

Abstract

There is a commonly held belief in the endurance coaching community that recreational athletes 'perform their easy sessions too hard and their hard sessions too easy'. The purpose of the present study was to describe the training intensity distribution (TID) of recreational triathletes during the general preparation phase of a triathlon season, based on intensity zones and observe relationships with physiological and performance measures associated with Ironman distance triathlon. The research aimed to determine if a relatively greater percentage of moderate intensity training is more beneficial toward physiological adaptations associated with Ironman performance, when compared to a relatively large volume of training at higher intensities. **Method:** 13 male triathletes (mean $\pm$ SD: age 42.5 ± 6.17 years, Weight 80.7 ± 9.5 kg, Height 177.3 ± 4.2 cm) participated in the study. A training observation was performed over a 6-week period, where the 4-weeks with the greatest training volume were chosen for analysis. The TID of all run and bike training sessions was quantified using continuous heart rate (HR) monitoring. During the subsequent week of the observational period each participant performed a graded exercise test to determine physiological variables including MFO, FATmax, VT1, VT2 and VO_{2max} . Three intensity zones were used to calculate the training intensity distribution of the 4-week training period: zone 1 (moderate domain), for intensities below first ventilatory threshold; zone 2 (heavy domain), for intensities between first and second ventilatory thresholds; and zone 3 (severe domain), for intensities above second ventilatory threshold. **Results:** The TID described as percentage of time spent in zones 1, 2, and 3 respectively, were ($55.6 \pm 19.1\%$, $37 \pm 15.3\%$, and $7.6 \pm 5.1\%$). Significant positive correlations were found between MFO (g/m) and total training time spent in Z1 ($r = .657$, $p = .039$) and between HR at Fatmax and percentage of training time in zone 1 ($r = .697$, $p = .025$). In contrast, significant inverse correlations were found between MFO (g/m) and percentage of training time in zone 3 ($r = -.665$, $p = .036$) and also between HR at Fatmax for both total training time and percentage of training time in zone 2 ($r = -.691$, $p = .027$), ($r = -.674$, $p = .033$), and total training time in zone 3 ($r = -.641$, $p = .046$). **Conclusion:** Recreational triathletes perform a relatively large percentage of their training time in zone 2, however better physiological and performance measures are associated with a TID prioritising a relatively large percentage of training time in zone 1 and less in zones 2 and 3. The results suggest that recreational athletes competing in Ironman distance triathlons are performing their low-intensity training too hard, whereas scheduled high-intensity training sessions are not performed hard enough. Therefore, it is recommended they adopt a TID prioritising a relatively large percentage of training time in zone 1, although future research is needed to clarify this, especially during different phases of the season.