



V8 Supercars

November 2009

About the sport of V8 supercars

While some people may sit back and watch a bunch of (most often) men driving around a track as a bit of fun, V8 Supercar racing is no longer a past-time for people with an abundance of money. It is a multi-million dollar series demanding physical and mental fitness similar to that of many Olympic athletes. This perpetually evolving sport, is always pushing the limits of technology and engineering. It is also becoming increasingly demanding on the drivers and thus many teams are now dedicating greater resources not only look at what is fuelling the car, but what is actually fuelling the driver!

Grade of racers

The V8 Supercar series is split into two tiers; the V8 Supercar Championship Series, and the V8 Supercar Fujitsu Series. Within the V8 Supercar Championship Series the majority of drivers are professional, whilst there are fewer professionals in the Fujitsu series and more 'privateers'. The Confederation of Australian Motorsports (CAMS) also runs a Driver Development Program (DDP) for some drivers who may race V8 Supercars as well as other disciplines.

This can take up a significant part of each week during the season as well as on race weekends and is a major consideration when designing any nutrition and hydration plan. In the Fujitsu Series nearly all drivers have to balance either studies or work with their motor sport. Some drivers in the Konica Series are also required to fulfill a significant level of commitment to sponsors and the media.

At the time of writing the Championship series is the only truly professional category of circuit motor racing within Australia. An increasing number of teams are consulting with dietitians, not just for the drivers but for pit crew members, mechanics and other team members. The drivers have significant responsibilities, not only to their racing but to the plethora of sponsors and media that are essential to every driver's career.

Training

Since each practice/test session on the track is very expensive (and limited by regulations) the majority of training for drivers takes place in the gym, and various forms of cross training. Competing in triathlons and cycling/mountain biking are favourites amongst some drivers. While the driver of yesterday would have scoffed at the idea of going to the gym to improve one's driving performance, you would be hard pressed to find a single driver who doesn't make some effort in the physical fitness department to give them an edge!

Competition

Currently there are 13 races in a season; spread between the start of March and the first weekend in December. This is a pretty standard spread for all forms of motor racing around Australia (although most other categories have significantly less race meetings).

The majority of races in V8 Supercars follow an endurance format of between 300 kilometers (approximately 2 hours 15 minutes) and 500 kilometers (2 races of 250 kilometers over 2 days, roughly 2 hours each).

There are still some sprint races which follow a 3 race format over 2 days. These races are 150 kilometres each or 50 minutes of continuous competition. Some race formats and dates tend to change year to year, so strategies must change accordingly. For the Bathurst 1000 (6 hours 45 minutes) and the Sandown 500 (3 hours 45 minutes) the driving duties are shared between 2 drivers.

Physical Characteristics

Since the sport is largely skill based, it is logical that it does not select for a particular body type. Driver ages also range widely. The majority of athletes are in their late 20's to early 30's, but the ranges for the Championship series and Fujitsu series have been 21-50yrs and 18-57yrs respectively.

Nutrition Issues

Mental vs. Muscular Fatigue

Physical or muscular fatigue is less of a performance factor in V8 Supercars than mental fatigue. The ability to concentrate for long periods of time can determine the outcome of the race. To prevent mental fatigue athletes need to minimise the effects of dehydration by drinking adequate amounts before the race and during the race; where a fluid delivery system is available. Topping up fluid and carbohydrate stores between races can also help prevent fatigue.

Minimising dehydration: a hydration plan

Dehydration of 1.5-2% (1.1-1.5kg for a 75kg driver) can significantly affect both physical and mental performance. In a long race, in a hot cabin, drivers are unlikely to prevent dehydration totally. Studies of relatively short races with Supercar drivers in hot conditions show cabin temperatures above 50°C, with the average sweat losses of 3% of bodyweight.

These conditions would be taxing enough, but are further exacerbated by the triple layered fire-proof suit, fireproof underwear, gloves, socks, helmet and boots.

To offset large losses of fluid that are likely to occur in the race drivers need to have a plan for:

- Drinking adequate amounts in the days leading up to the race
- Drink 400-600 ml of fluid 2 to 3 hours before the race, providing adequate time to urinate any excess
- Have the equivalent of a glass of fluids immediately before the race
- Use any available fluid delivery systems regularly throughout the race
- Drink lots after the race to replace fluid losses, especially if you have another race that day or the day after

Commitments with the media, sponsors, race engineers and AVESCO mean that race day can be very hectic, thus a well constructed plan should be prepared ahead of time. As with the car, drivers should have a standard plan that they execute, counting backwards from the time the race starts, in order to be best prepared for the challenges that lie ahead over the day/race meet.

This routine should be practiced in training or at less important events and in different environments (cool, moderate, hot) to be fine-tuned for important events.

One important consideration with regards to hydration is urine output. Adding sodium, or drinking fluids containing sodium may help decrease urine output, particularly when dehydration becomes significant (>2% of body mass).

Sodium is in sports drinks primarily because it appears to improve palatability and may be beneficial in maintaining the thirst response. The level of sodium in sports drink is quite low, and may not be optimal for decreasing urine output because of the palatability issue. A drink containing sodium, such as a sports drink or fluids with added electrolytes (e.g. Gastrolyte or Gatorlytes®) may be your best choice between races when dehydration has been significant. During races, sports drink with standard sodium concentration may be ideal since studies have shown less fluid is consumed as palatability decreases. Your Sports Dietitian can help you select the best drink for different competition situations.

Drinking fluids with a carbohydrate concentration > 8g/100ml (e.g. soft drinks, energy drinks, fruit juice) during exercise delays gastric emptying and slows fluid delivery. Therefore sports drinks or water are the best choices during driving, especially in hot environments where fluid demands are high. The addition of electrolytes may be useful, and expert advice from a Sports Dietitian would be necessary when considering this.

The need to stay cool is becoming increasingly important as cars run faster and hotter and a variety of implements such as cool suits or portable air-conditioning units are becoming more popular with teams.

Hydration Testing & Analysis

A qualified Sports Dietitian can perform hydration testing to determine the driver's sweat rate and sodium losses, and then devise a tailored hydration plan suited to the driver's individual needs.

What to eat pre-event

Food available at the circuit consists of a typical takeaway menu (deep-fried food, hamburgers, hotdogs, pies, etc). These high-fat, energy-dense options are not ideal pre-race so you will need to plan your own pre-race meals. Below are some options for breakfast, lunch and also for those who can't stomach a full meal pre-race.

- **Breakfast:** Cereal, toast and juice or baked beans on toast and juice
- **Lunch:** Sandwich(es) and juice
- **Lighter options:**
 - Smoothie with your favourite fruit (e.g. banana, strawberry or blueberry), low fat yoghurt, milk and honey
 - Powerbar™ Protein Plus® or Sustagen® Sport and a banana
 - Juice and a few cereal bars
- **Other snacks for between races or recovery:**
 - Sports drink (e.g. Gatorade)
 - Fruit Juice and/or pieces of fruit
 - Honey or vegemite sandwiches
 - Yoghurt
 - Packet soup + bread or low fat hot chocolate and marshmallows in cold environments

What to eat/drink during the event

Competitors have the opportunity to eat/drink in between sessions. There is usually a few hours in between sessions. Food available at the circuit consists of a typical takeaway menu (Deep fried food, hamburgers, hotdogs, pies, etc). Drinks available are a lot better, with water, Gatorade and PowerAde, taking more fridge space than the usual soft drinks, and energy drinks.

The ability to drink during a race will depend whether or not the driver uses a hydration system (e.g. Camel Pack or specialized in-car drinking systems). Having someone on the radio regularly reminding the drivers to drink at convenient points on the track (like long straights or when the pace car is on track) is especially important. If you are wanting to trial using a hydration system, try it during a less important race first. In hot environments sipping regularly rather than trying to ingest a lot of fluid in one go may be preferable. Taking a visual cue such as the finish line as a cue to drink can be a good reminder to sip regularly.

See our fact sheet on eating and drinking during sport for ideas on suitable foods and drinks [Eating and Drinking During and After Sport](#).

Fuelling a Fitness Program

The majority of drivers in the Championship Series have a fitness program. This has filtered down through the ranks to the development categories where drivers as young as 16 are being introduced to the benefits of physical fitness and a nutritious eating plan.

A good training diet should supply adequate carbohydrate to match energy needs, moderate amounts of protein and fat, as well as supplying enough vitamins and minerals. Your specific needs will depend on the amount and type of training you are doing. A Sports Dietitian can help to plan meals and snacks to get the most out of your training and performance. Click [here](#) to find a qualified Sports Dietitian near you.

The V8 Supercar Championship Series now takes place in all states of Australia, New Zealand, and one round in China (click [here](#) to read more about nutrition and eating in China).

Most drivers are likely to buy food before and after they arrive at the track, however many now have team caterers who prepare their food during the day. Most teams would cater for guests and sponsors, planning ahead can ensure that the people 'putting on the show' are well looked after too!

A word on caffeine

Some drivers also consume caffeine in the form of cola drinks, tea, coffee energy drinks to help prevent fatigue, especially when they feel their "energy levels are low". Drivers who do this should inform themselves about the beneficial and detrimental effects caffeine in various forms and amounts can have and make an informed decision on using it. Click [here](#) to read more on caffeine from the AIS fact sheet on caffeine for more information, and check with your governing body on the current status on whether or not caffeine use is banned.

For more information

Go to www.v8supercars.com.au for more information, championships and opportunities to get involved.

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