

## FACT SHEET

# FOOD FOR YOUR SPORT – SNOWBOARDING

## ABOUT SNOWBOARDING

Snowboarding is a winter sport that has been enjoyed both recreationally and competitively since its inception in the 1960's. Since then, the rate of uptake of this sport has increased rapidly, going from a small sub-culture on the snowfields before debuting as an Olympic sport at the Nagano Winter Olympic Games in 1998.

There are a number of events within snowboarding. The Olympic events include parallel slalom, parallel giant slalom half-pipe, snowboard cross and slopestyle.

Snowboarding is an intermittent sport which can be both a sprint and endurance sport with frequent changes in directions and acrobatics intermixed. The sport requires the development of muscular strength, power and agility. Body composition of athletes will differ according to events however, typically, muscular and lean body types are advantageous, especially for events involving aerial acrobatics.

A key characteristic of snowboarding to note is the extreme environments in which the sport is undertaken. Temperatures can range from 5 degrees Celsius to -25 degrees Celsius and at altitudes from 500-2000m above sea level, placing an athlete's body in greater amounts of physiological stress than typical athletes training at sea level.

## TRAINING DIET

A general healthy eating pattern helps to support the needs of snowboarders. Nutrition is often based around lean proteins for muscle repair and recovery, carbohydrate appropriately timed for fuel. In addition, fruit, vegetables, nuts, seeds and wholegrains provide important vitamins and minerals, along with some healthy fats.

Individual nutrition requirements will be determined by training load, specific athlete needs, training goals, body composition goals, health and adjustment for growth.

Due to the cool climates and higher altitudes in which training for snowboarding takes place, there are a number of physiological adaptations that occur, including

vasoconstriction and increases in respiration rate and blood pressure. Further to this, metabolic rate can be as much as 10-15% higher than for sports undertaken at lower altitudes due to greater energy demands on an athlete's body. The extreme environment can also reduce immune function and impact iron status and vitamin D levels.

Due to the increased energy requirements that occur at altitude, avoiding excess weight loss (especially loss of lean muscle mass) and optimising dietary intake are key nutritional goals for snowboarding athletes. Matching energy needs to athletes is therefore very important. Carbohydrates are the most important fuel source for snow sport athletes, as there is a greater dependence on glycogen stores in cool climates. Protein intake is also important to maintain lean muscle mass and promote recovery between sessions, and should be included at every meal and in snacks.

Carbohydrate rich snacks that are easy to carry with the athlete can be important in making sure that energy requirements are met. Snacks might include:

- Muesli bars
- Dried fruit or trail mix
- Sports bars
- Energy gels or sports chews

In events where body composition changes are required for performance improvements, energy intake will need to be adjusted in collaboration with a qualified Sports Dietitian, to ensure optimal health and body composition.

## FLUID NEEDS

Fluids are lost during snow sports primarily due to sweat loss, higher rates of respiration, and exposure to altitude. However, fluid restriction and deliberate dehydration are common amongst snowboarders due to limited access to fluids and to toilet facilities on the snow. Fluid can also provide warmth during training and competition. Taking a thermos flask with drinks such as tea, coffee, soups and Milo helps athletes to rehydrate as well as keep warm.

There is also the opportunity to refuel by adding a carbohydrate source to the warm drinks, such as honey, hot chocolate powder or meal replacement drinks.

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Individual fluid needs will vary between athletes and an individual plan can be developed with an Accredited Sports Dietitian.

The aim is to start any exercise session or competition well hydrated. This requires drinking regularly throughout the day leading up to training or competition. Having a drink with all meals and snacks is a good start.

## EATING BEFORE COMPETITION

It is important to practice fueling prior to competition to assess tolerance, and not to try anything new on the day of competition. Each athlete is different, but a pre-event meal is typically eaten around 3 to 4 hours before the start of the event. This meal should contain some carbohydrate for fuel as well as some fluids for hydration. Some suitable pre-event meal ideas include:

- Toasted cheese and tomato sandwiches
- Hot porridge with banana and cinnamon
- Pasta with beef mince in tomato-based sauce
- Chicken noodle soup with bread rolls

If solids don't sit well before competition, or snowboarders are very nervous, a liquid source of protein and carbohydrate such as a fruit smoothie can be a good option.

## EATING AND DRINKING DURING COMPETITION

During snowboarding competitions, there may be many heats in one day. Because of this, it is important to keep easy to carry carbohydrate rich snacks such as muesli bars and dried fruit on hand to top up energy stores between heats. Appetite may be suppressed in the cooler climate, so it is important to have a plan for regular meal or snack breaks on competition days rather than rely on hunger.

Fluid intake should be consistent across the day, as thirst cues may not be as apparent in cooler weather. Use warm teas sweetened with honey or hot chocolate in a thermos flask to top up carbohydrate stores and providing warmth.

It is important to remember that drinks and snacks will freeze when left in the cool conditions, so be sure to use thermos flasks and heat snacks to keep food at edible temperatures!

## RECOVERY

There are three key components of recovery nutrition:

- Refuel muscle glycogen (carbohydrate stores)
- Repair muscle (for function & development)
- Rehydrate (replace fluids lost through sweat)

After long training sessions or competition days, a recovery meal or snack should be eaten as soon as possible to replenish depleted muscle glycogen and repair muscle damage. This can be difficult, as there may be a delay in accessing recovery food during the time on transportation between snowfields and accommodation.

Plan to have a small carbohydrate and protein rich snack which is easily consumed, such as a sports bar, on hand while travelling. Keep this close to your body in pockets to ensure it is not frozen by the end of the session. Continue recovery with a meal once back at the accommodation.

Some recovery food suggestions include:

- Avocado on toast with poached eggs
- Minestrone soup with bread rolls
- Burritos with beef, cheese, avocado and salad
- Chicken stir-fry with rice or noodles

## OTHER NUTRITION TIPS

- **Check iron levels** Low iron stores are a concern when training and competing at high altitudes. Monitor iron levels, especially if feeling fatigued over a long period of time. Iron supplements should only be taken if prescribed by a medical doctor as excess iron intake can be harmful.
- **Consider Vitamin D supplementation** Vitamin D levels can be low, especially if living at altitude as typically very little skin is exposed to the sunlight (which is the main source of Vitamin D). Routinely checking Vitamin D levels with a medical doctor is recommended.
- **Learn to cook!** Snowboarders are required to travel a lot for their sport, and may need to move overseas at a young age. Learn meal planning and cooking skills is important for a smooth transition out of home.