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Influence of anthropometry on race performance in extreme endurance triathletes: World Challenge Deca Iron Triathlon 2006.

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OBJECTIVE: To investigate the influence of anthropometric variables on race performance in ultra-endurance triathletes in an ultra-triathlon. DESIGN: Descriptive field study. SETTING: The "World Challenge Deca Iron Triathlon 2006" in Monterrey, Mexico, in which everyday for 10 consecutive days athletes had to perform the distance of one Ironman triathlon of 3.8 km swimming, 180 km cycling and 42.195 km running. SUBJECTS: Eight male ultra-endurance athletes (mean (SD) age 40.6 (10.7) years, weight 76.4 (8.4) kg, height 175 (4) cm and body mass index (BMI) 24.7 (2.2) kg/m2). INTERVENTIONS: None. MAIN OUTCOME MEASURES: Direct measurement of body mass, height, leg length, skinfold thicknesses, limb circumference and calculation of BMI, skeletal muscle mass (SM), percentage SM (%SM) and percentage body fat (%BF) in order to correlate measured and calculated anthropometric variables with race performance. RESULTS: Race time was not significantly ($p>0.05$) influenced by the directly measured variables, height, leg length, body mass, average skinfold thicknesses, or circumference of thigh, calf or upper arm. Furthermore, no significant ($p>0.05$) correlation was observed between race time and the calculated variables, BMI, %SM and %BF. CONCLUSIONS: In a multistage ultra-triathlon over 10 Ironman triathlon distances in 10 consecutive days, there was no effect of body mass, height, leg length, skinfold thicknesses, limb circumference, BMI, %SM or %BF on race performance in the only eight finishers.