

The Research of the Relationship between Triathlon Competition Results with Physical Fitness Performance

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Abstract : The purpose of this study was to investigate the impact of swim 1500m, 10000m run, VO2 max, and body fat on Olympic distance triathlon competition performance. The subjects were thirteen college triathletes with endurance training, with an average age, height and weight of 20.61 ± 1.04 years (mean \pm SD), 171.76 ± 8.54 cm and 65.32 ± 8.14 kg respectively. All subjects were required to take the tests of swim 1500m, run 10000m, VO2 max, body fat, and participate in the Olympic distance triathlon competition. First, the swim 1500m test was taken in the standardized 50m pool, with a depth of 2m, and the 10000m run test on the standardized 400m track. After three days, VO2 max was tested with the MetaMax 3B and body fat was measured with the DEXA machine. After two weeks, all 13 subjects joined the Olympic distance triathlon competition at the 2016 New Taipei City Asian Cup. The relationships between swim 1500m, 10000m run, VO2 max, body fat test, and Olympic distance triathlon competition performance were evaluated using Pearson's product-moment correlation. The results show that 10000m run and body fat had a significant positive correlation with Olympic distance triathlon performance ($r=.830, .768$), but VO2 max has a significant negative correlation with Olympic distance triathlon performance ($r=-.735$). In conclusion, for improved non-draft Olympic distance triathlon performance, triathletes should focus on running than swimming training and can be measure VO2 max to prediction triathlon performance. Also, managing body fat can improve Olympic distance triathlon performance. In addition, swimming performance was not significantly correlated to Olympic distance triathlon performance, possibly because the 2016 New Taipei City Asian Cup age group was not a drafting competition. The swimming race is the shortest component of Olympic distance triathlons. Therefore, in a non-draft competition, swimming ability is not significantly correlated with overall performance.

Keywords : triathletes, olympic, non-drafting, correlation

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