

# Dehydration a problem in combat sports

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Athletes in combat sports often try to shed body weight in order to compete against lighter and smaller opponents. A new doctoral thesis from the University of Gothenburg, Sweden, points to the human body's limited ability to quickly recover following extensive short-term weight loss. Almost half of the studied athletes were severely dehydrated on the morning of their matches. Nevertheless, the athletes seem to focus on the mental advantages of the method.

Stefan Pettersson has studied the very best Swedish [athletes](#) in wrestling, taekwondo, judo and boxing. The data was collected via interviews with athletes on the Swedish national teams and by studying about 70 [elite athletes](#)' hydration status and [food intake](#) on match day.

All studied athletes compete in weight classes. In combat sports, it is generally considered beneficial to first lose a lot of weight prior to weigh-in and then drink and eat a lot before the match, with an ultimate purpose of being able to fight a shorter and lighter opponent than would otherwise be possible. Previous research shows that 80-90 per cent of all athletes in sports with weight classes adhere to this practice.

Athletes commonly abstain from food and drink for up to 24 hours prior to a weigh-in. They also often reduce their food intake for 96 hours in order to deplete stored carbohydrates. This [dietary regimen](#) is sometimes combined with sauna sessions intended to rid the body of even more water.

Pettersson's thesis sensibly addresses the perceived performance

advantages resulting from the studied practices, but also the problems and demands that the rules in these sports present to athletes with respect to food intake, body weight and hydration. Analyses show that the athletes' ability to quickly recover from the [dehydration](#) was far from satisfactory. In fact, almost half of the studied athletes were severely dehydrated on the morning of match day.

'This could mean that their [endurance](#), explosiveness and strength are reduced in their first fights. Previous research has also shown that their mental performance may suffer, which could imply a poor perception and ability to make quick decisions,' says Pettersson.

Pettersson has served as a nutritionist on the Swedish Olympic Committee's resource team for several years. He suggests that not only areas such as nutritional counselling and long-term weight management but also the rulebooks should be reviewed in order to reduce dramatic short-term weight loss in weight class sports.

'One way to deal with the problem would be to schedule the weigh-ins right before a match, or to do weigh-ins like today but add a second weigh-in right before a match with a rule for how much [weight](#) an athlete is allowed to gain in between. Yet new rules would probably not be enough. To make up for any lost mental advantages, the athletes may need some good mental coaching.'

The results show that many actors involved in the sports need to be made aware of the problems, including athletes, coaches, nutritionists, and sports psychologists. Furthermore, the international federations for the respective sports should seriously consider revising their rulebooks.

Provided by University of Gothenburg

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