NUTRITION FOR TRACK AND FIELD (THROWS)

Training

Elite throwers train all year round. The base or off-season usually involves a considerable commitment to weight training, mostly in general and functional maximum strength. General fitness with light aerobic sessions are also included. In addition, off-season training focuses on refining technique with a combination of sessions on the runway or in the circle and drill work to improve certain aspects of the run up in javelin or rotation/glide in the other throws. As the competitive season approaches, extra emphasis is placed on high quality throwing sessions but with continued work in the gym focusing on power development rather than general strength.

Competition

Major competitions for elite throwers are the Olympic Games, World Championships and Grand Prix/IAAF Circuit. Most Australian throwers compete in key selection events during the Australian summer. At junior and recreational levels, competitions are usually held on a weekly basis during the summer months in the southern states and over the winter in the northern states. A throwing competition consists of a qualifying round where athletes either have to throw a particular qualifying distance or finish in the top 12 to qualify for the final. Within the final, the top 8 throwers after 3 throws qualify for another 3 throws. After the first 3 throws, the throwing order changes to reflect the placings at that point, with 8th place throwing first through to 1st place throwing last for the remaining 3 throws.

Physical Characteristics

Previously, it was thought that throwers needed to have a large body mass, but a good power-to-weight ratio is important for throwers to generate speed onto the implement both prior to and during the release. Long levers (arms and legs) also help in propelling the implement as the release of the implement can occur further ahead of the throwers body.

Common Nutrition Issues

Training Nutrition

Throwers need to consume sufficient carbohydrate to fuel training needs, however carbohydrate requirements do not reach the level of speed or endurance-type athletes. Throwers need to be mindful of eating sufficient variety and quantity of food to meet nutritional requirements and promote recovery between sessions. Diets need to be nutrient-dense. Moderate portions of lean sources of protein such as lean meat, skin-free chicken, eggs, low-fat dairy foods, lentils and tofu should also be included in moderate amounts throughout the day. 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. Snack foods such as yoghurt, fresh fruit, low-fat flavoured milk and sandwiches are all nutritious fuel foods and make good snacks.

Body Size

In the past, throwers have had higher body fat levels, but there is a trend towards ensuring that body mass is functional. Muscle is able to generate speed and be carried across the circle or down the runway more efficiently than fat. However, body fat levels are often individual and dependant on total body size. Some throwers may need to reduce body fat levels leading into the competition phase to further enhance their power-to-weight ratio. Throwers needing to reduce their body fat level should target excess kilojoules in the diet. In particular, excess fat, sugary foods/ drinks and alcohol could be reduced to assist with fat loss without compromising the nutritional value of the athlete's diet and muscle mass.

Preparation for Competition

Throwing events do not deplete glycogen stores and therefore carbohydrate loading before a competition is not necessary. Rather, the elite thrower should continue to follow a meal plan similar to that used in training. A slightly lower total energy intake may be required, given that energy needs are not as high as training loads taper off in the days prior to competition. The support of a dietitian in preparing a competition nutrition plan can be particularly valuable in getting the fuel supply right.

Competition Day Food and Fluid

On the day of competition, the priority is intestinal comfort - avoiding hunger but not risking the discomfort of a full stomach. The type of meal will depend on the timing of the event (including qualifying round and final) and personal preferences.

The following foods are suitable to eat 3-4 hours before exercise:

- crumpets with jam or honey + flavoured milk
- baked potato + cottage cheese filling + glass of milk
- baked beans on toast
- breakfast cereal with milk
- bread roll with cheese/meat filling + banana
- fruit salad with reduced-fat yoghurt

The following foods are suitable to eat 1-2 hours before exercise:

- liquid meal supplement
- milk shake or fruit smoothie
- reduced-fat yoghurt
- fruit

Suitable choices may not be available at the competition venue. As such, athletes should be encouraged to bring along their own supplies of food and fluid for the day ahead. Experiment with any new nutrition regimes in training, to ensure normal routine on competition day. Take care to drink adequate fluid when competing in hot weather.

For travelling tips see Nutrition tips for travelling athlete's factsheet.