



fittips

Fuel on the move

In the early days of the Tour de France, the standard drinking receptacle was a glass bottle – probably containing wine or beer! – and was carried in a shirt pocket or shoulder bag along with tools and spares. There were no fancy bottles, cages or drinking systems, and aid stations were found along the route, usually in the shape of a local bar or tavern. Fortunately, technology has moved on and there are now many ways to carry fluids when cycling, running, walking, or engaging in any activity.

Cycling

The traditional frame-mounted cage and bottle has changed little in the last thirty years, and still provides a very effective means of carrying fluids on long journeys. It does, however, have its disadvantages. Firstly, you must sit up to drink – breaking your rhythm and making you less aerodynamic – and, secondly, once emptied, the bottle cannot be refilled and becomes excess baggage.

A more aerodynamic option is the Camelbak type drinking system – a plastic bladder with a feeder tube contained in a small rucksack which

holds up to two litres of fluid. With this system, the rider is more aerodynamic when drinking as there is no need to change riding position to drink. The downside is that, once emptied, like a bike bottle, it becomes a burden.

Triathlon has massively increased the pace of technological change in cycling. Renowned for their gadgets, a particular favourite of the triathlete is the aerobar mounted drinking bottle. These allow you to drink comfortably and without disrupting your rhythm with just a nod of the head. An added advantage is that they can be refilled easily on the move through a large capacity neck plugged with a porous foam stopper. When combined with a behind-the-seat bottle mounting system, you have the ultimate aerodynamic drinking system.

The disadvantage is that the added weight on the handlebars can affect the handling of the bike, and it is also easy to spill the fluid over your bars when refilling or if you're on a bumpy road. In time, this can lead to problems such as sticky handlebars, brake lever corrosion and damaged cycle computers/heart rate monitors.

The behind-the-seat bottle cages can also cause problems when climbing out of the saddle, as they can add up to 3kg in weight at the top of the bike, making it sway to a greater degree as you climb. It can be necessary to modify your riding style when using these systems.

Running

Most long distance road races have aid stations, so the need to carry fluid when racing is lessened. However, during training, it can be essential to carry fluids, especially on warmer days or during longer runs.

Runners have three choices. For short runs, you have the running flask – a squashed donut-shaped bottle that is easy to grip, but carries comparatively little fluid. Next, you have a simple bottle belt that carries a standard plastic bike bottle. If you're particularly thirsty, or conditions dictate, you should consider using a Camelbak system. For most people the choice between these two systems comes down to



Photo: Ultra-Fit Images/Nigel Farrow



price and comfort, as the Camelbak is carried like a rucksack whilst the bottle belt is carried on the waist. The bottle belt has the advantage that you can easily change bottles, whereas once the Camelbak is empty it becomes redundant. Recently, a cross between the two has entered the market – a sort of bumbag with a drinking bladder in it.

Other activities

Whilst the Camelbak is hard to refill on the move, it has many advantages over carrying bottles. The Camelbak system is available in

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rucksacks, Nike utility vests and bum bags as well as in its own bag. Its no-hands feeding ability make it ideal for activities that preclude you holding a bottle, such as cross-country skiing, climbing, mountaineering, adventure racing etc. And, unlike a bottle, when it's empty, it packs down into your rucksack with no dead space.

How much, and when

During any endurance-based activity, it's essential to maintain both fluid and energy levels to maintain performance. If you dehydrate enough to lose 1% of your body mass, then your performance can deteriorate by as much as 10%. In some cases, if you don't drink, you won't finish.

The drink itself is a very personal thing as every athlete has different tastes and tolerances. It is therefore essential that you test

SQUEAKY CLEAN

Always remember to flush out your drinking system after use as it will inevitably grow new and wondrous lifeforms if left in your car boot for a week. Because modern sports drinks provide all the nutrition that bacteria need to breed at an alarming rate, good hygiene is essential when using any drinking system. All drinking systems should be properly washed and disinfected prior to storing with their lids removed. It is also a good idea to sterilise your bottles with either baby bottle sterilising fluid (found in most chemists) or by using denture sterilising tablets – simply drop half a tablet into a bottle full of clean water.

your fluid choice in training prior to competition. Even the pros have made this error, and the consequences can be a ten hour-plus Ironman, rather than victory.

As a ball-park starting point, a drink made of simple sugars (glucose) should not exceed a concentration of 5% (50 grams in a litre of water), whilst a complex carbohydrate drink (maltodextrin, Teknofuel, Maxim) can be absorbed at concentrations as high as 15% (150 grams per litre). Experiment to find which brand and strength suits your tastes and needs. If you're racing in very hot conditions, then you'll probably want to reduce the amount of carbohydrate in each litre as you will drink a greater volume of liquid at a higher rate than you would in standard climatic conditions.

Now you have the drink, you have to decide when to drink it and how much to consume. Ideally you should try to consume one litre per hour, broken down into fifteen-minute segments. Again, it's down to personal taste – different people absorb fluids at different rates. Test when training and find a ratio that works for you. A good trick is to set the countdown repeat on your stopwatch so that it beeps every fifteen minutes to remind you to drink. This will help you to drink when you don't actually feel thirsty. If you wait until you're thirsty, it's far too late.