

The Neglected Category of Sub-elite Athletes in Ironman Triathlon

DEREK BUESGENS, & CAIO V. SOUSA

Health and Human Sciences; Loyola Marymount University; Los Angeles, CA

Category: Undergraduate

Advisor / Mentor: Sousa, Caio (c.sousa@lmu.edu)

ABSTRACT

Physical tests and training programs are tailored considering many factors, including the athletic level (i.e., amateur vs. professional, also known as age-group vs. elite). Ironman triathlon (IM) is a long-distance endurance event that thousands of athletes participate in around the world. However, the conventional division of athletes between age-groupers and elites neglect a group of amateur athletes who perform similarly to elite athletes. The spotlight on a new category of “sub-elite” athletes highlights the importance of new physical assessment protocols for a group largely underestimated as an amateur but overrated as an elite athlete. **PURPOSE:** The goal of this study is to identify and explore the populations of amateur athletes who perform similarly to elite athletes in IM. **METHODS:** Publicly available data from all IM events from 2002 to 2022 were used for this analysis. Age-group athletes were categorized as “sub-elite” when their overall performance falls within one standard deviation of the elite group of athletes competing in that event and gender. **RESULTS:** A total of 741,973 entries were analyzed and 12,670 of those were categorized as elite athletes. Sub-elite athletes made up 45,994 of the total (6.7% of all age-groupers). Only 3.8% of age-group women were categorized as sub-elite while almost half of men fell into that category (7.4%). The majority of sub-elite athletes are concentrated between 30 to 39 years of age, regardless the gender. Performance-wise, sub-elite athletes are around 9% slower than elite athletes, whereas age-groupers are, on average, 39% slower. **CONCLUSION:** Sub-elite athletes comprise an existing and considerable population of athletes competing in IM events. Further research regarding physical tests and training protocols for this population is warranted.