

Glenn Coltman's Tips for Preparing for Cycling in Time Trials and Triathlons

The key thing about Time Trials and Triathlons is that you need to be properly prepared. Preparation involves ensuring that you have the right equipment, have trained effectively, eat correctly, and have good technique. This is not an in-depth guide but it highlights the areas you need to focus on to get the most out of Triathlons and Time Trials. In addition, good preparation will ensure that you enjoy your cycling more because you will be more comfortable on the bike and will be conditioned to achieve your aims.

EQUIPMENT

Tyres: For a competition you want your Tyres at the maximum recommended pressure. As well as lowering the rolling resistance, it will help avoid punctures caused by pinching. Large soft tyres add rolling resistance and mean you will have to put more effort into riding. Road tyres are much thinner and smoother and need higher inflation pressures. If you only have access to a mountain bike, then you need tyres that are closer to road tyres as possible for riding on the road. There are many brands and types of road tyres; we all have our own thoughts about the best ones, but do make sure you use quality makes.

Chain: Your chain should be cleaned and lubricated before and after use. If you allow your chain to get rusty, it will mean that you have to work harder when you ride.

Brakes and Gears: Brakes should be checked to ensure that they are working well and not rubbing. Your gears should be checked and adjusted to ensure that they shift smoothly.

Toe clips or clip-less pedals: Toe clips are not expensive and help keep your foot firmly attached to the pedals. This will ensure that the energy from your leg is transferred efficiently to the pedals, without your feet slipping off the pedals. In addition, they help you to pedal circles as described below. Clip-less pedals are used with bike shoes and cleats that lock into the pedals – these are even more efficient. If you are going cycle regularly then I believe that these are a great investment.

Road bike versus mountain bikes: Road bikes will be noticeably faster on the road. Mountain bikes tend to make the rider adopt a more upright position. This leads to increased air resistance. So, the most important differences are the riding position that a road bike allows because of the frame geometry, handlebars, tyres, and the weight. However, this advantage is shrinking as mountain bikes are becoming lighter. If you only have a mountain bike, you can improve your riding position by making sure the handlebars are low enough to allow you to adopt as low a profile as possible so your body is not acting as an air brake.

Shoes: Stiff soled shoes are important because they help transfer energy efficiently. This is important when you push down with your leg it does more than just bend your shoe but transfers the effort onto the pedals.

Aero bars and wheels: In my opinion, these are important additions to your bike if you are going to take part in competitions and keeping track of times and placing. Aero bars substantially increase the efficiency of your position by lowering air resistance and helping gain better times. They can add 1 mph or more to your speed on a flat road; this will translate to between 2 to 3 minutes savings over an hour time trial. A surprising amount of air resistance comes from the spokes cutting through the air and aero wheels can cut this air resistance. Whilst their effect is not quite as dramatic as aero bars, they can make a difference of ½ to 1 mph - sometimes more in the right wind conditions.

Seat height: Your legs provide the power for the bike, and your legs have the most power when close to extended. Therefore, you need to have your seat height to be adjusted so that at the very bottom of the pedal stroke your leg is just slightly bent. A good sign that your seat is too high is that your hips bounce when you pedal. In addition, if the seat is too low you may find that you get a pain behind your kneecap.

Back position: Much of the resistance you face at 20 to 30 mph is from the wind. There will be less wind resistance and you will be able to go faster if your back is as flat as possible when riding. At first such positioning feels unnatural, but it is much more efficient and you will quickly get used to it.

BASIC TECHNIQUES

Peddalling Circles: It is more effective to use your feet throughout the pedal stroke, not just pushing downwards. Pulling back when the pedal is going through the bottom of its cycle and pushing over the top are a skill that needs practicing; it also requires that you use more muscle groups and have trained properly. You should also that you should be pulling up when the pedal is moving up. Put simply, you need to be exerting as even a pressure as you can throughout the pedal stroke - and it helps to think of "pedalling circles". The main advantage of this process is that it keeps your legs from fighting each other. This takes practice and you will need to think about it a lot until it comes naturally.

Pedal Speed: When you first get on a bike, there is a natural tendency to ride at about 60 to 80 revolutions of the pedals per minute. The most efficient pedal speed for most riders is between 90 and 110 rpm on a time trial, depending on the terrain and the rider. This will require practice, so that eventually it becomes second nature; at first this will feel unnaturally fast.

Relaxed arms: Your elbows should be bent and you should have a controlled grip. It is important that you do not grip too tightly on the handlebars, or ride with locked elbows. Not only will this stop you wasting energy, but it will also help you to ride in a straighter line. In addition. If you lock your elbows, small bumps in the road will vibrate through your body and cause small handlebar movements.

TRAINING

Start your training carefully with realistic goals in mind. Exercise and cycling can be dangerous, so it is important that you monitor your performance and be sure that the training you do is realistic, healthy and not over ambitious.

Anaerobic Threshold: This is the point of exertion at which your body is just able to supply enough oxygen to keep the muscles operating at the same level. If you try to push harder you will go into oxygen debt, at this time your muscles begin to ache and you start to gasp for air. To succeed in a time trial or triathlon, you have to keep your body operating as close to this level as possible without crossing it. You can learn more about your threshold by using a heart monitor to keep track of where you are relative to your anaerobic threshold. If you do not have a heart monitor you need to learn to be aware of your exertion and assess how close you are to your anaerobic threshold.

If you train correctly you aim to ensure at least three things:

- Firstly you will raise your anaerobic threshold. The more you train, the more your heart becomes stronger. At the same time your blood chemistry becomes more efficient at carrying oxygen and nutrients to the muscles.

- Secondly, your recovery rate will improve. When you cross your anaerobic threshold and then ease up some it will take time until your system recovers so that it can operate efficiently again. The more you train the less time it will take you to recover - this means that you will be able to stick closer to your anaerobic threshold without crossing it.
- Thirdly, the more you train the more you will be able to exert yourself for a longer period. It is not possible to maintain a given pace indefinitely, but your training will help you maintain a given level for longer periods.

Endurance and Interval training: For triathlon and time trial vents, sprint speed is less important than your anaerobic threshold and your endurance. Endurance training can be done with 1 or 2 long rides a week, where you are riding longer than (sometimes several times) the distance of the race. These rides need not be require you to be pushing hard, and can often be done at a moderate pace.

Interval training is used to push yourself to maximum exertion, then going slightly above your anaerobic threshold for some time (say 1 to 8 minutes per interval). Then you ease back until you recover, and then go again. The benefit of this type of training is that it raises your threshold and speeds your recovery time.

This type of training will dramatically improve your times. Longer intervals should be done for longer time trials, while very short intervals can increase peak power and sprinting ability. Sometimes I mix them up or just concentrate on longer or shorter ones, depending on a forthcoming race. When doing longer intervals, of 2 miles or above, you will want to do fewer than if you are doing 1/2 mile intervals with a small incline. You can tell when you have done enough when you notice that one interval is substantially slower than the previous one. Having a standard interval can help you track progress and see what works best for you. Knowing your times around a given lap can be used to monitor how your training is going, seeing which workouts have been effective. It also helps you to gauge if you are over-trained or tired. Interval training is physically and mentally tiring - it is very important have recovery days between such training sessions.

OTHER TIPS

Nutrition: It is important to drink plenty of fluid while riding. You will quickly lose moisture through evaporating sweat and will not even notice. If this happens you quickly become dehydrated, which will cause you to slow down and possibly get cramp. The best hydration comes from a combination of water and an energy drink or fruit juice. As a basic rule of thumb you need one bottle per 30 to 45 minutes, and possibly more on very hot days. In any exertion of over 30 minutes it is essential that you have some water with nutrients in it. If you are riding for more than a couple of hours, you will need to take solid food like energy bars.

Warm up: If you want to get your body tuned up to race at peak efficiency and to protect your muscles, it is important that you warm up properly. You should make sure that you have already broken sweat and that your body is ready to efficiently by getting the blood moving around your muscles.

Some practical points: When doing training such as interval training you need to find a quiet place where car and pedestrian traffic is not a problem. Do not forget to always obey the rules of the road. Lastly, don't forget to have fun! Training should be fun and great chance to release some energy and enjoy the outdoors.