

RIDEUK24

RIDE UK 24 2013

TRAINING AND NUTRITION GUIDE

A GUIDE TO HELP BUILD UP YOUR FITNESS AND BALANCE YOUR NUTRITION IN
PREPARATION FOR BOTH THE MANCHESTER AND NEWCASTLE CHALLENGES



www.rideuk24.com



RIDE UK 24 TRAINING AND NUTRITION GUIDE

WHY TRAIN?

Training is a very simple process that gradually increases an individual's ability to perform a repeated task. By training regularly and pushing a little harder each time – with time to rest and to recover – Your challenge to accomplish cycling more the 250 miles in 24 hours can be achieved.

Training will enable you to develop your cadence. This is the speed at which your legs rotate (Rates Per Minute), helping you to improve your aerobic capacity; meaning that your heart and lungs will grow stronger and will be less stressed when cycling or exercising.

WHAT ARE YOU TRAINING FOR?

You will be essentially training in order to carry out a 24hr cycle ride. In order to accomplish this Ultra cycle challenge, you will need to develop your strength and your stamina. You will need to be able to cycle continuously without the onset of fatigue, this will only be achieved through building up stamina, learning to adequately fuel yourself through this type of challenge and mentally preparing yourself for the task ahead.

Ultra cyclists will have to possess high levels of aerobic endurance. This means that if you are going to succeed in endurance cycling, you need a well-developed oxygen transport system in order to deliver oxygen to your working muscles.

Your legs will be performing the same action continuously for a prolonged amount of time – so part of your training is to enable your legs to develop a natural cycling motion whilst increasing the ability of your legs to work more efficiently for a longer period of time.

The challenge for you is get from A to B and to enjoy the challenge of covering this enormous distance. By consistently working on your strength and endurance, we will get you there!



Training is a very simple concept; it is all about progressively increasing your ability to do just that little bit more and giving yourself time to adapt, recover and come back stronger.

HOW DO YOU TRAIN?

How much preparation time is required to complete a 24 hr ride with confidence? - That depends on your base level of fitness and your experience on a bicycle. If you have ridden a bike regularly for years, the preparation time won't be as long as for someone who is new to cycling.

Training for endurance is straightforward, but not easy. You simply need to do weekly long rides building up to 75% of your target distance. Every time you ride, your aerobic fitness will improve and you will develop something called 'muscle memory' and before long you will be able to cycle along at a reasonable pace without it feeling too hard at all. The best way to develop this muscle memory and endurance is to gradually build up the mileage by spending every increasing time in the saddle.

Whatever your level of fitness. It is important to warm up for at least 10 minutes before undertaking any exercise and to cool down for at least 10 minutes again after exercising.

THE TRAINING PLAN

The training plan works by gradually increasing your weekly mileage by building your aerobic capacity, this is called - Aerobic Conditioning.

The high levels of aerobic conditioning needed to give you this aerobic efficiency also holds another advantage, the ability to use a greater proportion of fat rather than carbohydrate for muscle fuel. Aerobic conditioning enhances the ability to use abundant fats while exercising, therefore sparing your limited but precious carbohydrate, stored in the liver and muscles as glycogen.

Nevertheless, the ability to use anaerobic metabolism is another training aspect that must not be neglected. In some cases, such as encountering a tough hill you will require a burst of speed – this will mean relying on a greater contribution of anaerobic metabolism to the energy supply. In other words, low intensity aerobic work alone is not enough if you want to succeed as a cyclist.

Sheer muscle strength is another essential requirement. Cycling, after all, is a power endurance activity, so if you have a high level of muscular strength, you will need to use a smaller percentage of your maximum strength to maintain the same workload.

For example your midweek rides can be shorter and can be completed at a slightly quicker pace, though still at that nice endurance intensity, with longer rides at the weekend to work on your ability to just keep going.

To develop your cadence you should select the gear that feels most comfortable when you are cycling on whatever gradient. If you can keep a steady RPM of around 60 - 70 most of the time this would greatly aid the speed at which you become cycling fit, and this will increase your strength and stamina which you can build on.

Don't worry if you miss the odd session. There will be times where the training feels like a chore and it all seems like too much. But persevere. Nothing in life worth achieving is ever easy so keep your eyes on the prize of cracking this long distance ride.

Beginner Cyclists/Moderately Fit - You should start your training regime at least 4 months in advance of your trip. Mileage should be built up gradually to avoid injury and over-exercise, and to establish a good base fitness on which to build the stamina levels you will need.

Cyclists/Moderately Fit - This category might include anyone who has been cycling intermittently over the years, perhaps by cycling to work in the summer or regular Sunday rides. As you will have a degree of basic fitness and confidence built up from previous cycling, 3 months or so of training should prepare you for the ride.

Cyclists/Fit - This category would include people who cycle regularly throughout the year whether it be commuting 20 miles or more to work a day or training seriously with weekend races and time trials. People within this category should already have a good training schedule and be amply fit to tackle ride.



DIFFERENT TYPES OF TRAINING

Training for a cycle challenge such as a 24hr ride, you will need to divide your time amongst the different types of training.

Muscular Endurance

Building up the combination of both strength and endurance is known as Muscular Endurance – Muscular Endurance is the ability to perform many repetitions against a given resistance for a prolonged period of time.

This training helps cyclists to cope with fatigue, to tolerate high levels of lactic acid and is suited for steady-state events – such as long distance cycling. Light loads are used so that exercises can be sustained for a prolonged period of time, with rest periods kept to a minimum.

For Example Half Squats, Leg presses, Calf presses, V-sit-ups, Bench presses etc.

Strength Training

Strength training programmes' for sport can help cyclists to improve their muscular endurance.

Basic strength programmes adapt the body for more strenuous resistance training. It targets the major muscle groups, tendons, ligaments and joints to help prevent injury. Exercises include squats, bench press, overhead press, leg press and calf press.



Cycling Interval Training

Interval training can be best described as bouts of exercise interspersed with short rest intervals. It is based on the concept that more work can be completed at a higher relative intensity compared to continuous-type training.

The intensity and duration of the work intervals and the length of the rest periods dictates the training response. All-out bouts of work coupled with longer rest periods are used for speed and speed endurance development.

Cycling interval training is an important to building up improvements in your performance. Cycling interval training means that you train in consecutive periods with a high heart frequency combined with resting periods and low heart frequency.

In between the intervals, you should not get a high heart rate. Stay on your bike in a very easy pace in about 60 % of your max Heart Rate (HR) until you have to run the next interval. Typically, the delay is about 10 min between each interval. You can increase this slowly to a 20 minute interval of 84-90% of max heart rate or include hill-sprints.

Rest intervals are a critical component of the interval training program design. In order to stress the aerobic system efficiently, short rest periods are incorporated into the session. The opposite is true for speed development.

Speed Training

Speed training requires maximal effort and a high quality of work, longer rest periods are more appropriate to allow the athlete to recover between work intervals. In order to enhance aerobic endurance and increase $VO_2\text{max}$ (*Maximum Oxygen Consumption) towards its upper limit, interval training should consist of 3-5 minute work bouts with a 1:1 work to rest ratio or less.

Hill Sprints

On a hill of about 5-9% gradient, find a segment that will take about 20 to 25 seconds to summit. You may get out of the saddle again for the last 10 yards to the top.

Then turn around and pedal easily back down the hill. Do not begin another sprint until your heart rate drops below 120 bpm (Beats Per Minute). Keep the bicycle as straight as possible, and ride in as straight a line as possible to the top.

For example – for the first couple of sprints, sprint up the hill using a low gear, once you find this comfortable then gradually increase the gear levels so that the sprints get harder. Building power and speed into your cycling program is a good way to add variety to your workouts. And there is no reason to repeat the same speed workout every week, because there are many options to getting the same job done.



DIET & HYDRATION

During the course of your Ultra cycle your body will require fuel, and being able to take on food and digest it whilst still in the saddle will be essential for you to complete the challenge.

For this type of event you are recommended to consume between 3,000 to 5,000 calories daily. What you eat when you start to train will have an impact on your cycling and energy levels. Initially weight maintenance may be the best gauge for caloric adequacy. If you are losing dramatic amounts of weight and find you are struggling to progress in your training due to fatigue, it is most likely a sign that you are not taking on enough calories to properly fuel yourself.

Carbohydrates should make up about 60 percent and protein should make up 20 to 25 percent of total calories. The rest should come from healthy fats.

- Make sure you learn what food will and won't work for you during the event.
- Learn how to adequately fuel yourself for the task at hand
- Understand what calories intake you will need to perform at your best.

Start experimenting with different types of food to find out what works for you.

On any cycle over 50 miles in length, you should integrate eating and drinking training. You need to train your body to process food and liquid while being active.

You will also need to figure out which foods you can digest whilst exercising, without feeling too lethargic or bloated afterwards or which foods may not agree with you at all. During the challenge you will be supplied with the carbohydrate rich you will need to complete the challenge. At Action Challenge we will aim to make different types of food available to cover most dietary requirements, however if you have an especially limited diet you may want to ensure you bring supplementary food with you to ensure that you have enough food to finish your challenge comfortably, should there not be anything you like at a rest stop. Below are some rough guidelines of what sort of fluid and calorie intake you will need to adequately fuel your body throughout the challenge.



Useful tips

- Everyone reacts differently and you need to figure out what works for you through practice, rather than finding out on the day of the event.
- Make sure you are adequately hydrated before you start the event, you should drink at least a litre of no more than an 8% carbohydrate solution.
- During the challenge you should be aiming to drink at least a litre of water every hour, you may want to double that in especially warm conditions.
- You will need to balance a diet of both protein and carbohydrate intake during the challenge along with a degree of fat intake.
- If you start to experience problems during the challenge, keep going, but reduce your speed and drink some simple sugar solution until you start to feel better.
- Avoid fizzy drinks, as they make you feel full as well as caffeinated drinks as they are dehydrating.
- After the event continue to hydrate, and eat a balanced meal.

Food and Nutrition

The basic science behind adequately fuelling yourself through an Ultra Cycling Event is recognizing that your useable energy is stored in glycogen, a form of carbohydrate, which is stored around the muscles and the liver; if you deplete your stores of glycogen too much then you will eventually hit 'the wall.' Therefore the secret to being successful in an Ultra is to train your body to access multiple glycogen stores effectively, whilst learning how to replace them during the challenge.

An athlete with only 5% body fat has enough energy stored in the fat to walk 100miles, so accessing and converting fat is the key to a successful challenge. Although you do have enough glycogen stored to cover the distance as a cycle, the conversion of glycogen takes time, which as a cycle you don't have, you will therefore need to supplement the glycogen stores with an intake of more immediate energy in the form of carbohydrate during your challenge. The best type of carbohydrate intake during your challenge is easily digestible complex carbohydrates such as cake, sandwiches, malt loaf, rice pudding and mashed potato. These work better than simple sugars as they provide a steady stream of useable energy, rather than swamping the system with immediate energy that will stop the body from converting carbohydrate to useable glycogen.



As well as carbohydrates you will also need to consume protein during your challenge. This is because there is a massive degradation of the muscles during an Ultra event, which can be minimized through the intake of protein whilst exercising. Performance has been proved to improve during with a regular protein intake, however during an event you will want the protein to be easily digestible so it is advisable to get it from sources such as cheese, yoghurt or soya protein drinks, rather than heavy meat.

It is also important to take in a proportion of fat during the challenge. This is because the body uses fat to convert protein and carbohydrates and is used to getting a portion of fat in most meals, therefore it is advisable to not distort the bodies usual pattern as under extreme stress this may be enough to upset your system.

Prior to event day you should focus on building up your glycogen store a couple of days before the event through eating more protein and carbohydrates. It takes a while for the food to reach the muscles as glycogen, so it is best to avoid binging on carbohydrates the day before the challenge as this will just leave you bloated and in need of the toilet.

In the few hours before the challenge starts you should try and avoid any substantial meals, but instead go for something easily digestible such as mashed potato, pasta or omelets.

HYDRATION

A litre of isotonic solution (no more than 8% solution is recommended) should be consumed in the hour before the start of the event.

Please remember that it is important not to overload on just water as taking in too much without an isotonic solution will just lead to you washing away your natural minerals and eventually cause cramp.

Managing your fluid intake during the challenge is extremely important, too little fluid before the event and during the first couple of hours will result in the body over-heating, dehydrating and eventually running out of energy; it is no good waiting till you feel thirsty

as by then it is already too late, your objective should be to drink at least a litre of water every hour you are on the course. Too much liquid or liquid of an excessive concentration will result in overfilling, heaviness, stomach cramps and eventual vomiting.

Remaining Injury Fee

Injury is an inevitable part of any athlete's journey and is unfortunately not something that can ever be 100% avoided. However there are things that you can do to minimize the likelihood of injuries occurring. The main advise to follow is not to over-train. Too many contenders start to panic in the final weeks leading up to the event and feel as though there is more they need to be doing to be adequately prepared for the event. However constantly hitting the road or the gym will only cause constant muscular niggles which threaten to hinder your training and lead to constant tiredness as you push your body beyond the sensible limits. This will in turn damage your immune system and lead to an endless stream of colds and lethargy.

If you want to build up your training volume, increase your mileage in small amounts, not more than 10% per week and remember the value of non-impact supports in looking after your joints. Also make sure your work out routine is varied to avoid overloading specific muscle groups. Balance heavy training with sufficient rest to promote healing and recovery.

Taking Care of your immune system

As mentioned above the key to successful training is to find over the course of weeks and months a workload you feel is challenging and progressive but is not so punishing that you spend all your spare time at the physio or are prone to constant colds as a result of overtraining that has weakened your immune system, leading to missed days and weeks of training.

However you also need to protect your immune system once you have finished your challenge as well. During the event your body will take a battering so you need to leave plenty of time to recover once you have completed the challenge. Your immune, system will be at an all- time low, so take vitamin and mineral supplements to prevent against infection.

Eat and drink well in the days immediately preceding the event to make sure your body has enough nutrients and proteins to repair the damage and tears inflicted on your muscles. Many athletes aren't very good at sitting still so if you do need to keep moving, try a period of "active rest" and indulge in light, low-impact exercise such as swimming, walking or cross training, but don't overdo it or you will soon find you have a cold coming on.



www.rideuk24.com



TIPS FOR ULTRA CYCLISTS

1. Develop a solid foundation by building up your mileage gradually, try to not go above 10% increase per week.
2. Treat your long cycle's like practice challenges, eat, drink and rest as you intend to on the challenge. The closer your practices are to the actual day of the challenge, the better prepared you will be.
3. Fit your training schedule around your life, not the other way around or you will soon find you won't be able to maintain it.
4. Don't forget to mentally prepare yourself for the challenge at hand. Physical fitness will only get you so far, you need to have your heart set on finishing, to complete an Ultra and to overcome the trial it presents.
5. Be prepared for every type of weather condition, don't be a fair weather cyclist as on the day you will have no control of the conditions. Get used to exercising in the cold and the rain, so you do not get a shock on the day.
6. Train using different mediums of exercise to build up muscle mass without impacting your joints, such as swimming or cross training. These will help maintain and improve your fitness levels whilst reducing the risk of injury or over-training.
7. Taper your training and allow your body to mend any strains that build up from extreme training. The reduced output will probably result in a slight weight gain, which is actually beneficial for longer challenges as the reserves will come in handy when your body runs out of glycogen.
8. The Event is not a race, it is a challenge. Concentrate on finding a pace that you can sustain for the duration of the course. Cycle your own event and enjoy the thrill of the challenge. If you burn out too quickly you won't make it to the end.
9. Think about and plan in advance what you will need during the challenge. Unique to Ultra's you will need to consider such items, hydration gels and/or energy bars, rain and sun protection, spare clothing etc. It is better to have it and not need it, than the other way around.

From everyone at Action Challenge we would like to wish you the best of luck with your training. If you have any questions in relation to this guide or about training in general, please feel free to contact us on 0207 609 6695 and ask for Elizabeth or email info@rideuk24.com and a member of the team will get back to you as quickly as possible.

From Action Challenge, London.



www.rideuk24.com

