

## Fuelling Fitness for Taekwondo



**Background** Taekwondo is the Korean art of self-defence and played at the top level requires a high degree of fitness and co-ordination. The sport involves a rapid series of punches and kicks and hence a high degree of high-intensity anaerobic activity is required. However a high level of aerobic fitness is also needed to enable the athlete to recover from the quick bursts of activity as well as to maintain performance throughout several rounds and during a tournament.

Taekwondo competition consists of 3 x 3 minute rounds with 1-minute rest in between each round.

During a tournament athletes maybe required to compete from 5-8 times over a day to reach the finals. The weigh-in period is 1 hour on the morning of the competition and there is usually 1-2 hours between the weigh-in and the start of competition. This time between weigh-in and competition, although brief, will provide the athlete with a small window of opportunity to fuel-up and consume some fluids.

Taekwondo is a weight-category sport, see table below for weight division categories. As with other weight-division sports athletes aim to compete at the heaviest weight for that division in order to achieve a weight advantage over a lighter opponent. To achieve this athletes often train “heavy” (anywhere up to 5 kg over their “ideal” weight division). However, prior to competing athletes typically try to decrease their body weight over a short period of time in order to compete in a lower weight division – this can be an unfavourable method of pre-competition preparation and rapid weight loss is not recommended for any athlete. See below for more suitable pre-competition nutrition strategies.

Weight division	Female	Male
Fly weight	< 49	< 58
Feather weight	49 – 57	58 – 68
Welter weight	57 – 67	68 – 80
Heavy weight	67 >	80 >

### Training Diet

Taekwondo athletes often opt to compete at a weight category that is lower than their normal weight and at a weight that is not easy to maintain, hence it is not uncommon to see athletes adopting “drastic strategies” in order to achieve a rapid amount of weight loss just before competition. These constant weight loss strategies, such as severe food and fluid restriction, excessive exercise, the use



of saunas, laxatives and diuretics can lead to other nutritional goals being compromised.

In order for athletes to reach their maximum nutrition potential during training it is important to be adequately fuelled and hydrated. Along with good training and recovery athletes should incorporate a nutrition plan which provides adequate nutritious carbohydrates (wholegrain cereals, pasta, rice, fruits and vegetables) to ensure a ready source of energy, a protein source (lean meat, chicken, fish, beans and legumes) to assist with muscle recovery and repair and also importantly that the diet is low in fat. This will ensure a lean physique is achieved and enable the athlete to maintain a weight that is close too or only 2-3 kg over the most suitable weight category.

### **Making Weight:**

It is important that athletes chose their weight category based on competition goals, previous weight/skinfolds, period of growth, and most importantly must consider a minimum weight which will allow for good health. Generally it is optimal for athletes to keep their weight within 2-3 kg of their competition weight, this enables the athlete to minimise the number of nutritional strategies needed to be implemented. This will also provide the athlete more confidence that the weight can be achieved, without the need for last minute desperate measures. In the 2-3 days before competition athletes should avoid excessive salt consumption which will assist with minimising fluid retention and hence weight. Some athletes try to fast before competition to minimise the amount of food inside the gut, however, this may prevent optimal pre-competition fuelling. A wise alternative is the use of low residue foods consumed 12-24 hours before competition (e.g. low fibre cereals, white breads, PowerBars™, and liquid meal replacements), these foods can minimise the amount of undigested food in the gut, whilst providing a source of carbohydrate and fluid.

### **After the Weigh-in and pre-event**

In the sport of Taekwondo athletes weigh-in on the morning of competition, and then the actual competition will start 1-2 hours afterwards. This can lead limited time for refuelling and re-hydrating before the first round, however, an organised athlete can ensure they have plenty of ready-to-consume snacks to kick-start the re-fuelling and re-hydration process. Quick and easy snack foods include sports drinks, liquid meals (Sustagen Sport), fruit, yoghurt, flavoured milks, sports/cereal and power bars.

### **Fluid Needs**

Some athletes who have not taken their nutritional preparation seriously can be left with the need to dehydrate to make weight. This can be foolish as excessive dehydration can be detrimental to performance as well as increasing the risk of heat stroke. An athlete needs to be smart with their nutrition to plan for a gradual



reduction in skinfolds and weight to avoid the last minute dehydration strategies; the use of saunas and sweat suits can be avoided if an athlete plans well. To ensure adequate levels of hydration start following a good drinking plan the day before competition. A good indication of adequate hydration status is to check that early morning urine is clear or pale.

### **What Should I Eat / Drink During Competition?**

To ensure that athletes keep fuel stores 'topped up' all meals and snacks should be consumed regularly throughout the day. This is particularly important during competitions where an athlete may compete 5-8 times throughout the day and the opportunity to eat may be limited. If an athlete is very nervous prior to competition and finds it difficult to eat, a liquid based snack (e.g. Sustagen™ or sports drink) may be more suitable.

In situations where large gaps occur between meals e.g. between lunch and an evening training session a high carbohydrate snack 1-2 hours prior to training is recommended. See box below of examples of snacks that provide 50g carbohydrate that would make suitable pre-training snack ideas.

### Recovery Foods

Sometimes it is not possible or practical to have a main meal straight after training. In these situations it is recommended to consume a snack immediately after training which provides approximately 50-100g of carbohydrate combined with a source of protein. This promotes muscle repair and initiates the recovery process. Snacks should also be combined with a source of fluids to help replace any fluids lost during the training session.

- **Snack ideas which provide 50g of carbohydrate:** \*indicates snacks that are combined with protein
- Bowl of breakfast cereal with low fat milk\*
- 800-1000mL sports drink
- 2 cereal bars
- 200g carton of yoghurt with a cereal bar\*
- 3 pieces of fruit
- 250-300mL low fat fruit smoothie\*
- 1 roll with meat/cheese and salad\*
- 1 roll with jam or banana filling
- 2 toast with jam or honey



## **How to get involved**

Taekwondo Australia website - <http://www.taekwondoaustralia.org.au/>

Taekwondo School in Australia - <http://www.tkd.net/schools/Australia.htm>

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