

NUTRITION FOR WATER POLO

Water Polo is a very physical contest as players are expected to perform repeated high intensity sprints in moving up and down the pool. Once play has been established at the attacking end of the field, players will wrestle with their opponents in an effort to gain an advantage in field position to create a better goal scoring opportunity. Typically, players will be rotated in and out of the game regularly as there are unlimited substitutions allowed throughout the game.

Training

National level water polo players will train twice daily (more during intensive training camps) including swim training sessions, water polo specific sessions, gym workouts and games. Given the importance of achieving or maintaining a robust physique, players will routinely undertake 3-4 gym sessions a week, with a particular focus in off-season of increasing muscle mass. Players will typically swim 3-5km in conditioning swim sessions, with water polo specific sessions lasting one-and-half to three hours.

Physical Characteristics

Elite female water polo players have higher body mass and tend to carry additional body fat compared to elite level female swimmers. Physique requirements vary with positions, with centre forwards and centre backs generally being heavier and stronger than goal keepers and drivers. The additional size provides a physical advantage in terms of buoyancy and physical contact (e.g. wrestling) during the game. Average height, weight and sum of seven skinfolds for Australian women water polo players are listed in Table 1. National water polo league (NWPL) players and national water polo (NWP) squad members are represented. Interestingly, national team squad members are heavier and taller than their Australian national league counterparts.

Table 1. Anthropometric characteristics of national water polo league (NWPL) players and national water Polo (NWP) squad players (mean \pm S.D).

	NWPL Players (n = 12)	NWP Players (n = 16)
Height (cm)	169.6 \pm 4.4 *	174.1 \pm 5.3
Body Mass (kg)	65.8 \pm 8.4*	73.6 \pm 8.0
Sum 7 SF (mm)	116.4 \pm 33.9	97.9 \pm 21.1

*Indicate significant difference from NS players.

Common Nutrition Issues

A hectic schedule requires planning

In Australia, water polo is an amateur sport. As such, players have other commitments such as work or study scheduled throughout the day in addition to daily training sessions. A key issue for water polo players is to organise their daily snack and meal routine in order to optimise daily training and facilitate recovery between training sessions. It is common place for players to travel straight to work or University immediately following morning training. Athlete friendly options are rarely offered at the pool, work or university cafés, hence the importance of being prepared before embarking on a hectic day of training. Players need to be organised and ensure they have a range of nutritious snacks, rich in carbohydrate and protein, on hand to initiate refuelling and repairing of muscle after training. Below are some examples of snacks that have sufficient carbohydrate and protein to optimise recovery.

Resistance training

By timing suitable pre and post-exercise snacks or scheduling meals around training, athletes can maximise their response to regular resistance training. As previously mentioned, regular weight training is an integral component of the training schedule of elite water polo players. The following is a list of snacks designed to provide adequate protein and carbohydrate to maximise the response to weight training.

Appropriate pre-strength training snacks 30-60 minutes before a weight training session:

- 200g tub of low-fat fruit Yoghurt/Custard/Rice Custard
- 1 piece of fruit with tub of yoghurt/1-2 slices of toast with glass of reduced-fat milk
- Lean meat/fish/chicken sandwich
- Crackers and cheese
- Liquid meal supplement (e.g. Sustagen™)
- Fruit and Nut mix – handful (50g)

Appropriate post- training snacks if your next meal is not scheduled within 60-90 minutes:

- 250-300ml liquid meal supplement
- 300g creamed rice
- 250-300ml milk shake or fruit smoothie
- 600ml low fat flavoured milk
- 1-2 sports bars (check labels for carbohydrate and protein content)
- 1 large bowl (2 cups) breakfast cereal with milk
- 1 large or 2 small cereal bars + 200g carton fruit-flavoured yoghurt
- 220g baked beans on 2 slices of toast

- 1 bread roll with cheese/meat filling + large banana
- 300g (bowl) fruit salad with 200g fruit-flavoured yoghurt
- 2 crumpets with thick spread peanut butter + 250ml glass of milk
- 300g (large) baked potato + cottage cheese filling + glass of milk

Travel to overseas countries

Water Polo is played throughout the world, particularly in Europe. As a result, our players often spend several months a year overseas, with some players basing themselves in Europe playing in one of the many semi-professional or professional leagues. For some athletes, life away from their favourite foods and daily meal schedule can be difficult. It is important for players to adjust their daily food selection and timing of meals to accommodate a new cuisine and lifestyle in order to meet their daily nutritional requirements.

A unique aspect of travelling as a water polo team overseas is that the accommodation and meals are arranged by the host country. This can mean staying in 5 star establishments when travelling to countries where the national water polo federation is well funded, to staying in sub-par accommodation where meals are inadequate in meeting the requirements specific to athletes. Many of our players will take a small supply of their favourite snack foods such as fruit and nut mix and cereal bars, along with specialised foods items such as sports bars, liquid meal supplements and sports drinks.

This fact sheet is based on National team athletes and is therefore specific to these athletes. Written by AIS Sports Nutrition, last updated February 2014. © Australian Sports Commission.