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PERFORMING WHEN
IT COUNTS



It may seem a bit of a no-brainer to suggest that your plans and preparations for competition in relation to nutrition are as vital as your training sessions. After all, why would you risk jeopardising weeks, months and even years of preparation through a lack of planning relating to your fuelling strategy?

In this chapter you will find out:

- That carbohydrate, water and salt levels need to be optimised before competition in order to get the best out of yourself
- How 'carbo-loading' can be beneficial to events that last more than 90 minutes
- The importance of planning, refuelling and hydrating strategies, so they are right for competition
- Making sure your pre-competition food has enough carbohydrate and how to recover in order to sustain performance

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Unfortunately, with so much emphasis on training for your event, sometimes other considerations are not made until the last minute. As an athlete on the world class plan, this process needs to be as natural to you as your training schedule. After all, you need to ensure you get your diet right before, during and in the recovery from the event. And if, as is the case in some events, you have more than one round a day, it's even more important that you recover properly before competing again.

FUELLING UP FOR COMPETITION

In the immediate few days before competition, you may be tapering down training levels. During this time, it is important to eat correctly and match your requirements to that of a more moderate training regime. However, it is still important to focus on carbohydrate as the main source, to ensure that energy stores are stocked-up for the competition.

In the first instance, you must make sure you restock your glycogen stores from training – particularly if your event lasts longer than an hour. Otherwise you are already at a disadvantage against your opponents.

If you are competing for less than 90 minutes, you can stock up by resting for about a day beforehand and consuming carbohydrate – about 7-10g per kg body weight. All athletes would do well to realise that a day's rest or light training whilst eating a carb-rich diet, is sufficient to restore glycogen levels (see chapter three for more details relating to carbohydrates).

CARBOHYDRATE LOADING

If your event continues for longer than 90 minutes, then you are likely to benefit from carbohydrate loading to maximise your glycogen fuel stores prior to the competition. This can be achieved by reducing training levels (both intensity and duration) and at the same time eating a large

amount of carbohydrate (around 8-10g carbohydrate per kg body weight per day) for 2-3 days before the event. Whilst an athlete may find they are gaining some weight following a carbohydrate loading phase – this is normal. You may also feel heavy in the early stages, but you will feel the benefit later.

Factsheet 8 show examples of foods over a day providing 8-10g carbohydrate per kg body weight to meet the carbohydrate loading diet needs of three individuals with different body weights. By using similar foods, you can see what happens to foods and

quantities in different circumstances.

At present, it is mainly thought that carbohydrate loading is useful for endurance events such as marathons. However, with any change in diet, it is worth having a look at how increased carbohydrate intake affects your performance in training, to gauge if it suits your needs and requirements. The only certainty is that low carbohydrate stores will impair performance.

Other considerations you may wish to consider:

- carbohydrate loading has also

been shown to increase exercise performance in the heat, so this is something worth experimenting with in training if an event is in a hot climate

- both male and female athletes will benefit from carbohydrate loading, providing both energy and carbohydrate intakes are also adequate
- if too many competitions close together make it difficult to carbo-load effectively, then try to fuel up as much as is practical and prioritise the most effective loading for the more important events or finals



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PRE-COMPETITION MEAL

As well as having a strategy for fuelling in the days approaching an event – what happens in the hours before can also be significant. If you eat a carbohydrate-rich meal about 3-4 hours before the event, it is thought it can enhance performance by helping to maintain blood glucose levels.

Pre-competition meals can also help to stock inadequate muscle glycogen stores and restore liver glycogen stores which get depleted during the night. Restoring liver glycogen stores is particularly essential for competitions that start in the morning.

It is important to be aware that for an athlete, the majority of events will take place in the evening – meaning you are used to preparing yourself for competition at a latter part of the day. Then when you come to compete at a major championships some athletes

can be caught out by having to compete in the morning. The exception to this may be a marathon runner, for whom many of the key races will take place in the morning hours.

Although carbohydrate is especially key for endurance athletes, for the shorter events that do not cause fatigue or deplete carbohydrate stores, then there does not need to be such an emphasis on carbohydrate for the pre-competition meal.

For intense competitions that last longer than an hour, such

Other considerations

- Don't forget to experiment with different foods and amounts during training – you need to find foods which not only provide energy, but also reduce hunger, settle the stomach and are convenient and practical
- Choosing low GI carbohydrates for the pre-competition meal sometimes helps sustain the delivery of carbohydrate during exercise but does not necessarily improve performance, particularly when additional carbohydrate can be consumed during the event
- Carbohydrate does not need to be eaten in the hour or two before competition, providing carbo-loading has taken place in the 2-3 days before competition and the competition is not late in the day
- Early morning events can make it hard to decide what to do. It is hard to get up early enough to have a meal 3 or 4 hours prior to the event without reducing the sleep needed – you may prefer a lighter meal or snack and to continue to fuel whilst competing
- If you suffer from stomach problems: if you consume meals prior to an event, it is advisable to choose foods low in fat and low in fibre, as well as low to moderate protein. Liquid meal supplements/replacement meals or carbohydrate-containing drinks and bars are also easier to consume

as endurance races, plus for competitions where there are multiple events or rounds in one day, then it is recommended that athletes consume 1-4g carbohydrate per kg body weight during the six hour period before competing.

Factsheet 9 demonstrates examples of pre-competition foods that provide 1-4g carbohydrate per kg body weight for three individuals with different body weights. Similar foods have been used to illustrate what happens to foods and quantities in different circumstances.

CARBOHYDRATES – IMMEDIATELY BEFORE AND DURING?

For some athletes, a carbohydrate snack 30-60 minutes before exercise can be beneficial, providing they don't have a sensitive stomach when eating before exercise.

The most important factor is to get the balance and amount right, e.g. if pre-exercise carbohydrate is needed, it is important to consume more than 70g, and best to opt for high GI carbohydrate. If 50g is consumed, the body expects carbohydrates to be made available for fuel, but the small amount does not provide enough to sustain the effort.

In fatiguing events that last longer than an hour then it is advisable to consume 30-60g per hour of rapidly absorbed carbohydrate, as this can improve performance. This intake is best achieved by taking feedings every 10-30 mins, event permitting – as this can help provide a steady flow of glucose into the bloodstream.

Remember: planning and practising is everything – only try new strategies in training. See chapter three for a list of pre-exercise snacks that provide at least 50g of carbohydrate.

INCREASED FAT – BETTER BEFORE EXERCISE?

There is limited research concerning increasing fat

availability in the diet for endurance performance.

The theory is that it will reduce the call on carbohydrate usage and delay the onset of carbohydrate depletion and fatigue. Increasing fat availability before an event – whether it is immediately before or a matter of an hour – can reduce carbohydrate usage, but it is not certain this will enhance exercise performance.

If an athlete finds that fat adaptation can be an effective strategy for enhancing their performance, then it is best to opt for brief exposure over a prolonged period of increased fat consumption. It should be thought of as a pre-competition tactic rather than a long-term nutritional strategy. However, it should be experimented with during training to discover whether it suits you and improves performance – the ultimate outcome.

HYDRATING PRIOR TO COMPETITION

As stated in a previous chapter, since a degree of dehydration will occur during competition, good hydration is essential before competing. Therefore, pre-competition preparation should also consider hydration levels, to ensure fluid and salt losses from previous training or competition have been optimally replaced.

- Hydration strategies are an essential aspect of pre-competition planning and

are discussed in more detail in chapter five. But the main points in summary are:

- athletes should drink sufficient fluid the day before competition to ensure that they are well hydrated
- different drinks strategies, including over-hydration etc. should be tested out during hard training sessions that mimic the competition effort
- before competition, drink around 400-600ml of fluid (with or without carbohydrate) in the 60-90 minute period before competing
- it may help to drink 300-500ml of fluid in the 10-15 minutes prior to strenuous events that last longer than an hour
- once again, it's fundamental that you plan and practise hydrating strategies that you intend to use. It is not advisable to try out new drinks or hydration strategies during important competitions!

THE FINAL WORD

There is no point in adopting any of the strategies discussed in this chapter if you are not physically prepared following your training and last competition – therefore, recovery is the key. Recovery is part one of fuelling for your next session or competition. It should not be neglected or you will already be one step behind your opponents.