

A DAY IN THE LIFE OF A TEAM DOCTOR

– *Written by Roger Palfreman, Qatar*

There are 17 professional road cycling teams at the WorldTour level – the elite tier in professional cycling. These are the teams who get automatic invitations to take part in the world's greatest cycling races such as the Tour de France and the 'monument classics' – one day races, such as Paris-Roubaix and the Tour of Flanders.

Each team has up to 30 riders and a great many supporting staff; among these are the team doctors – medics with a passion for cycling and the great fortune to be able to combine their working life with their favourite sporting activity. They have a variety of different professional backgrounds; some trained as general practitioners/family doctors and then developed an interest in sports medicine, others are sports physicians, while there are even a few orthopaedic surgeons who also manage to fit being a team doctor into a hectic surgical practice. Very few work full-

time in cycling – most work 50 to 100 race-days per year and spend the remainder of their time in a more conventional medical role.

Jobs are rarely advertised and employment is usually on the basis of individual contacts and personal recommendation. Many of the team doctors have been involved in the sport for more than 10 years and occasionally switch from team to team, usually when their current team disbands due to the withdrawal of their main sponsor.

THE RACING SEASON

The racing season runs from February to October and comprises several different types of races, each presenting distinct challenges for both riders and their medical support staff: single-day races, short stage races (lasting up to 1 week or so) and Grand Tours – the Tour de France, Giro d'Italia

and Vuelta a España which are 3 weeks in duration. It is unusual for riders to excel at all three forms of racing.

Single-day races occur frequently throughout the racing calendar – a small number of these races are designated 'Classics' based on their heritage and degree of difficulty, and competition to win them is both fierce and intense. Top one-day riders generally need the ability to make repeated short, sharp efforts towards the end of a long race and, ideally, possess a good sprint.

Short stage races (typically 7 to 10 days in length) are prestigious events in their own right, but are also used as 'fine tuning' just prior to racing a Grand Tour. A successful performance requires many of the qualities required for a Grand Tour, such as the ability to ride well on mountain stages, but with fewer demands on recovery processes. The winner is the rider with the smallest aggregate time from each of the daily stages.



Image: Getting to know the riders is an important part of the job.

Grand Tours last 3 weeks and are composed of a combination of flat stages, undulating stages, mountain stages and time trials (an individual ride against the clock). Top riders need to be outstanding climbers and proficient time trialists, with high sustained power/weight ratios. The ability to recover from repeated days of hard effort is paramount. This contrasts with the more explosive power demanded of single-day racers.

Most WorldTour teams employ between four and six doctors, each covering around 50 to 100 race-days per year. Given that there are up to 30 riders in each team, it's not unusual for the team to be involved in two or three different races simultaneously, each race requiring medical support. Grand Tours ultimately demand almost 4 weeks of a doctor's time, since riders and staff arrive several days prior to the start. It is

not unusual for teams to have one doctor for the first half of the race, then switch to a colleague for the remainder ('split Tours'), in order to reduce the time spent away from home. Doctors assigned to single-day races and short stage races usually cover the race in its entirety, however.

In addition to races, doctors may be asked to provide medical support at training camps. Most teams hold their pre-season training camps in December or January. This is one of the few occasions in the year when the entire team will be present in the same location and it provides an ideal opportunity for new riders and staff to meet their colleagues.

Training camps during the racing season are often held at altitude – Tenerife being the most popular location with the top teams, since it allows riders to reside at altitude in the hotel (2000 m), yet descend

to lower levels for more intense training (the live high, train low principle). It is usual for one of the medical staff to be present for at least part of the camp, given the importance currently afforded to altitude training in preparation for major races.

MEDICAL PREPARATION FOR A RACE

Medical planning for a Grand Tour often begins several months prior to the race. For most other races, though, it usually starts the week before – the rider roster is usually ready at this point, so a quick message is sent to all the riders to make sure there are no health issues and to check if they need any medications or supplements bringing out.

Next, the race profile is reviewed, whether it's a single-day race or a stage race. If the race contains a time trial and the weather is likely to be hot it's important to



Image left: The mountain hotel Parador at altitude in Tenerife is a popular base for an altitude training camp.

Image below: Complete medical equipment when travelling light.



ensure that appropriate equipment for the pre-race warm-up has been included on the packing list, such as cooling fans, ice vests and facilities to make ice slurry drinks.

One week prior to the race it's usually possible to get fairly accurate long-range weather forecasts – whether it may be warm, cold, dry or wet. In hot and humid conditions race drinks will be modified to increase sodium content and this needs to be confirmed with the team's nutritionist.

At certain times of the year it's also important to check for predicted level of airborne allergens. For riders with a history of allergic rhinitis or asthma it may sometimes be wise to advise them to increase their medications prior to the race, as a prophylactic measure.

Packing medications and equipment

While it would be ideal to transport a wide variety of medicines and medical equipment to races, most teams impose limitations on how much their team doctors can carry with them. Partly, this relates to the additional airline transportation cost, but it's also a result of the limited storage space available on the team bus and team cars when at the race. It's not unusual to be restricted to a single 20 kg suitcase for all personal effects (including clothing), medications and medical equipment! In such situations, it's only possible to carry essential and emergency items and to rely on purchasing all other medicines from local pharmacies on arrival and prior to the start of each stage. When it's proving

difficult to find a certain medication in the local pharmacies, doctors from other teams will often help out.

On the other hand, some larger, better-resourced teams may allow their doctors to carry all necessary equipment and medicines with them to races. This is a much better situation, particularly when a certain medicine is needed urgently or is not available in the local pharmacies.

THE DOCTOR'S ROLE AT THE RACE

For the majority of races, staff and riders arrive 1 or 2 days before the start. This gives the chance to catch up with the riders and make sure they're in good health, get a list of their current medications and supplements (needed if they're notified for doping control at some point in the proceedings) and even perform baseline lung function tests for those who occasionally experience respiratory symptoms while racing.

From the outset, it's essential to be vigilant for potential infection risks to the riders, whether at the hotel, on the team bus or during interactions with other people. Infectious illness may not only impair the performance of the person concerned, it also has the potential to spread to other riders. The key strategies are to maintain good hand hygiene practices and to avoid high-risk situations, such as frequent hand shaking. Some teams even go to the extent of disinfecting hotel rooms prior to occupying them!

THE DAILY ROUTINE

It's not uncommon for Doping Control Officers to arrive unannounced at the team hotels early in the morning, before breakfast. Frequent blood and urine tests (as part of the Athlete Biological Passport) are all part of a professional cyclist's life and the doctor should accompany any of his riders who are

required to attend doping control. This is to observe the sampling procedure, making sure it follows accepted practice and also to provide a list of riders' medications and supplements for the Doping Control Form.

However, unless it's a single-day race, most mornings are not interrupted by anti-doping matters, in which case the riders will call in to the doctor's hotel room on their way to breakfast for a health check – a few brief questions on how they're feeling and whether there were any issues sleeping, followed by an accurate measurement of body weight and urine-specific gravity. Reference values for urine-specific gravity are constructed for each individual rider, so that deviations from the norm can be recognised. A fall in body mass of more than 1 to 2% from the previous day raises the possibility of inadequate replenishment of glycogen stores (underfuelling) or residual dehydration, particularly if there was a high thermal load that day. In such cases, the urine-specific gravity can be used to decide which is the most likely scenario of the two. Riders deemed to be underfuelled are advised to take an additional 100 g of carbohydrate with breakfast, while those considered more likely to be dehydrated will drink extra fluid and electrolytes before the start of the day's stage.

Following breakfast, the procedure differs, depending on whether it's a single-day or multiday (stage) race. Stage races usually involve changing hotels on the majority of days, in which case luggage and non-essential medical equipment has to be loaded onto the team truck or sprinter van for direct transfer to the next hotel. An essential medical kit stays with the team doctor at all times.

There is normally a transfer of up to 2 hours to the start of the day's racing, so all riders and some staff (including the doctor) will make this journey on the team bus, while others will get there using one of the team cars. This time can be used to catch up with the riders, change dressings for those who sustained injuries during the previous days or simply catch up on emails or administrative tasks.

Most teams aim to arrive at the start at least 1 hour before the race gets under way. The first item on the agenda is the team talk, delivered by the lead Directeur Sportif (DS),



Image: The lead Directeur Sportif gives the pre-race brief.

who is essentially the team's manager for the race. This takes the form of a Powerpoint presentation, covering the race tactics, course profile and anticipated weather at various points along the race route.

Once this is finished, the riders start to prepare themselves for the race, changing into race clothing and selecting their race food (typically a combination of freshly-made rice cakes, energy bars and sports gels). There is now the opportunity for team doctors to head for the nearest pharmacy, should they need to buy any essential items or stock up on their existing medications – it's quite common to meet colleagues from other teams while at the pharmacy, as they tend to follow a similar routine!

Sometimes the weather is likely to be a factor in the day's racing. If hot weather is predicted the Wet Bulb Globe Temperature (WBGT) can be checked at the start of the race, bearing in mind that this may not reflect conditions later in the race and at another location on the course. The results may suggest changes to the clothing choices of the riders (such as use of mesh jerseys), the sodium content of the race drinks or ensuring that ice socks and electrolyte tablets will be available from the team cars.

Conversely, when it's likely to be cold or wet, hot drinks and technical clothing become the priority.

DURING THE RACE

The doctor usually spends the race in one of the two team cars, which follow on behind the riders. Also in the team cars are the two Directeur Sportifs, who are in overall charge of the team and dictate tactics during the event by advising the riders over their race radios, and the two mechanics, there to address any unwelcome problems occurring with the bikes, such as punctures, malfunctioning powermeters or subtle changes needed to the riding position. The mechanics' toolboxes, spare wheels, as well as drinks bottles and spare race clothing all have to be accommodated inside the cars, which means there is very little room for medical equipment and only a small emergency bag is usually kept by the doctor's feet in the front of the car. This contains a few medicines, pocket mask and airways, dressings and motion sickness tablets for the doctor or mechanic – travelling at speed on twisty roads when not actually driving the car can cause severe travel sickness!

The main role for the doctor during the race is to assess riders in the event of a collision and attend to any injuries. The first indication of potential trouble is when a crash is announced on the race radio, often accompanied by a list of affected teams. If the rider gets up immediately, then he can be assessed at the car as he attempts to rejoin the race and any skin wounds and other injuries attended to. If he doesn't get up the doctor needs to get out of the car and check the rider's condition at the roadside; it's important to consider the possibility of a spinal injury, head injury or serious fracture, as well as the more frequent upper limb injuries. A quick concussion screen should be performed before the rider gets back on their bike – any other matters can usually be dealt with a little later, while he holds onto the side of the moving team car.

Fortunately, in most races there are not many crashes. In this case, it's usual to assist with passing drinks bottles and food to the riders and also when riders need to make clothing changes (particularly when the weather is cold or wet). Depending on which DS is in the car, the doctor may be asked to help by listening carefully to the race radio and noting down the names of riders at the front of the race and any associated time gaps. Such information allows the DS to determine tactics as the race unfolds. Liaising by mobile phone with other staff situated at roadside feeds, suggesting changes to drinks or food as a result of the weather conditions or terrain may also be necessary.

As the end of the stage approaches it can be quite a tense time. If there is likely to be a bunch sprint, the risk of a high-speed crash is much greater and there is always a sense of relief when all the riders cross the finish line unharmed. Attention then turns to doping control – if one of the team's riders has been selected for anti-doping the doctor needs to make his way to the control, most often a mobile unit located somewhere in the finish area. It's the doctor's job to make sure his rider gets through this procedure as quickly as possible so that the recovery process is not interrupted. This includes taking the recovery food and drinks into the waiting area inside, being very proactive in getting the rider to the front of the queue



Image: The team doctors often head to the nearest pharmacy before the race gets underway.

to provide a sample, then liaising with the team to provide transport to the hotel (or team bus, if still present at the finish). It's important not to overlook infection control too, as it's common for a lot of handshaking to take place while in the anti-doping unit – the doctor should always carry a hand sanitiser along!

If there has been no doping control, the doctor gets back onto the team bus at the finish and checks over all the riders, attends to any skin wounds and assesses them for any other injuries. It's not that unusual for a rider to complete a race with a potentially serious injury, such as a fractured wrist or elbow. A quick decision has to be made regarding the need for further investigations in hospital in such cases – this is no small matter if you're in a country where English is not widely-spoken and/or access to healthcare is likely to be problematic. If it's a single-day race, it's often easier for the rider to travel home and seek medical attention once there, providing they're able to do so. It all depends on the nature and potential severity of the injury.

AFTER THE DAY'S RACING

Assuming there have been no significant injuries or need to seek hospital

investigations, for all but single-day races there will be a transfer by team bus to the next hotel. Sometimes this takes only a few minutes, though anything up to 3 hours is possible on some stage races. Riders usually have pre-prepared hot food ready for them on the bus, along with a choice of several different recovery foods and drinks. Some riders use pneumatic compression garments applied to their legs to help reduce muscle soreness. Those with skin injuries will use a different compression device that simultaneously cools the affected body part. It's vital they follow the correct recovery protocol in order to be ready to race hard again the following day. It's a good idea to keep a check on the riders' recovery strategies, as some of them need a few gentle reminders when they're very fatigued after a hard day in the saddle.

Once at the hotel, riders go for massage. This is also a good time to briefly check on the riders again, before they go for their evening meal. Larger teams take their own chefs (and mobile kitchen) to races, but then eat their food in the hotel dining room. However, one or two teams even have their own mobile dining room, so riders don't actually eat at the hotel. While the riders enjoy their evening meal, there



Image: The two Directeur Sportifs drive the team cars during the race.



Image: The team car is the doctor's office on a race day.



Image: Following the race from a team car.

is usually a Performance Team meeting on the bus, attended by the two Directeur Sportifs, physiotherapist, sports scientist/nutritionist, doctor and, if present, the team's Performance Director. This is a chance to discuss all riders' injury or health problems, any staff issues, reflect on the day's racing and plan for the following day. Following this, the doctor records all the day's relevant medical information in the Electronic Medical Record. By this time, the riders have usually finished eating and have returned to

their hotel rooms to prepare for bed. While this usually signals the start of dinner for the staff, the doctor needs to see the riders again for one further check. Sometimes this means missing the evening meal and, instead, snacking on protein bars or other recovery food from the team bus. It's quite common for work to finish at around 11pm at night, so it's usually lights out shortly afterwards, ready in time for another early start the next morning another day, another stage, another hotel, but the same routine!

*Roger Palfreeman M.B.Ch.B. (Hons), B.A.
(Hons), Dip.S.E.M., F.F.S.E.M.*

*Clinical Liaison for Sports Science
Aspetar – Orthopaedic and Sports
Medicine Hospital
Doha, Qatar*

*Former Team Doctor, BMC Racing Team
and Team Sky*

Contact: Roger.palfreeman@aspetar.com