should evaluate larger and specific samples with different characteristics in order to select the best procedure to adopt in this particular environment.

Topic: Training and Testing

Presentation E-poster