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Summary. — The article by Del Vecchio, et al. (2011) provides relevant information to trainers about the effort-pause ratio during mixed martial arts matches. Taking into account the physiological profiles of fighters would increase interest in these findings.

Del Vecchio, Hirata, and Franchini (2011) was a remarkable analysis. Its authors were aware of the study’s limitations, i.e., the small number of matches analysed (26 matches) and the moderate competition level of fighters (regional level). On the basis of their data, the authors concluded that a match of mixed martial arts in competition can be characterized as an intermittent effort of high intensity. The authors suggested that the mixed martial athlete needs to be specifically prepared to maintain high intensity for the duration of each round. To illustrate this precept, Del Vecchio, et al. (2011) proposed two interesting examples of exercises to improve the specific physical conditioning for this type of athlete.

Continued research and development are needed to refine the knowledge of the mixed martial arts as practiced in competition. Passelergue and Paillard (2010) explained in detail the two fighting strategies that were observed in judokas; one has an “endurance” profile, winning the fight at the end of the match; the other has an “explosive” profile and wins the fight at the beginning of the match. Gariot, Favre-Juvin, Novel, Reutenauer, Majean, and Rossi (1995) showed that judokas with the endurance profile used aerobic metabolism in a more preponderant way during a match compared to judokas with the explosive profile. The efforts of the judokas with the endurance profile last longer but they provide less mechanical power than those of the judokas with the explosive profile. For a given effort–pause ratio, the intensity and the duration of actions can differ according to the judoka’s physiological profile. Hence, in practice, with the endurance profile, the training should consist of progressively increasing the mechanical power for a given effort duration, i.e., the ability to augment the intensity of efforts, while with the explosive profile, the train-
ing should consist of progressively increasing the duration of efforts for a given mechanical power, i.e., the ability to prolong and/or repeat efforts.

Certainly, an annual training plan depends on the effort–pause ratio during sports combat matches (Nilsson, Csergő, Gullstrand, Tveit, & Refsnes, 2002; Beneke, Beyer, Jachner, Erasmus, & Hütlé, 2004; Campos, Bertuzzi, Dourado, Santos, & Franchini, 2011), but also on the physiological profile of the judoka (see Franchini, Del Vecchio, Matsushigue, & Artioli, 2011) as well as the physiological requirements of competition (Paillard, 2010). Different strategies also exist in mixed martial athletes. Thus, it would be interesting if Del Vecchio, et al. (2011) supplement their analysis by distinguishing the different physiological profiles in mixed martial athletes, with a larger number of matches completed by high-level athletes. With this type of supplementary analysis, trainers could conceive optimal training organisations from the effort–pause ratio and the physiological profiles of fighters in order to adapt their physiological characteristics to physiological requirements of competition (Paillard, 2010).

REFERENCES


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