

Should Extreme Weight Cutting Be Banned in Professional Mixed Martial Arts?

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I always knew that mixed martial arts (MMA) athletes cut weight, but I only realised how dangerous it was when I started studying this phenomenon in more detail. Unfortunately, few people know about it. Interestingly, almost every athlete in combat sports practices some form of weight cutting before competitions, starting as early as adolescence (Zhong et al., 2024). The idea is to intentionally dehydrate yourself to lose up to 10% of your body weight in just two days, before the official weigh-in. This is done to compete in a lower weight class to gain an advantage and then rehydrate before the fight (Brechney et al., 2022). It is important to understand that this is not a niche practice; it is standard in this sport at virtually all levels of professional competition. Despite the growing evidence base, many athletes ignore it and continue to do it as a tradition.

I was inspired to write a paper about the death of Yang Jian Bing, a 22-year-old Chinese boxer in the 51 kg weight class who tragically died after losing approximately 8.5% of his body weight during a pre-tournament weight loss. The cause of death was multiple organ failure due to severe dehydration. After this incident, the assertion that weight loss is a personal choice with no real consequences became less true. This became the basis for my project, as I wanted to discuss specific cases and how they impacted the community, rather than the problem as a whole.

I plan to study what research actually says about the processes that occur in the body during such extreme, rapid weight loss. I am particularly interested in examining the effects on cardiovascular function and the potential risk of serious injury (Martínez-Aranda et al., 2023). I am also interested in studying how different organisations responded to similar tragic cases and how each one changes its policies after such incidents. After analysing this data, I will be able to address ethical issues and understand the line between a fighter's right to make their own

decisions and the responsibility of governing bodies to protect them. To study sports science and specifically weight loss, I will use academic journals, and their freshness will be my top priority. Regarding regulations, I will use official documents from the organisations that host the tournaments, as these are the primary sources that essentially regulate such rules.

Initially, I considered a broader question concerning sports ethics, but I had to narrow it down to the specific weight class because it gave me a more focused research question, which is essential for quality research. Therefore, the question of whether sports governing bodies are doing enough to protect athletes is too vague to build a targeted argument around. So, I came up with a more streamlined question: Should extreme weight zones be banned? To justify my choice of question, I began examining specific evidence of this practice and organisational policy and how it supports both sides of the argument. It was important to me that the focus remained on sports science regulation and not on anything that would intersect with my subjects in mathematics, business, or psychology.

The primary sources I plan to use are from peer-reviewed journals devoted to sports science. All publications directly address rapid weight loss in combat sports athletes and cover both the physiological mechanisms of dehydration and the observed effects on performance and health. Dehydration exceeding 2% of body weight begins to impair both physical performance and cognitive function (Breachney et al., 2022). It is important to understand that the rapid rehydration methods used by fighters in the hours between weigh-ins and fight day do not effectively address these impairments during the typical recovery period (Lakicevic et al., 2022). When fighters lose 10% or more of their body weight, this raises serious concerns about the health risks to young athletes still in their developmental stages.

I will use the case of Yang Jian Bing as a central real-life example. It is noteworthy that One Championship mandated pre-competition hydration testing and measured urine specific gravity with a threshold of 1.025 USG. It is important to understand that this is a measure documented in official rules, and the existence of such a specific, enforceable decision for analysis is a good description of the problem and argument for its seriousness. I will also use official rule photos and UFC policy documentation to compare approaches. It is also interesting to explore the sociological and ethical literature on athlete autonomy and the structural pressures that influence athletes' decision-making in professional sports.

Before I begin, I need to thoroughly assemble a sports science literature base and understand the ethical and normative arguments that make sense. I will start by searching for studies related to rapid weight loss and dehydration, looking for those that have well-documented effects on reaction time and decision-making ability. It is important to understand that dehydration impairs performance and increases the risk of injury. However, studies vary in their methodology, and some have very small sample sizes, making it difficult to judge the quality of the results (Martínez-Aranda et al., 2023). Therefore, I am including this in my report and will not jump to conclusions based on alarming results from such studies.

Once I have a good baseline of research examining physiological characteristics, I will move on to the regulatory side. My focus will be on One Championship, as it is the only major organisation that has implemented a hydration testing protocol with real controls. It is important to note that weight cuts influence MMA fight results, and this link has been particularly well-documented between post-weigh-in weight gain and competitive success (Faro et al., 2023). This helps explain why the urge to make weight remains so strong even when athletes understand the risks involved. My plan is to gradually complete the entire report over the course of one month,

beginning with collecting information from the first drafts. This will be followed by an analysis of the report and additions, and will conclude with conclusions supported by an ethical framework.

I can confidently say that this project has changed my understanding of weight cutting, and I now understand that I did not have enough information to appreciate how risky this practice is. The most frightening thing about this report is the realisation of how ingrained this practice is at every level of professional competition. It is important to note that the gap between fan understanding of standard pre-match procedures and the actual weight cutting process is quite large, and my goal was to narrow this gap and help more people understand the potential consequences of such actions.

What I like most about this project is the regulatory component. Since only one organisation that holds professional competitions has been able to introduce hydration testing as a specific requirement before competitions, it is one thing to argue that something needs to be changed, and quite another to immediately take action after a tragic incident. Therefore, the example of One Championship is indicative in this case. The existence of such a regulatory framework also allowed the ethical component to more seriously consider this argument about autonomy and not dismiss it, since there is a concrete alternative to which one can refer.

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