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Nutrition in Olympic Combat Sports

Elite athletes' dietary intake, hydration status and experiences of weight regulation

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Abstract

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There are a number of sports in which competition is conducted with weight limits or weight classes. In one-on-one combative sport, such rules are enforced to create an equal playing level and minimize the risk of injury between opponents. The prevailing attitude among competitive combat sports athletes is that a performance advantage will be gained by rapidly losing weight thus competing against a lighter and smaller opponent. However, rapid weight loss by voluntary dehydration can have implications for health and performance.

The aim of this thesis is to improve the understanding of weight-regulation practices of elite combat sports athletes. This is investigated by means of interviews emphasising on Swedish national team athletes' (n=14) perceptions and experiences of the phenomenon, and by cross sectional data (n=68) on hydration status and dietary intake collected at six different competitions in the 4 Olympic combat sports of wrestling, taekwondo, judo, and boxing.

The qualitative research demonstrated that athletes practice weight regulation not only to gain a physical advantage over opponents but also for purposes of identity, mental advantage, and mental diversion. However, negative experiences including physiological needs and opposing ideals related to dietary- and weight-making practices were also displayed. The dietary and weight conflicts were most prominent close to competition.

The hydration status measured at the morning of competition day demonstrated that almost half of the participants were categorized as seriously hypohydrated despite high water intake. Time for recovery was not significantly related to hydration status but athletes with shorter recovery time tended to be seriously hypohydrated to a greater extent than athletes competing under rules allowing for extended recovery time. Furthermore, a large proportion of the participants consumed a diet below current sport nutrition recovery guidelines regarding energy-yielding macronutrients.

The main findings of this work demonstrate that weight regulation in combat sports is practiced in such a magnitude and intensity that it brings about negative physical and psychological consequences. Stricter weigh-in regulations might hinder rapid weight-loss practises but such actions will not solve the problem entirely. To manage stricter rules, nutritional counselling might be of further importance. Moreover, the mental benefits currently ascribed to weight regulation should be considered.