NUTRITION FOR TRACK CYCLING

Track cycling involves a number of sprint and "track endurance" events. Both individual and team events exist. These include pure sprint events such as the individual and team sprints; long sprints such as the 500 m and 1000 m time trials and the Kieren; middle distance events such as the individual and team pursuits; and endurance events such as the Madison, scratch, handicap and points races.

The main events are summarised below.

Event	Gender	Distance	Time Taken	Key Nutrition Considerations
Sprint	Men	3 laps	< 60 secs	Preparation
		3 laps	< 60 secs	
Team Sprint	Men	3 laps	< 60 secs	Preparation
		Women	2 laps	
Time Trial	Men	1000 m	60+ secs	Preparation Recovery between heats and finals
		Women	500 m	
Standing Lap	Men	1 lap	>15 secs	Preparation
Kieren	Men	2000 m	~ 2 mins	Preparation Recovery between heats and finals
		Women	2000 m	
Individual Pursuit	Men	4000 m	4 mins 20+ secs	Preparation Recovery between heats and finals
		Women	3000 m	
Team Pursuit	Men	4000 m	4 mins+	Preparation Recovery between heats and finals
Scratch Race	Men	15 km	15+ mins	Preparation Hydration
		Women	10 km	
Points Race	Men	40 km	40+ mins	Preparation Hydration
		Women	25 km	
Madison	Men	50 km	45+ mins	Preparation Hydration

Training

Training varies according to the type and number of events being raced. Sprint track cyclists generally focus on short high quality repetitions with long recovery, as well as strength training to build lean body mass. For longer sprint events, athletes also include some longer sessions and endurance rides. Longer track events such as the Points Race, Madison, and Kieren are generally suited to endurance trained road cyclists, who compete in these events in their off season or during major events such as Olympics and World Championships. With a good endurance base and short periods of sprint training, road cyclists can excel in track endurance events.

Competition

Elite track cyclists compete at World Cups, World Championships, Commonwealth Games and Olympic Games. Cyclists are often required to complete a number of heats and finals over one or many days. Competitive recreational cyclists may compete weekly during the racing season. Cyclists often compete in several events and are required to contest a number of heats and finals.

Physical Characteristics

The physique of sprint track cyclists is characterised by large muscle mass and low body fat levels. A high percentage of fast twitch muscle fibres helps maintain high cadences. Endurance track cyclists are typically leaner and lighter, similar to road cyclists.

Common Nutrition Issues

Training Nutrition

Sprinters need to optimise muscle mass and minimise body fat levels to achieve an optimal power:weight ratio. This requires a carefully balanced intake. Consuming excess total energy can lead to an increase in body fat. However, restricting energy intake in an attempt to achieve an ultra-lean physique can cause loss of muscle mass.
Sprinters need to consume a variety of nutrient-dense foods and match carbohydrate needs to their training load. Protein requirements are similar to other sprint athletes, being around 1.6-1.8g/kg of body weight.
Overall, a healthy balanced diet containing a wide variety of nutrient dense wholegrain breads and cereals, fruits and vegetables will help a sprint cyclist meet their nutritional requirements and manage weight. Regular serves of lean meats, poultry, fish, eggs, legumes and low-fat dairy products will help to meet protein, calcium and iron requirements.
If body fat levels become a problem, it may be necessary to increase energy expenditure and focus on ensuring carbohydrate and energy requirements are not being over estimated. Recovery is crucial to track cyclists. Recovery can be optimised by consuming a

mix of carbohydrate and protein before and after training sessions. Endurance track cyclists are best referred to the road cycling fact sheet for training nutrition advice.

Preparation for Competition

Body fuel stores are not a limiting factor for single sprint events. However, when contesting a number of races over a day, fuel demands can be high. Cyclists should aim to begin competition sufficiently fuelled, well hydrated, and a comfortable stomach. In most cases, track cyclists can prepare for competition by maintaining their usual healthy eating habits. Generally, carbohydrate loading is not required for sprint events. Longer events such as the Madison may be an exception.

Competition Day Food and Fluids

Pre-competition meals should be familiar and individualised. For sprinters, the meal does not necessarily need to be a high energy meal but should contain foods that the athlete enjoys and tolerates. For longer track endurance events the pre-competition meal should contain plenty of carbohydrate to top up fuel stores.
Track bikes do not have bidon cages and it is often unnecessary or impractical to drink during a race. Therefore “Pre” and “Re” hydration strategies are especially important for longer events and multiple race competition days.
Sprinters need to assess the opportunities between events to eat and drink. The aim is to consume sufficient food and fluid throughout the day to ensure the cyclist is in peak condition at the end of the day when the competition really counts.

Travelling

Elite track cyclists compete worldwide. Athletes often fly in to compete only 1-2 days before racing. Managing jetlag, in particular minimising dehydration, is important to see cyclists ready for competition on arrival. Athletes who travel regularly, need to be aware that traveling reduces training loads therefore reduces energy requirements. This is also a consideration for endurance trained road cyclists coming back to compete on the track. Adjusting food intake to accommodate the reduced requirements can help avoid unwanted weight gain.

Supplements

There are a number of supplements that may appeal to track cyclists trying to gain an edge over their competitors. However, the majority of these are not supported by scientific evidence. Some products that may be useful to cyclists are described below. It is important to note that supplements are only useful as an addition to quality training and a good diet. Most junior and recreational athletes will gain more benefit from perfecting training and dietary practices than from using any particular supplement. For further details, see the AIS Sports Supplement Program.

Supplement	Suggested Uses
Carbohydrate Gels	Compact energy source for a quick carbohydrate hit, Potentially useful for multi-event competition days and as an energy source for athletes who have trouble with solid foods before competition
Sports and Cereal Bars (e.g. PowerBars)	Good source of carbohydrate for fuelling and refuelling. Suitable protein/carbohydrate mix to facilitate recovery from resistance training sessions. Handy snack between events and on longer training rides.
Liquid Meal Replacements (e.g. PowerBar Protein Plus)	Recovery from resistance training and heavy training sessions. Can be used between events if short breaks don't allow time to eat. Pre-race when solid food is not tolerated.
Sports Electrolyte Drinks	Between events for rehydration and refuelling, especially in hot environments. Good for pre-race hydration.
Buffering agents	High intensity short duration track events such as (e.g. pursuits) to neutralise lactic acidosis.