GUIDE TO BETTER CYCLING
RunningwithUs exists to provide the best endurance sports coaching, personal training and fitness consultancy in the UK. Established by GB running coach Nick Anderson and actress Phoebe Thomas we have supported hundreds of runners, triathletes, charities and businesses to achieve their goals. Our team includes London’s top personal trainer and young endurance sport coach, Tom Craggs and GB distance runner Lucy MacAlister.

This guide is designed to give WaterAid cyclists an overview of some of the key elements of training, nutrition and conditioning to help you become the best cyclist you can be.
10 TIPS TO GET YOU STARTED...

**TIP ONE**
Have a routine. Your body likes consistency and patterns. Regular consistent training will yield better results than peaks and troughs!

**TIP TWO**
Plan it out. Check out our training plans or look online for support from a coach. Variety in your training and progressing at a sustained, sensible pace is vital.

**TIP THREE**
Ring-fence your training. Once you have decided on your plan and routine get the sessions into your diary at times and on days you know are going to work around work and home life - don’t set yourself up to fail!

**TIP FOUR**
Train to time, not miles. You can find yourself clocking up miles rather than training sensibly. Cycle to time & effort. Give every ride a purpose! Some should be easy to allow you to recover or build endurance, some harder building a strong heart & pace.

**TIP FIVE**
Don’t just ride. Cross training such as running, swimming and gym work can play a vital role in building your fitness with less injury risk.

**TIP SIX**
Listen to your body. You have a plan now, but don’t be a slave to it. Your body is an amazing machine, if you feel tired and sore consider training at a light intensity for that day, stretching, eating well or getting some massage. Rest allows your body to heal and recover.

**TIP SEVEN**
Set achievable targets. Training plans contain weeks of training. Set some targets that are realistic within this journey to race day. Targets will motivate you and help you check your progress. Maybe it could be a best time for a shorter sportive or your favourite local route using Strava.

**TIP EIGHT**
Strength and conditioning, including the exercises in this guide will add variety to your training and help you remain injury free.

**TIP NINE**
Treat nutrition and sleep seriously. Your body needs rest and fuel in order to train and improve. Clever athletes sleep well & have a diet rich in protein & micronutrients supported by high quality carbohydrate. Snacking & eating between meals and sessions helps to fuel training correctly & promote active recovery.

**TIP TEN**
Keep it social. Training with other people - both with your cycling but also cross training and conditioning helps keep you focused, have more fun and train more consistently. Surround yourself with positive, like-minded people.
GETTING KITTED OUT
THE BIKE

Bikes come in all shapes and sizes. Don’t feel as if you need to spend thousands on the latest carbon fibre road bike if you don’t wish to, your fitness and training is more important, but getting a bike you feel comfortable on, that is well fitted is crucial. Road bikes are obviously most suited to long sportives or quick road courses and triathlons. Within this you can get more ‘aggressive’ racing bikes with drop handle bars and aerodynamic riding position, through to more comfortable, touring style bikes with flat bars…try before you buy, and ask the experts.

CLOTHES

A base layer, short-sleeved jersey and bib-shorts with padding, paired with arm and knee warmers, gilet, and lightweight packable rain jacket should see you through poor weather but also consider gloves and overshoes and replace your short-sleeved jersey with a long-sleeved equivalent or soft shell. For all other garments, choose mid-weight sweat wicking technical fabrics. Cycling specific shoes with hard soles and cleats that ‘clip in’ can dramatically increase the efficiency of your power transference. If you decide to purchase these then practise using them before going on the open road.

THE HELMET

Helmets are compulsory for sportive events and should be the first thing you buy at the start of your training. Helmets are designed to draw the air across the head when you are travelling at speed; allowing you to stay cool and comfortable. Fit is everything with the helmet, so measuring your head circumference before purchase is recommended. Most modern helmets can be tailored to fit your head size, often with just a one handed adjustment of a dial.

OTHER KIT YOU’LL NEED

Punctures are far and away the ‘mechanical’ you’re most likely to suffer, so carry an inner tube or (ideally) two, tyre levers, and a pump. A multi-tool fitted with a selection of Allen keys, and sometimes a flat-bladed screwdriver, Torx bit, and chain link extractor is another essential piece of on-the-go maintenance equipment, and easily stowed in a jersey pocket or saddle bag. Finally, and depending on your level of mechanical proficiency, a spare chain link and gear cable are worth space in your mobile tool kit. Make sure your bike is fitted with a cage and water bottle.
BIKE FITTING - THE BASICS

When your bike is well fitted you’ll feel a part of one machine. A poorly set up bike will make you less efficient and increase your injury risk. Consider a professional bike fitting. Whilst these can be expensive they can make a huge difference to your enjoyment of your riding. Here though are a few pointers;

Seat Height - A simple method to determine a good saddle height is to work out your inseam measurement and then put the saddle at 109% of this measurement when taken from the pedal axel to the top of the saddle’s height.

Seat position - How far forward or back your saddle is will change the pressure/angle of your knee joint. If you have small feet then push your saddle well forward, this will ease the strain on your knees.

Pedal Adjustments - Ideally you should pedal with the balls of your feet. If you are not using clip in cleats consider toe clips to help secure your foot in the correct position.

Handlebars - Do you like to ride crouched over, head down and bum up? Or perhaps upright on the saddle, nice and tall? Your choice of position affects your choice of handlebar, even your choice of bike. If you ride leaning forward placing weight on your hands, then the handlebars should be narrower than or the same width as your shoulders and the stem by which the handlebars are attached to the front forks should not be so long so as to risk pitching you over the bars when braking hard. If you plan to ride sitting upright or leaning very slightly forward then it is simply a matter of deciding where you can comfortably place your hands. There are a range of adjustable stems available, and you may have one fitted to your bike.

Other points to note - There are five pressure points; two hands, two feet and a bum on the saddle. Relief can be achieved by spreading the load appropriately between these points. Lowering the bars shifts some weight to the hands. Pedalling a bit harder shifts some weight to the feet. Wear gloves or mitts. Wear cycling shorts with a chamois (padded underneath). Don’t over-tighten shoes or toe-straps.

TOOLS

Look to undertake a basic cycle maintenance course or view some tutorials online. Knowing how to change an inner-tube or adjust your breaks and gears should be essential knowledge for all cyclists. In order to do this you’ll need to get yourself kitted out with spare inner tubes, tyre levers, a basic multi-tool and hex key and a pump, consider also carrying a puncture repair kit.
THE TRAINING
THE LONG RIDE

6/10 effort focusing on building your time on the bike and developing your aerobic capacity. Start off riding at 65% of MHR (conversational pace). Gradually this will build to 75% of MHR as you start to practice periods of race effort riding. These rides improve your muscular endurance and condition your body to burn fat as its primary fuel source. They also prepare you physically and mentally for the task ahead. If your goal is a long sportive or ride of 80+ miles don’t expect to necessarily get this far in your training, but the goal should be to achieve between 65-80% of the distance before race day.

THRESHOLD RIDES

The golden zone of training for endurance sports anaerobic threshold training should form a key element to your weekly training mix. Ridden at a ‘controlled discomfort’, of about 80–85% of your MHR, you’ll only be capable of uttering a couple of words to your training partners. Tempo/threshold rides or intervals improve your lactate threshold, your riding efficiency and aerobic capacity (your body’s ability to utilise oxygen). All this helps to improve your endurance performance.

HILLS

Including hills in your training obviously help prepare you for hills in your race or sportive, teaching you how to control your cadence and measure your effort. Aside from this they also provide fantastic aerobic and strength gains. Different types of hill session develop your fitness in different ways. Including lots of climbs at ‘threshold’ effort in rides of 90+ minutes can be an excellent way of developing your anaerobic threshold and experiencing climbing at race effort. Shorter, harder, faster climbing between 45 seconds and 5 minutes can be used to develop power, strength and Vo2 max and can be included in shorter, dedicated sessions.
INTERVALS
Intervals help to boost specific race pace speed and involve running timed efforts with a controlled recovery. The effort level is around 85–100% of MHR, depending on the duration of the event you are training for and the length and volume of intervals used. Typical examples might be 10 x 2 minutes @ 9/10 effort with 60 secs recovery, 5 x 4 minutes of sustained hard riding in a big gear with 90 secs recovery, or short bursts of between 20 and 40 secs at maximum intensity.

RECOVERY, EASY OR STEADY RIDES
These sessions are your opportunity to practise your bike handling as well as getting in an additional aerobic session. Recovery rides are your easiest efforts of the week (alongside warming up and cool down). The goal is to work at 5-6/10 and finish with your body feeling better than when you started. Generally easy rides or efforts around interval sessions should be 6-7/10 in terms of effort, focusing on technique, consistency and remaining able to fully communicate. Carrying out some of this riding before breakfast helps to teach your body to metabolise stored fats as an energy source - very important for long races and sportives.

SPIN CLASSES
Spin classes can be a useful addition to your training. Keep in mind that most (other than some very road cycling specific classes) will be aiming to work you hard between threshold and interval effort - therefore a spin class will have an effect on your fatigue levels. Consider replacing a hard ride if needed.

REST
To help your body cope with the workload, rest is going to be as important a part of your training schedule as the cycling. Listen to your body and take heed of any warning signs. If you feel fatigued even before you’ve got on the bike, find yourself thinking up excuses not to ride or start suffering a series of minor injuries; you probably need more time off. Taking enough rest allows physical and mental recovery and gives your body the time to adapt to your workload. Remember: on rest days, that is exactly what you should be doing!
**OTHER CONSIDERATIONS**

Around the actual rides themselves here are a few other considerations to throw into the training mix:

**CADENCE**

Cadence refers to the speed at quickly you turn the pedals. It is important as it relates to the relative biomechanics efficiency of your cycling action. Many cycle computers and GPS devices allow you to monitor this. There is no golden rule for optimal cadence, it’s about finding a rhythm that works for you, adapting to your fitness, your terrain and your experience. A reasonable place to start though would be to aim for 90 revolutions per minute.

**POWER**

Power, measured in watts, is a crucial factor in cycling performance. Simply put power is the force you apply through your pedals x by your cadence. It’s not necessary for most cyclists to buy themselves an expensive power meter to monitor this but it is worth being aware of. In a long ride, just as in a marathon, if you go off too hard, applying too much force and muscular conduction you are liable to see your muscles fatigue too quickly and burn too much stored glycogen. Practice riding in a big gear in training occasionally, at a lower cadence to feel that burn!

**GEARING**

Your gears are your friends. Use them to control your cadence and power by being aware of your terrain, fatigue level, environmental conditions etc to control your effort. Try to maintain a relatively consistent cadence using your gears rather than fluctuation through big surges of effort.
SAFETY AND BIKE HANDLING
BASICS OF BIKE HANDLING

Starting:
1. Engage both brakes.
2. Position one pedal in the 2 o’clock power position.
3. Put all your weight on this pedal; then release the brakes.
4. Stand up on the pedal and simultaneously ease yourself back onto the saddle.
5. Keep your grip on the handlebars firm but relaxed so you will not wobble.
6. As you gain speed, shift to higher gears.

Stopping:
1. Free one foot if you use toe clips, straps or clipless pedals.
2. To slow, apply both brakes evenly. Your front brake actually accounts for 70% of your braking power.
3. As you slow, shift down a few gears to make it easier to start up again.
4. Just as you come to a complete stop, turn the handlebars slightly away from the side you step down. The bike will lean slightly to this side, making it easier to step down.
5. Step down off the seat and put one foot down. You will find that one side is more natural than the other. Putting your foot down sends a clear message that you are stopping to other cyclists and motorists.
6. As you are stopped, reposition your pedal into the power position so that you are ready to start again.

When in motion;
1. Use small adjustments of the handlebars and leaning your bike to correct your line.
2. Look up and ahead rather than staring at your front tire.
3. Do not weave in and out of parked cars as you ride along. Hold your line and ride with authority - DO NOT UNDERTAKE.

Scan and signal;
1. Relax or remove the hand on the side you are scanning to avoid turning the handlebars as you scan.
2. Slightly tighten your grip on the other hand for balance and control.
3. Briefly turn your head to look over your shoulder to scan behind you. You may need to do this a few times.
4. Let others know what you plan to do before you do it. Hand signals are a vital communication tool. Always signal your intent when turning, changing lanes and changing position within the lane. Make your signals definite, bold and clear.
GROUP RIDING

Appreciate that riding in a group or close to other cyclists brings unique dangers but also advantages. We would strongly suggest looking at joining a local cycling club or group to experience good group riding etiquette and safety. Here are just some of the basics;

* Stay consistent and smooth - try to avoid making dramatic movements or sudden changes in course.
* Communicate clearly both verbally and visually with hand signals.
* Look forward and maintain your focus on what is coming up, without getting too distracted by other riders around you.
* If you notice a danger such as a pothole or a car, communicate this to others in the group.
* Share the lead - don’t just sit in draft for miles on end - take your turn at the front of the group.

DESCENDING

* Be sensible about the speed at which you can remain safe and in control.
* Avoid sharp braking - stay smooth, relaxed and anticipate what is ahead.
* Keep your centre of mass low on the bike and don’t lean your body into the corners - the bike leans a little, not you.
* Be aware cars will come at you around corners. NEVER sacrifice safety for speed - take blind corners slowly.
* Slow in advance of corners, not half way around.

FINAL TIPS

* Consider joining British Cycling and getting insured.
* Make yourself seen with high visibility clothing.
* Always wear a helmet and gloves.
* Practise using cleated shoes before you head onto the open roads.
* Consider a local cycle proficiency group or training.
* Read the highway code and understand your position related to pedestrians, other cyclists and motorists.
* Never cycle through red lights or on pavements where their use is solely for pedestrians.
* Avoid undertaking and always be aware that lorries, buses and many cars have a huge blind spot when turning, particularly turning left - many cyclist deaths occur because of this.
CONDITIONING AND STRETCHING
The following pages outline at home, strength and conditioning and stretching exercises to be undertaken when the plan says ‘core’. All of these exercises are fundamental, core exercises which, when included regularly will make you a faster, less injury prone cyclist.

**THE FINGER CRUSHER**

Get into a sit up position, find the natural arch in your back, place your hands under the arch, engage your lower abs and pelvic floor and push your spine down on to your hands, trying to crush your fingers.

**The next level:** Do slight alternate leg lifts, while still keeping the pressure on your hands even.

**PLANK**

From a prone position raise up through your core on your elbows and toes, keeping a straight line from the neck down through the legs to your ankles, engage all your core muscles by sucking your belly button up to the ceiling. Keep your chest over your elbows.

**The next level:** Add in alternate left lifts by squeezing your glutes, work to keep your hips level. If this is too hard to begin with, you can avoid lower back pain by doing this with your knees on the ground.

**SIDE PLANK**

Make a right angle with your supporting arm, your feet together and your stomach strong. Rise up, making sure you squeeze your glutes and push your pelvis through. Hold it for 30-60 seconds.

**The next level:** Lift your free arm into the air, keep your side really strong, then tuck the arm under your hips and take it back to the top again in a flowing, control movement. Again this plank can be done on your knees to make it easier.
THE BRIDGE

From the sit up position, keep your stomach strong, engage your glutes and roll up into a bridge. Keep your hips high by squeezing your glute muscles. Keep your hips high and level throughout.

The next level: Make this tougher by crossing your arms over your chest or including alternate leg lifts ensuring your hips remain in the same position.

PRESS UP

Press-ups are a key exercise to improve stability and posture on the bike. Place your hands shoulder and a half's width apart, get into the plank position, lower your chest to the floor and push back up, not just pushing through your chest and arms, but also through your core.

The next level: Narrow your hands in a diamond shape under your chest before carrying out the same movement. If this is too hard carry out the same movement on your knees.
**SPLIT LEG LUNGE**

This works the cycling muscles in a full chain movement. Point your toes forward, keep your back heel lifted and with hands on hips, lunge down, squeezing the glute of your rear leg. Make sure everything goes down in the centre and not forwards. Your knee should NOT be over the front of your toes, lunge forward with a bent back knee.

**The next level:** Once you’ve nailed this move, you can progress to driving the knee up from the lunge.

---

**SINGLE LEG SQUAT**

This also works everything in a full chain movement. Stand on one leg, engage your glute on your standing leg, squat down as if sitting back onto a chair, keep your hips facing forward and aligned with your knee and toe. You don’t want your knee to roll inwards, so go down as far as you can without that happening.

**The next level:** Focus on gradually increasing the depth of the squat. You can use a Swiss ball between yourself and a wall for balance.
**STRETCH 1 - THE GLUTES**

Sit with one leg out straight. Cross the other leg over, keeping knee bent. To feel stretch in backside hug bent knee into chest. Keep back straight. Hold for 30-45 secs.

**STRETCH 2 - HAMSTRING (ORIGIN)**

Lay on back. Pull one leg up to chest and hug with both arms. Keep one leg straight on floor keeping ankle flexed.

**STRETCH 3 - HAMSTRING (BELLY)**

Lay on back. Keep one leg on the ground. Raise other leg holding the back of the calf with a bend at the knee. Bring up to feel the stretch in the middle (or belly) of the hamstring. Use a rope or towel around the foot to help if you need to.

**STRETCH 4 - HAMSTRING (INSERTION)**

Repeat stretch number three but this time with a straight leg. Flex ankle to feel stretch in behind the knee. Use a rope or towel around the foot to help if you need to.
STRETCH 5 - LOWER BACK & IT BAND

Lay on back. Bring one leg up to chest and rotate to lower the knee to floor using opposite arm as a counter weight. Keep one leg straight on floor keeping ankle flexed and keep shoulders on floor. Other arm should be straight out at shoulder level.

STRETCH 6 - QUADS

This can be done lying on your side in a straight line. Grasp the top of the ankle with the same side hand and bring heel to backside. Hips should be pushed forward.

STRETCH 7 - HIP FLEXORS

Kneel on one knee. Take the other leg forward with a large stride. Push hips downwards until a stretch is felt in the front of the hips/quads.

STRETCH 8 - CALF (GASTROCNEMIUS)

Stand with feet shoulders width apart. Take one foot forward and keep feet parallel. Maintain the arch in the forward foot by pressing down with the toes to stop foot rolling in. Straighten back leg and feel stretch in top area of the calf.

STRETCH 9 - CALF (SOLEUS)

Repeat position from number eight, but this time bend back leg to take stretch into lower calf above Achilles.
STRETCHING - TIPS

* Don’t forget to stretch both legs and repeat holding stretch for 40-45 seconds each time.

* Never stretch cold muscles. The main benefit for endurance cyclists is stretching after the ride.

* Instead of stretching pre ride, give yourself time to gently ease into your pace or carry out some active, but light strength exercises such as static lunges.

* A good stretching routine will help to restore the muscle balance and allow you to be more flexible.

* Do not underestimate the value of cross training, massage and stretching in your schedule.

* Consider regular sports massage and yoga as well to help you stage on top of a gradual build up in tightness…don’t wait until injury occurs!
CROSS TRAINING
WHAT IS CROSS-TRAINING?

There are 2 types of cross-training or X training we all need to know about;

* One is your conditioning work, which focuses on strengthening muscles but won’t make you aerobically fitter. Examples are Pilates, core conditioning, weights and floor work such as the plank or press-ups (see the page on strength and conditioning for more). All these areas should play an important role in your training at least once a week in order for you to channel the power of your core through your pedals.

* The other is aerobic conditioning such as swimming, running, aqua jogging (yes running in the pool with a buoyancy aid!), rowing and using a cross trainer. This exercises the heart and muscles and will definitely keep you aerobically fit.

Your heart doesn’t know the difference between going for a ride or cross training it just works as hard as you ask it to. You can really boost your fitness towards any cycling distance with clever cross training.
CROSS TRAINING TIPS

Recreate your training plan on the treadmill, cross-trainer, rower or in the pool swimming or Aqua Jogging if you feel exceptionally sore in the lower limbs after hard days.

If the plan says 45 minutes recovery ride this can be easily recreated on the kit listed here. So can your threshold rides and interval work. Remember the key is to train to effort, and don’t worry about miles or pace.

If you’re injured firstly consult a doctor or a physiotherapist. If they say you are able, still follow your training plan but use cross train instead. Don’t lose that hard-earned fitness - keep going! If you can see a sports physio or injury expert they will also offer treatment and training advice. Ensure that the cross training is also pain free.

Try our core conditioning exercises earlier in this pack once or twice a week for 10 -15 minutes holding and repeating each position several times. These can all be completed at home after a ride and you don’t need to belong to a gym or spend hours there!

Try not to ‘aimlessly’ cross train. Attack your cross training sessions with the same focus and commitment as you would your rides and you’ll start to see the value of these sessions. Consider gym classes or outdoor exercise classes but be aware of their relevance to cycling. The key above all else is aerobic development and muscular endurance. There are loads of great classes out there, olympic lifting for example, which will get you fit…but not necessarily cycling fit. Pick you classes wisely…and yes…spin classes can be great! Ensure you are still fresh for your main cycling sessions though.

Certain types of cross training are better suited to certain sessions from your plan. Don’t, for example, try to replicate your 4-5 hour ride as a run! Instead XT for up to 3 hours mixing swimming, running and gym work. Running, aqua-jogging and cross trainer can be great for replicating threshold sessions and the rower great for high intensity strength and VO2 max intervals.