

## **NUTRITION FOR TRACK AND FIELD (JUMPS)**

### **Training**

Elite “jumpers” train all year round concentrating on speed endurance running, plyometrics, and heavy strength weights in the off-season. Coming into competition phase, the emphasis is on speed, specific technical sessions in the pit and developing strength and power. Bounding and technical sessions have a high physical impact on the body, therefore working on flexibility and core strength is a year round focus.

### **Competition**

Major competitions for elite “jumpers” are the Olympic Games, World Championships and Grand Prix Circuit. Most Australian “jumpers” spend the winter months overseas returning to Australia to compete in key selection events during the Australian summer. The domestic season commences in November and continues until March, culminating in the National Championships. At junior and recreational levels, competitions are usually held on a weekly basis during the summer months.

### **Physical Characteristics**

Power-to-weight ratio is important for “jumpers”, therefore maximising muscle mass and maintaining low body fat levels is desirable. For all the events, particularly high-jump, a significant vertical leap is advantageous.

## **Common Nutrition Issues**

### **Training Nutrition**

Jumpers need to consume sufficient carbohydrate to fuel training needs, however carbohydrate requirements do not reach the level of endurance-type athletes. Given this, daily carbohydrate should reflect daily exercise levels. Jumpers need to be mindful of maintaining low body fat levels but still need to eat a sufficient variety and quantity of food to meet nutritional requirements and allow for the development of muscle mass. Diets need to be nutrient-dense. This is best achieved by including a wide variety of nutrient-dense carbohydrate sources such as bread, cereal, fruit, vegetables and sweetened dairy products in the diet. Moderate portions of lean sources of protein such as lean meat, chicken, eggs, low-fat dairy foods, lentils and tofu should also be on the menu. Energy-dense foods such as cakes, pastries, lollies, soft drinks, chocolate, alcohol and takeaways should be used sparingly.

Appropriate snacks need to be included before and after training to maximise performance

during training and to promote recovery. The quantity should match the intensity and duration of the ensuing training session with an emphasis towards carbohydrate for the sprinting sessions and carbohydrate/protein for weight training.

A good base diet will provide adequate nutrients and energy to enhance adaptations from training, support optimal recovery and avoid excessive food-related stress.

### **Low-Body Fat Levels**

Power-to-weight ratio is an important determinate of performance. Jumpers require low body fat levels whilst being strong and muscular. Low body-fat levels usually occur naturally for male athletes, however, they often need to reduce total body mass leading into the competition phase. Some of the additional muscle mass gained in off-season weight training is not sport specific, therefore needs to be trimmed to achieve an ideal body composition for competition. Female jumpers often need to manipulate their food intake and training to achieve their desired body fat levels.

Jumpers needing to reduce their body fat level should target excess kilojoules in the diet. In particular, excess fat, sugary foods and alcohol can add unnecessary kilojoules and would be better replaced with more nutrient-dense foods.

### **Preparation for Competition**

Since jumps will not deplete muscle glycogen stores, the day of competition is best tackled with glycogen stores topped up to their usual resting level. This can be achieved with the athlete's usual carbohydrate intake and 24-36 hours of rest or very light training.

Hydration and gastrointestinal comfort are important considerations pre-competition. Jumpers need to feel comfortable, confident and 'light' on the runway. A reduced fibre intake may be helpful in the 24-36 hours before competition. Products such as liquid meal supplements may be useful as a pre-event meal.

### **Competition Day Food and Fluid**

A single jump involves only a brief explosion of energy and does not significantly affect muscle glycogen stores. However, competition may drag out for many hours whilst each competitor takes a turn. Qualifying rounds usually last for two hours or more. The main focus of competition eating in these events is to maintain blood glucose levels, maintain hydration and maintain a comfortable stomach.

Sports drinks are useful to assist with meeting fuel and fluid needs during competition. It is important to experiment in training so that you can be confident of your routine on competition day.

*This fact sheet is based on AIS / National team athletes and is therefore specific to these athletes. Written by AIS Sports Nutrition, last updated June 2009. © Australian Sports Commission.*