

NKF Policy on Weight Making in Sport Karate in collaboration with Olympiatoppen

The topic of weight making practices in combat sport has been debated for decades (e.g. academic research, IOC health committees and International Federations). Scientific studies are very clear and compelling data shows that the majority of elite athletes in these sports manipulate body weight throughout the season with both gradual and rapid weight loss methods. Indisputably, this can be detrimental for health and performance with an increased risk of long-lasting impact on the athlete, both physically and mentally (Artioli *et al.*, 2016, Sundgot-Borgen & Garthe, 2011).

1. Senior Athletes

Guidelines with respect to being healthier in the weight making process are well documented. One of the main recommendations for senior (18+ years) athletes is that no athlete should reduce greater than 5% of hydrated body weight (Franchini *et al.*, 2012; Green *et al.*, 2007; Oöpik *et al.*, 1996;) to reduce the chances of this process putting the respective athletes health (short or long term) at risk.

N.B. Lower percentages are recommended by Olympiatoppen in Norway (approx. 3% hydrated weight, Sundgot-Borgen & Garthe, 2011).

In light of such recommendations it is a primary concern of NKF to promote combat sport in a manner that considers the health and well-being of the respective athlete(s). As such based on research reports and guidance from Olympiatoppen Table 1 highlights the acceptable boundaries for **Senior athletes** competing under the banner of Kampsport federation (NKF) in championships and / or Norway National team.

Table 1 Recommended maximum hydrated weight (kg, based on 5% weight cut) with respect to respective weight category (kg)

Male Weight Category	Hydrated weight	Female Weight Category	Hydrated weight
-60	63	-50	52,5
-67	70,35	-55	57,75
-75	78,75	-61	64,05
-84	88,2	-68	71,4
+84	n.a.	+68	n.a.

To avoid rapid weight loss practices that impairs health and performance it is recommended weight loss begin at least 4 weeks prior to competition and that no more than 2-3% reduction in weight (Sundgot-Borgen & Garthe, 2011) should occur as part of a rapid weight loss process (i.e. 4 days, Santos *et al.*, 2016).

1.1 Major Championship exceptions

Due to the disparity between Olympic and World categories in Sport Karate (i.e. 5 world categories, 3 Olympic categories), specific occasions may arise, such as major championships (e.g. VM, EM, European Games, Olympic Games), where an athlete looks to reduce percentages greater than the 5% recommended. Such circumstances should be the exception and not the norm wherein weight goals are based on objective, valid measurement of body composition (e.g. DXA, sum of skinfolds) and consultation with a health professional (e.g. Sports nutritionist) to direct the weight making process and timeline (Sundgot-Borgen & Garthe, 2011)

N.B. All members of the Norway national team adhere to the outlined principles.

2. Junior and Cadet Athletes

Biological growth, maturation and behavioural development are complex, on-going processes characteristic of adolescent development (i.e. ages 10-19, World Health Organisation, 2016). Alarmingly, it has been reported that simultaneous with these complex development processes adolescents involved in combat sport have already started engaging in the practice of weight cutting (Alderman *et al.*, 2004 highlighted athletes starting as young as 9-14 years). At such sensitive ages engagement in weight cutting methods can potentially lead to significant health risks associated to nutritional status, growth and development (Berkovich *et al.*, 2015) and body image (Sundgot-Borgen & Torstveit, 2004).

In general it is recommended that young athletes should be discouraged from weight loss practices (Artioli *et al.*, 2016; Santos *et al.*, 2016; Sundgot-Borgen & Garthe, 2011) and greater emphasis should be placed on gameplay, physical and mental development (Santos *et al.*, 2016; Franchini *et al.*, 2012; Sundgot-Borgen & Garthe, 2011). As such the following guidelines will be adhered to by NKF:

Athletes aged 15 years or under: **No weight cutting practices**

Athletes aged 16-17 years: **≤ 1 kg weight reduction through gradual process, i.e. over 4 weeks** (only with parental consent and an informed co-operative decision process between athlete, coach, parents and where necessary a health professional).

Athletes that increase their weight (due to growth or gain in muscles etc.) and therefore change weight category, have to contact the federation immediately.

Violation of the above guidelines and regulations can lead to consequences up to missing the selection.

Consent:

I, (name) hereby consent to the above guidelines and regulation.

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Date, place, signature Athlete

Date, place, signature parent

References

Artioli GG, Saunders, B, Iglesias, RT and Franchini, E (2016). It is time to ban rapid weight loss from combat sport. Sport Medicine, 46, 1579-1584.

Berkovich B-E, Eliakim A, Nemet D, Stark A and Sinai T (2015). Rapid weight loss among adolescents participating in competitive judo. International Journal of Sport Nutrition and Exercise Metabolism, 26, 276-284.

Franchini E, Brito CJ and Artioli GG (2012). Weight loss in combat sports: physiological, psychological and performance effects. Journal of the International Society of Sports Nutrition, 9-52.

Green CM, Petrou MJ, Fogarty-Hover MLS and Rolf CG (2007). Injuries among judokas during competition. Scandinavian Journal of Medicine & Science in Sports, 17, 205-210.

Oopik V, Paasuke M, Sikku T, Timpmann S, Medijainen L, Ereline J, Smirnova T and Gapejeva E (1996). Effect of rapid weight loss on metabolism and isokinetic performance capacity. A case study of two well trained wrestlers. Journal of Sports Medicine and Physical Fitness, 36, 127-131.

Santos J, Takito, M, Artioli G and Franchini E (2016). Weight loss practices in Taekwondo athletes of different competitive levels. Journal of Exercise Rehabilitation, 12(3), 202-208.

Sundgot-Borgen J and Garthe I (2011). Elite athletes in aesthetic and Olympic weight-class sports and the challenge of body weight and body composition. Journal of Sports Sciences, 29, 1-14.

Alderman B, Landers D, Carlson J and Scott J (2004). Factors related to rapid weight loss practices among international-style wrestlers. Medicine and Science in Sports and Exercise, 36, 249-252.

Sundgot-Borgen J and Torstveit M (2004). Prevalence of eating disorders in elite athletes is higher than in the general population. Clinical Journal of Sports Medicine, 14, 25-32.