COILL AN CHLOCHAIR NAOMH MHUIRE / CEAPACH

KILLYCLOGHER ST MARY'S/CAPPAGH GAA

GUIDE TO CYCLING

TOP TIPS FOR CYCLISTS OF ALL LEVELS

YOUR PARISH, YOUR COMMUNITY, YOUR CLUB

Forewords

Firstly, we the organising committee of the Croke to Cappagh cycle would like to take this opportunity to congratulate everyone who has taken the plunge and signed up for this fund raiser. We have in excess of 160 cyclists registered for it, and if you are reading this booklet you are probably one of them, or at least know someone who is doing it. We have a complete mixture of abilities involved in the cycle, which was always our main objective. We have vastly experienced cyclists with many years of touring behind them, experienced Triathlete's and complete beginners all training together. Just three months ago most of you may not have cycled for many years, if at all, and at this stage we would be confident in saying that you all have completed at least 30miles in one session. This is a fantastic achievement and on the day we will not be cycling more than this without the option of a break for food and craic.

This is firstly a fun cycle for everyone involved, so please leave those nerves at home on the mornings of the 12th and 13th of March. You will all have met most of your team by now and may have joined in on weekly group cycles, so you will see that it is not a race. We are all starting out in our teams each morning, and we will all be arriving home in the same team each evening. So on that note, please read on and pick up some valuable tips that will get you through this cycling challenge.

Emma Wallace
Social, Marketing & Fundraising Committee

Leisure cycling has become hugely popular in the last number of years. This guide is an attempt to assist cyclists of all levels to understand a little bit more about their equipment, improving their performance, and for those of you who are interested in a more professional approach, there are additional sections on nutrition, recovery, and higher level Introduction 3 training. Whatever your level of interest be it leisure, sportive events, or indeed occasional racing, improved knowledge will also improve your enjoyment of the sport.

We would encourage young people to take up any sport at some level even to supplement your main sport. We am aware of members of the Tyrone Team who regularly turn to cycling to assist recovery where they have suffered an injury. It is also a sport that can be enjoyed at a competitive level in advancing years and there are many household names in cycling who continue to ride their bike on a weekly basis into their seventies and eighties.

Cycling is a sport that one can take up at an early age and return to again and again over the years, provided a basic level of fitness is maintained. For those of you who have "fallen by the wayside" and have not been on a bike for some years, we would encourage you to take the plunge and borrow or rent a bike and get back out on the road. We have no doubt after a couple of spins you will be down to the bike shop to purchase a new machine.

Mark Kelly & Enda Harpur
On behalf of the Team Leaders

Equipment

Introduction

The first and most important step in choosing a bike is identifying what kind of cycling you want to do and how often you intend to use the bike.

There are four main types of bike:
- road bikes;
- mountain bikes;
- hybrids; and
- folding bikes.

Road bikes

These have drop handlebars and are faster on the road. The position of the rider is lower than on a mountain bike and these bikes are generally used for competitive cycling although there are some exceptions. They are designed to handle smoothly, climb and accelerate rapidly and corner at speed. There are two main types of road bikes:

Touring bikes
Touring bikes are designed for carrying luggage and for providing comfort during a long day in the saddle. Touring bikes are equipped with a wide range of gears to cope with carrying extra weight and particularly when cycling in the hills. They have a more relaxed riding position and are more comfortable than competitive racing bikes.

Racing bikes
Road bikes generally come with either a double or triple chain ring at the front but most race bikes have just the double chain ring. If you are planning on carrying loads, riding a lot of hills or just doing some general fitness a triple chain ring allows you a wider range of gears which makes cycling on steeper hills that bit easier.

Mountain bikes

Mountain bikes are designed to handle all types of terrain but are much slower than road bikes. There are two main types of mountain bikes:

Cross-country
Cross-country mountain bikes are also known as hard tails. These only have front suspension and are typically lighter making climbing easier. These bikes have less travel than the full suspension bikes as the emphasis is on speed not comfort.

Full suspension
Full suspension bikes are, as the name implies, fitted with suspension on both the front and rear. These are intended for heavy usage and more extreme trail riding and downhill racing. Full suspension can make the experience more comfortable and more exciting. It allows you to push your technical skills further. Mountain bike suspension has been designed to absorb the shocks from riding over uneven terrain. It aids traction over difficult loose surfaces and helps you to control the bike.

Hybrid bikes

A cross between a road bike and a mountain bike is the hybrid. These generally have flat handlebars, a wide range of gears, 700c road sized wheels and wide tyres. This makes the hybrid a good choice for allround cycling and they can be used on both roads and on cycle trails.

These bikes are the most popular for commuting as the upright position gives you a clear view of the road and the flat bars inspire confidence in traffic, and promote good bike control. Hybrids are also ideal for leisure and fitness cycling as the lower gears allow you to tackle gradients at your own pace and the position means that they are comfortable for all levels of cyclist.

Folding bikes

Folding bikes are designed for commuters who use their bike in combination with a train, car or bus. They are designed for cycling shorter distances and the emphasis is on ease of folding and lightweight frame, as opposed to speed and comfort.

Modern folding bikes can be equipped with up to ten gears or more and have a proper cycling position so feel natural to ride. They can be folded into a carrying position within seconds. They are also becoming increasingly popular with urban living where storage may be a problem, as folding bikes take up a fraction of the space of normal bikes.

Accessories

The accessories you use will again depend on the type of riding you plan on doing and the style of bike you have chosen. The correct type of clothing is covered in more detail in the next section of this booklet.

General equipment

Helmet: Top of the list is a good quality helmet. This is one of the most important purchases you will make and therefore should be chosen carefully to make sure it is a good fit and also manufactured to the correct quality and safety standards.

Tubes: Spare tubes are another important accessory as there is nothing worse than a long walk home with a punctured tyre. Two tubes should be carried for longer journeys.

Repair kit: A tube repair kit and tyre levers are also a good addition to any toolbox.

Pump: A small pump can be mounted to the bike frame to reduce the items you need to carry and a larger track pump will make the job easier at home.

All team leaders will always carry limited supply tubes and a pump.

Commuting equipment

Lock: A good bike lock is a valuable piece of kit and will prevent any would-be thief from making off with your new bike. Your local bike shop will recommend a suitable lock and you should always choose a lock that will adequately secure your bike. This will be money well spent.

Mudguards: To ensure you remain dry when you arrive at the office, a good set of mudguards will prevent rain from spraying up onto your clothes. Removable mudguards can be used if you do not need them on all the time.

Carrier/rack: This is a good idea if you plan on carrying items and do not want to use a rucksack.

Lights: A minimum of a front and rear light should be used to ensure you can be seen on the road. Reflective clothing is also a good idea.

Clothing

Introduction

The most important factors when considering what clothing to wear when cycling are both comfort and practicality.

Keeping warm in the winter and cool in the summer are also important considerations and cycling clothes generally contain specific materials for this purpose. A more breathable material is used for summer jerseys and many of these jerseys have the option of a full zip for added ventilation.

In the winter thermal and wind-stopper garments are probably the most popular choices for keeping warm.

Essential clothing for comfortable cycling

Cycling shorts are the most important and possibly the only absolutely essential item of clothing required for cycling. A good pair of cycling shorts with a padded insert will help eliminate saddle soreness and allow the rider to cycle happily all day if necessary.

There are many types of cycle shorts such as baggy shorts with an internal padded chamois liner worn by mountain bikers, slim fitting Lycra models and cheaper padded under shorts that fit with any pair of loose fitting pants.

It may be wise to try as many styles of bike shorts as possible before purchasing in order to get the best fit as everyone's tastes and requirements are different and what fits one person perfectly can be very uncomfortable for another.

The most effective way to stay warm and dry when cycling is to use layers. As you get warmer layers can be removed to stay comfortable.

A base layer should be worn next to the skin with either a short-sleeved jersey for summer or long sleeve over it for winter. Base layers are specially designed to 'wick' sweat away from the skin – this means they carry the moisture through the fibres to the next layer of clothing to be dispersed to the air.

Whilst a proper cycling jersey is not absolutely necessary, most riders will appreciate the technical fabrics that filter sweat away and will find features like back pockets for energy snacks and a long zip for ventilation a godsend after several tough hours on the bike. During changeable weather a gilet (type of sleeveless jersey) is a great accessory – it protects your chest from wind and rain but without being as warm as a full jacket. Many recreational cyclists never purchase cycling gloves yet these usually inexpensive items offer both protection if you fall off and also stop your hands getting sore through heavy braking or vibration on bumpy roads. Look for gloves with padded palms for added protection and shop around in discount stores, which often stock cycling gloves at a lower cost.

Eyewear is important to protect eyes from both the sun and nasty insects and debris flicking into the eye during a bike ride. The advantage of cycling specific glasses is the wraparound

design, which literally keeps flies out of sight not to mention looking pretty cool around town. Some styles of glasses allow lenses to be changed for different conditions and are one of the best choices if you are riding daily.

Cycling shoes are special shoes designed to attach to the bike's pedals via a clipless system. Attaching shoes to the pedals improves the efficiency of the pedal stroke, by allowing the cyclist to pull on the upstroke as efficiently as they push on the downstroke, resulting in a constant application of force through the entire 360 degree pedal rotation.

Beginner or inexperienced cyclists don't need a clipless pedal system or special cycling shoes. However, as you begin to ride longer distances more frequently, most cyclists will begin to appreciate the added efficiency clipless pedal systems will provide. Almost all clipless pedal systems work in the same way. There is a cleat attached to the sole of your bike shoe that fits onto, or into, a part of the pedal on your bike. To snap the shoe cleat into the pedal, the cyclist applies downward pressure. To release the shoe, the cyclist twists their heel outwards. Understanding how the clipless pedal system works will provide a better understanding of what to look for in a cycling specific shoe.

How cycling shoes should fit
A properly fitted cycling shoe should be comfortably tight. The heel should fit tightly enough to hold the heel in place through the entire pedal rotation. There should be even pressure on the instep when the shoe is laced and/or buckled up. You should have a little toe room at the end of the shoe, and the shoe should hold your forefoot stable without pinching.

Cycling shoes come in three widths:

• narrow;
• standard; and
• wide.

If you have extremely narrow, or extremely wide feet, look for manufacturers that offer shoes specifically designed to fit a narrow or wide foot.

Cycling shoes designed for specific types of riding Road cycling shoes are designed for speed. In general they have a very narrow profile designed to hold the foot, especially the heel, in place to maximise the power output from each pedal stroke. Road cycling shoes are lightweight, aerodynamic, and have extremely stiff soles.

Bicycle touring is all about taking a trip on your bike and enjoying it. That means that you need to be able to carry all the equipment and clothing that you intend to bring with you, on your bike. Touring cyclists ride a lot of miles on their bikes each day, and will benefit from the performance of a clipless pedal system. However, they also need to be able to walk comfortably when they are not cycling, and have a pair of shoes that don't necessarily look like a cycling specific shoe. There is an extensive selection of cycling shoe options available to the touring cyclist from tennis shoes to hiking boots and even sandals, all designed for style, comfort, and performance both on and off the bike.

What not to wear on a bike
There are some items of clothing that are preferable not to wear on a bike. Tight fitting jeans, for example, will cause huge discomfort after a short time in the saddle and will become sodden with water in heavy rainfall. Flip flops or shoes without a covered heel are also not advised. Wear training shoes unless you own a pair of cycling shoes.

Clothing for summer cycling
No matter where you ride, the Irish weather is going to catch you out at some time. Whether it's a typical summer shower or a chill settling in on a warm evening the correct cycling attire will always provide a reasonable level of comfort. Good quality cycling clothes are produced using fibres that are designed to retain body heat while allowing perspiration to filter out and disperse quickly on the surface, keeping you both dryer and cooler. Whilst there is no way to completely avoid getting wet in the odd summer shower, wearing this style of clothing means you will dry many times quicker than the equivalent garment produced in say a cotton fibre. When the sun goes down and the chill sets in, you will again find that the fibres used in quality cycling wear will retain your body heat, particularly when you are on the move.

Because the clothes are light and compact it is fairly easy to pack an extra base layer, jersey or gilet. These items can be folded into one of the pockets on the back of your jersey. When it comes to leg wear the preferred summer attire for the cyclist is shorts. The leg length of the shorts is down to preference, so whether they are above the knee or below the knee, wear the cycling shorts you feel most comfortable in. Quality cycling shorts fibres have the same heat retaining and perspiration filtering properties mentioned earlier.

Clothing for winter cycling
Cycling in the wintertime can be an enjoyable experience if the cyclist is adequately prepared. It's often surprising how quickly you will warm up even on the coldest of days once you start turning the pedals. It is however, vital that you put some careful thought into the clothes you wear.

Many people are surprised to find they don't need as much clothing as they might think. The rule of thumb is to be slightly cold when starting off. As long as you keep moving the core of your body will always be warm.

Fabrics
There are many choices for the fabric of cold-weather clothing. One type of fabric deemed unsuitable is cotton. Cotton retains a lot of moisture that it then holds against your skin, rapidly drawing heat away from your body. Nice in the summer, but hazardous in rainy or cold weather. Instead choose fabrics such as nylon or polyester.

Head
It is very important to cover your head with something but don't overdo it. It is well known that a cyclist will lose most of their heat through their head. Try wearing a thin polyester hat that just covers your ears. When it's particularly cold, wear a thin balaclava that also covers your face and neck. Forget a thick hat as it won't fit comfortably underneath a bike helmet.

Chest
Your upper body will rapidly heat up after a few minutes of cycling. Wear a thin base layer and a loose-fitting, thicker layer over that. Wear two to three layers. The first is a long sleeve, thin polyester shirt. You will want something that will breathe and not hold sweat against your body. If it is raining hard or really windy, wear an unlined rain jacket, often called a hard-shell. Rain and wind will quickly rob heat from your body, especially if you are standing still.

You will also sweat a lot more when wearing a rain jacket so try not to leave it on any longer than necessary. Another option is a fleece top. This is a good compromise of an extra layer without being too much. Also, choose clothing with zippers and vents to help control overheating.

Arms
Arms generally don't get that cold. In most cases, long sleeves are enough. Another popular choice is pull-on arm warmers. These nylon or polyester sleeves can be taken off and quickly stashed in a backpack or back pockets once you warm up.

Legs
Your quads and hamstrings do the majority of the work when cycling, so it is therefore very important to keep your legs as warm as you can in cold weather. Nylon tights are enough for many mountain bike riders where trees offer wind protection. Riding on the open road, where wind gusts are more common, may require thicker polyester tights.

Some tights have a built-in chamois pad. Others will need to be paired with regular bike shorts, either over Lycra shorts or under baggy mountain bike shorts. Instead of shorts, some riders wear rain pants over their tights. These hold in heat during wet rides, but make sure they aren't baggy enough to get caught in the chain or on the back of the saddle.

Face
When the wind is howling or snow is falling, wear a thin balaclava to protect the face and neck. If you don't always want it over your face it's easy enough to pull it down under your chin. However, when your mouth is covered, the air that you breathe in is already warmed from your body heat so your throat and lungs won't dry out as much from the cold.

Hands
At the beginning of a winter training spin your hands may get cold, sometimes numb. Hands are a trickier area to cover because gloves must be flexible enough to manipulate the shifters and brake levers, but thick enough to keep out the cold.

There are a number of winter bicycle gloves in varying thicknesses. Use a thinner pair for cool autumn and spring cycles, but for true winter conditions you will want thick gloves. Also, pack an extra pair of gloves in case the first set gets wet when going on longer spins.

Final thoughts
When cycling in the colder winter months the hardest part is always leaving the house to get started. Once you start pedalling you generally warm up in no time, as long as you keep moving that is. It is strongly advised not to ride alone in the winter, to carry a mobile phone, and have a spare layer of clothing to throw on in the case of emergency.

Technique and bike position

The importance of having the correct bike position Under the control of an experienced cyclist a bicycle can cover hundreds of miles in a day and can reach speeds of up to 80kms on downhill stretches. The bicycle is one of the most efficient machines invented, but this efficiency can be greatly reduced if the cyclist adopts the wrong bike position.

Getting your position right before you start cycling can make a real difference to your comfort. More importantly it can prevent injury and ensure that as much of your energy goes into forward motions as possible.

Saddle height
The correct way to set this position is by putting your heel on the pedal while it is as far from the saddle as is possible, with the crank arm in line with the seat tube. This is best done in soled shoes or socks. The correct height is found when your leg is fully extended. You need to make sure that the saddle is level and that your hips are not being rolled from one side of the saddle to the other. On putting your foot in the correct position on the pedal (with the ball over the axle) your leg should have a noticeable bend at the bottom of the pedal stroke. It is worth doing this with the saddle positioned quite far back in the seat post as being too far forward will put too much weight on your hands.

Saddle position
By positioning the saddle further towards the back wheel, you are able to bring the larger muscle groups into play. You will also find that you are able to spread your weight more evenly between the saddle, pedals and handlebars. As your arms will be stretching towards the handlebars, pushing your rear end backwards it will keep your body balanced, helping you to control your bicycle, and protecting your neck, shoulders, arms and hands from stress. If you find that you are having to stretch too far to reach the handlebars, especially if you feel forced to drop your head, you may need to fit a smaller handlebar stem, or at worst, your bicycle may be either too big or the wrong style for you.

Handlebar position
The correct handlebar position is a vital component in ensuring comfort, strong aerodynamics, control and efficiency. By having your handlebars high, you are transferring more of your weight onto the saddle area. What may feel more comfortable on a shorter cycle may prove to be less so after 20 to 30 minutes. In addition, by sitting more upright you will need to work harder to push you and your bike along, and you will be less able to use your arms and legs to absorb bumps or vibrations. If you only do short rides then set the handlebars wherever you feel comfortable. For longer or more energetic cycling it becomes more important to find an efficient balanced position. At first you should try to avoid having the handlebars higher than the saddle, but as you gain fitness and experience you will normally benefit from lowering the height of your bars slightly. For road bikes with drop handlebars you should start with the bars around 2-5cm below the saddle.

Foot position
The best way to find the correct angle for your feet is to sit on the edge of a table with your feet loosely hanging down and note the degree to which your feet point in or out. You may find that you will be able to replicate this position more easily with proper cycling shoes. These will also help your pedalling efficiency as they have a firm sole which will not bend or squash as you pedal. You should aim to have the ball of your foot more or less over the pedal axle.

Bike maintenance

Introduction
Keeping your bike in good working order is important for your safety. It's also smart because regular maintenance can save you money by preventing bigger problems. Plus, it gives you more time on the bike and less time in the repair shop.

Maintenance and servicing
A clean, well maintained bike is a pleasure to ride. Regular cleaning and maintenance will influence how long components last and help them to function to their optimum.

Cleaning
After regular use a weekly clean ensures that dirt and grime never build up on your bike. If carried out regularly it will take a lot less time and ensure your bike remains in good working order. Regardless of the type of bike you have the basic principals of cleaning generally remain the same. The majority of your efforts should be focused on the chain, cassette, chain rings and rear derailleur (jockey wheels). This area is constantly moving and will lead to excessive wear if not cleaned regularly.

The chain should be thoroughly cleaned before lubricating otherwise the dirt will simply combine with lubricant and leave you with a thick, black mess. This will wear away your chain and sprockets at an alarming rate. There are numerous tools and cleaning products available from any good bike shop to make cleaning your bike simpler and faster. Invest in a good set of brushes. This should include a wide, soft brush for cleaning large areas, a stiffer brush is good for working round rims and tyres and smaller brushes for getting into tight spaces. Cleaning products break down the grime on your bike and allow it to be washed off more easily.

Chain cleaners are small devices that attach to the chain and when used with degreaser remove the majority of dirt making the job much easier. Water soluble degreasers can be rinsed off with plain water to remove any residue. Any degreaser left behind on the chain after cleaning will begin to break down the new oil that is applied.

It is strongly recommended that household or car cleaning products are not used for cleaning your bike as these can contain strong cleaning agents that can harm paintwork and cause loss of performance. 'Bike specific' cleaning products help protect the components of the bike.

After cleaning it is vital that you dry and lubricate your bike. Chain lube comes in many different forms. Modern oils are synthetic and generally Teflon-based and are either dry lube, which prevents the chain picking up grit, or wet lube. Any good bike shop can recommend a lubricant best suited for the type of cycling you do. Road bikes typically use a Teflon-based lubricant while mountain bikes will require a heavier lubricant to cope with mud.

General maintenance

The majority of people just want to jump on their bike and ride but for your own safety and to keep your bike in good working order, it's important that you perform some simple checks frequently.

1. Wheels and tyres
Check your tyres to make sure they are properly inflated. You should also conduct a visual check of the tyre to ensure there are no cracks, tears or holes.

The wheels should be checked to ensure the nuts or quick release mechanisms that hold your wheels in place are tight. If the wheel is out of alignment you should visit your local bike shop to conduct a repair.

2. Brakes
Cables should be checked to ensure there are no problems with fraying or stretched cables. Squeeze your brake levers to make sure that they apply enough pressure to stop your bike. The brake pads in the front and back should also be checked to ensure they are correctly aligned on the rim. If your brake pads are squeezing the tyres when applied, not only can it wear or damage your sidewalls, but it can also cause an accident.

3. Seat post and handle bar stem
Check to make sure that your handle bars and stem are fastened tightly and that your saddle is at the correct height.

4. Helmet
A helmet is a good addition to your cycling accessories. This should be checked frequently to ensure there are no cracks on the outer shell or inner surface. The helmet should fit snugly and the straps should be adjusted to ensure a tight fit. A common mistake is to wear a helmet that rides up too high, which won't protect your forehead in the event of an accident.

5. Chain and gears
The last thing to check is that your chain turns cleanly through your front and rear sprockets and doesn't rub against the front or rear derailleur. You can do this as you pedal when you first set off. At the same time, quickly run your bike through its range of gears to make sure there are no problems with rough shifting, chain slippage etc., and that the drive train is free from excessive grime and doesn't need lubrication.

Tools

Here is a list of essential tools that every cyclist should take with them no matter how short their journey:

Multi-tool - With a range of Allen keys and screwdrivers
Tyre levers - To remove tyres from the rim to fix punctures
Mini pump - Many come with frame-fitting brackets
Spare tube - To quickly swap over in the event of a puncture
Patch kit - To repair punctures

Training

Introduction

Cycling has many health benefits that can be built into your everyday life. As little as 30 minutes of moderate exercise a day can help improve and maintain good health, also reducing the risk of serious health conditions.

Training for cycling can be undertaken at various levels of intensity based on the capabilities of the cyclist in question. It is important to gradually increase levels of training and to be patient with the results. The worst mistake a cyclist can make is to do too much too soon; it is very important that the body is given adequate time to recover after training cycles.

When you've performed a hard training ride, your body will have to recover before it gets stronger. How much time you need for recovery depends on the type of training and your overall fitness and nutritional status.

There are also some other factors that influence your recovery time, but to begin with it is important to know that hard training takes more time to recover from than light training. When you have trained for a while you start to notice that your legs feel sore the day after a hard training spin and might feel fresh the day after a light training session. To get the best level of progression you will need to find a good combination of training sessions and recovery.

Frequency, intensity and duration
There are three ways to change the total workload in a training week:
• frequency;
• intensity; and
• duration.

For example, if you train more frequently, ride with a higher intensity (more climbs, more speed training) or simply just ride more miles, you will force your body to adapt to these challenges.

The important thing for a cyclist is to be able to combine each of these methods and to integrate an adequate amount of recovery time to your schedule to maximise the benefits of the efforts being made. Remember that it is consistency that makes you a strong cyclist, not just one hard week of training. Small adjustments over time will help you to become a better cyclist. It is also important for a cyclist to listen to their body and to amend their training schedule accordingly.

Training principles
Below is a list of general training principles which may be applied to any plan or routine. These principles will help to shape your training plan and will also remind you of the importance of monitoring the amount of training you do and the amount of recovery time you allow yourself.

1. Train moderately
Your body has limits when it comes to endurance, speed and strength. Muscles will only contract forcefully a certain number of times before they refuse to pull hard again. A common mistake that many athletes make is to go too hard on the easy days and too easy on the hard days.

By progressing carefully, especially with intensity, you'll gradually get stronger and there will be time and energy for other pursuits in life. An athlete who enjoys training will get more benefits from it than one who is always on the edge of overtraining.

2. Train consistently
The human body thrives on routine, and regular activity brings positive change. This does not mean that you should do the same workout every day, week after week. Variety also promotes growth. This is not to say that you shouldn't do hard workouts or that it isn't necessary to push the limits on occasion and experience fatigue as a result.

The key to consistency is moderation and rest.

3. Get adequate rest
During rest, the body adapts to the stresses of training and grows stronger. Without rest, there's simply no improvement. As the stress of training increases, so does the need for rest. When we sleep, our body releases human growth hormones, and it mends and grows stronger.

If our time spent sleeping is shortened, it takes us longer to recover and our consistency in training suffers. Damaged cells take longer to heal, raising the risk of injury and illness. If the training workload remains high despite decreased sleep time, overtraining becomes a real threat. The risk of burnout is also greatly increased.

4. Train with a plan
This is fundamental to improvement in almost any endeavour of life, yet few self-trained athletes do it. Realise that all plans can be changed. It is important that you can adapt your training routine to suit the other responsibilities in your life such as work and home life. It takes some flexibility to cope with the many factors that will get in your way. These may also include a bad cold, overtime at work, unexpected travel, or a visit from family or friends.

5. Improve weaknesses
It is important to try and identify your weaknesses and to dedicate some extra training time towards making improvements. For example, if you struggle on climbs try to factor some extra climbing into your routine. If you find you struggle to keep pace on the flatter parts of a course, you should try to add some extra speed training to your routine. Address your weaknesses, work on them and don't shy away from them.

6. Trust your training
When the time comes to take part in an event, few of us trust our training. There's a great fear as the big event approaches that we haven't done enough, so we train right up to race day. It is important to taper down the training load in the lead up to an event. Do not go

out on a long training ride the day before the event.
It takes 10 to 21 days of reduced workload for the human body to be fully ready to compete, depending on how long and hard the training has been.

7. Listen to your body
If you listen to what the body is saying, you'll train smarter and get faster. Cyclists who train intelligently always beat athletes who train hard. It is important to monitor how you feel and to adjust your training schedule accordingly. The body will tell you when it needs a rest or a lower workload through pain, fatigue and illness.

8. Commit to goals
After you set your goals, take a look at them and determine how they relate to your lifestyle and training. Determine whether change is needed. Eat nutritious food to not only fuel the body for training, but also to help speed recovery, replenish depleted energy and nutrient stores, and provide the building blocks for a stronger body.

Sample training plan for 70km cycle

Training concepts
The main principle of training for a long distance event is to increase your mileage gradually over a number of weeks. By doing it that way, you help avoid injury, burnout and over-fatigue. Plus you will also be able to detect any issues with your body or your bike that you want to rectify before the big day.

Our eight-week training plan below assumes you are in shape at the start to be able to ride 12 miles comfortably. That's a one-two-hour ride at a very easy 8-12 mph pace.

The best way to learn training, hydration and eating tips is to ride with people who have done it before, but you can certainly do it on your own. As you prepare, aim for the targets as laid out in the table below to get you ready. It shows the distance of your longest ride each week (typically on a Saturday or Sunday) plus a cumulative mileage total for the week that you reach with your other riding.

Croker to Cappagh event training plan

Week	Length of long ride (miles)
1	15
2	25
3	30
4	35
5	45
6	50
7	40
8	30

Nutrition

Energy for training
The key to getting the energy you need for training is to get the most from the food you eat.

A specialised training diet is not necessarily needed but a healthy balanced diet will help you get the most back from your hard work. The foods mentioned in the food pyramid below are all important. For a balanced diet, the important thing is to eat food at each level in the right proportion.

The largest section at the bottom of the pyramid includes pasta, wholemeal bread, potatoes, rice and cereals. The smallest section at the top includes food high in fat, sugar and oil. These are the foods that should be kept to a minimum.

Tips for healthy eating in training When in training it is important that the foods at the bottom of the pyramid make up at least half of your daily intake and are the basis for your main meals. These are the foods that will give you the energy for training.

It is extremely important that a cyclist eats regularly when in training or when preparing for a particular event. Imagine a steam train: to travel fast, you need to refuel frequently. If you let the fuel levels in the train's boiler drop too low the train will grind to a halt.

The quality of the food you eat is also important. Only the best of fuel will do and anything less will lead to a reduced performance.

Your body's metabolism (the rate at which your body converts food into energy) works in exactly the same way. If you let it burn out:

- you get low blood sugar levels;
- you feel tired and lethargic;
- you get food cravings for snacks that are high in sugars and calories, such as chocolatebars or crisps; and
- your concentration levels suffer.

To avoid these issues and maintain adequate blood sugar levels you should try and eat every three hours, eat foods that release sugar slowly and eat enough protein to counteract the effects of carbohydrates that are high on the glycemic index.
The glycemic index or GI ranks carbohydrates according to their effect on our blood glucose levels. Choosing low GI carbs - the ones that produce only small fluctuations in our blood glucose and insulin levels - is the secret to long-term health, reducing your risk of heart disease and diabetes and is the key to sustainable weight loss.

Carbohydrates
Carbohydrates essentially consist of sugars (fruit, sweets, chocolate, jam, biscuits, etc.) and starches (potatoes, bread, rice, pasta, etc.). These foods release sugars at different rates. For basic meals and everyday snacks you should try to eat more foods that are lower on the GI scale to release energy slowly. If you eat too much of the high GI foods you are likely to gain

weight. Examples of fast releasing high GI foods include honey, sugar, croissants, white pasta, dried fruit, potatoes, chocolate, french bread, white bread, bagels, crisps, pastries, bananas, carrots and white rice.

Examples of slow releasing low GI foods include beans, fruit, eggs, turkey, chicken, cheese, whole grain rice, nuts, milk, oily fish, white fish, red meat and most vegetables.

Fruit and vegetables
Fresh fruit and vegetables are natural sources of energy and eating a sufficient amount is important. They are carbohydrates, but unlike processed sugary foods, fruit and vegetables provide a slow release of energy to the body.

It is important to have at least five portions of fruit and vegetables every day. One portion can be fruit juice (look for juice that says 100% juice). An alternative example can be red peppers which have the highest content of vitamin C compared to any other fruit.

Protein
Protein is generally made up of meat, fish and eggs (including chicken, beef, lamb and pork). Proteins help to stabilise our blood sugar levels and give us longer lasting energy. Protein also counteracts the effect of carbohydrates on blood sugar levels, and helps muscles to repair. The more muscle you have, the higher your metabolism will be which results in carrying less excess fat.

Fats
Not all fat should be avoided; its just important to eat the right sources of fat. Monounsaturated and polyunsaturated fats are better than saturated fats. Examples are given below:

- monounsaturated fats - olive oil, almond oil and avocado oil;
- polyunsaturated fats - fish and vegetable oils; and
- saturated fats - meat, eggs, cheese, cream, butter and cakes.

Tips for eating fatty foods:
- eat lean meat and cut off any visible fat;
- eat oily fish containing unsaturated fats;
- choose low-fat varieties of dairy products;
- limit the use of margarine and butter;
- avoid chocolate, cakes and biscuits;
- avoid pre-packed foods and eat fresh meat and fish over the counter whenever possible;
  and
- use natural oils when cooking.

The importance of hydration
A lack of water leads to dehydration, an increase in core temperature, an inability to concentrate, mood swings, headaches, an inability for muscles to recover after exercise and an increased risk of certain cancers and heart disease.

Your body is made up of 70% water so it is very important to maintain adequate levels of hydration. If you wait until you are thirsty before you drink then you are already dehydrated. It is important to try and drink at least one and a half to two litres of water a day.

Energy drinks containing electrolytes may also be used when cycling to maintain salt and mineral levels. When cycling, a general rule would be that you need one litre of water for every hour you are riding.

Healthy snacks
You can use a lot of energy when cycling so taking along a few snacks for the road and having some more at home for when you finish is also a good idea.

Most chocolate bars are high in fat and sugar and give you an energy burst, which runsout pretty quickly. For training though, the snacks that give you a 'slow release' energy are best.

Suitable examples would include:
- fruit (bananas are very popular);
- oat or wholemeal biscuits or muffins;
- dried fruit and nuts (without salt);
- 100% fruit juices;
- fruit scone; and
- low-fat cereal bars.

Food labels
Always check the labels on foods or snacks that you wish to buy. A lot of foods that look healthy are also packed full of hidden sugar, fat and salt. Labels give full amounts of sugars, fat and saturated fat per 100g.

Try to opt for food with the following amounts or less for every 100g:
- 2g of sugars;
- 3g of fat; and
- 1g of saturated fat.

Injury/stretching/recovery

Introduction
To perform and train consistently it is vital that the muscles used when cycling are allowed to recover and repair themselves after each effort. The quicker the muscles are allowed to recover the better a cyclist is likely to perform. It is therefore important that paying adequate attention to recovery should be an integral part of any training programme. A cyclist should carry out the following on a regular basis to ensure muscles recover as quickly as possible when training or cycling long distances:

- active recovery – following a tough training session or long distance event a cyclistshould undertake a period of cycling on a low gear for approximately 20 minutes at aslow pace. This exercise will help to speed up the recovery process by increasing blood flow, accelerating the circulation of nutrients, reducing muscle soreness and relaxing the mind with some quiet, stress free time on the bike;
- replenish fuel stores – the recovery process should begin the moment you step off the bike. A priority is the replacing of glycogen (blood sugar) that has been used up over the course of a cycle. Consuming carbohydrate rich foods and drinks in the immediate aftermath of a training ride/event will significantly improve the recovery process. If you have difficulty consuming foods straight after a tough spin many of the recovery drinks currently available will also aid recovery;
- hydration – it is very important to re-hydrate the body after cycling. A cyclist should make sure to drink plenty of water and/or recovery drinks containing electrolytes in the immediate aftermath of a cycle to ensure the recovery benefits are maximised;
- adequate levels of sleep – when you sleep your body re-channels all the energies usually reserved for daily tasks into helping your body repair itself. This repair job obviously takes more time when involved in significant cycle training regimes or taking part in sportive events. You should therefore aim to get as much sleep as possible (at least eight-ten hours) when undertaking significant levels of cycling;
- hanging the legs - elevating the legs above the heart (e.g. lying on your back with your feet up against a wall) helps eliminate by-products out of the legs, which is one of the primary causes of swelling and extended fatigue; and
- stretching – see below.

The importance of stretching
Stretching regularly will help you avoid tight muscles and injuries. But it can be a doubleedged sword. The wrong type of stretching can lead to injuries.

Cycling has many benefits. But, as with any exercise activity, it is not a complete exercise in itself. When you cycle, the muscles you move over and over to pedal the bike become stronger, tighter, and shorter. Often described as a “mid-range” activity, cycling involves a limited, repeated motion. During each stride, the leg is never fully straightened (locked) or bent to its fullest, so the muscles are never fully contracted or extended. This causes tightness, which contributes to any number of overuse syndromes such as pain in the lower back, hamstring muscles and knees.

Muscles commonly used for cycling
- the quadriceps – the muscle on the front of the thigh, which is used to start the downward pedal stroke;
- the gluteus maximus – the biggest muscle in the buttocks, critical to the extension ofthe knee from the hip joint in the downward stroke and in the reverse process in the upward stroke;
- the hamstring – cyclists have quite inflexible hamstrings because the pedal stroke doesn’t stretch that muscle. The hamstrings, the long muscle on the back of the thighs, combine with the quadriceps, calf muscles and gluteus maximus to propel the knees through the pedal stroke;
- the calf muscles – these help to push the front part of the foot down at the bottom of the pedal stroke, and to bend the knee, assisted by the hamstrings; and
- the tibialis anterior – the muscle used to pull the front of the foot upwards on the upstroke.

Stretching for cycling
Stretching helps you adapt to the rigors of cycling. Unfortunately, one of the curses of hard riding is gradual loss of muscle elasticity and an overall decrease in joint flexibility. Stretching, which requires no special skill, enables cyclists to make their muscles and joints more adaptable to the rigors of cycling.

Since stretching improves flexibility and increases range of motion, well-exercised muscles and joints will undergo less severe stress in competitive conditions. The longer that muscles and joints can perform without failure under stress, the longer you can cycle at your optimum speed. Muscles will last longer during activity before tightening up if prestretched correctly.

The stiffness and tightness that are frequently felt after a ride can be brought under control, and even eliminated, with proper stretching after a workout. Stretching keeps the body fine-tuned and hastens recovery.

Stretching is a form of preventive medicine, and all of the points mentioned thus far for reducing stress, improving flexibility and aiding in recovery, serve to prevent the breakdown of your system, which manifests in discomfort or pain.

One of the best ways to stretch is with static stretching, in which you stretch each muscle group slowly and gently, until a mild amount of tightness (not pain) is felt in the muscle. Then maintain this position for about 30 seconds or until the muscle begins to relax. As you hold the stretch, the feeling of tension should diminish. If it doesn’t, just ease off slightly into a more comfortable stretch.

After holding the easy stretch, move a fraction of an inch farther into the stretch until you feel mild tension again. This, the developmental stretch, should be held for another 5-30 seconds. This feeling of stretch tension should also slightly diminish or stay the same. If tension increases or becomes painful, you are over-stretching. Ease off a bit to a comfortable stretch. The developmental stretch reduces tension and will safely increase flexibility. Repeating this process a few times for each muscle group will give the best results.

Examples of stretching exercises

Quadriceps stretch
- touching a chair or wall for support, bend your left knee, grab your left foot with your right hand;
- keeping your knees together, pull your foot up so that your heel presses against your buttocks; and
- hold for 20 seconds, then repeat with your right leg.

Hamstring stretch #1
- sit on the floor with both legs out straight;
- extend your arms and reach forward by bending at the waist as far as possible while keeping your knees straight; and
- hold this position for 10 seconds.

Hamstring stretch #2
- sit on the floor with one leg out straight;
- bend the other leg at the knee and position the sole of that foot against your opposite inner thigh;
- extend your arms and reach forward over the one straight leg by bending at the waist as far as possible; and
- hold this position for 10 seconds.

Hamstring stretch #3
- stand and cross your right foot in front of your left;
- slowly lower your forehead to your right knee by bending at the waist;
- keep both knees straight;
- hold this position for 10 seconds;
- relax; and
- repeat by crossing your left foot in front of your right.

Calf stretch
- face a wall and stand 12 inches away from it;
- extend one leg behind you, keeping both feet flat on the floor and your rear knee straight;
- lean toward the wall until you feel tension in the calf muscle of the extended leg (You can put your arms on the wall for support.);
- hold for 10 seconds; and
- repeat with the other leg.

Times not to stretch

There are times when stretching can do more harm than good. For example, when:
- injury is present – stretching can lead to further injury if done to torn muscles or tendons. What they need is rest, not stretching exercises, to heal properly. Return to stretching once the injury has healed.
- muscles that are cold – while proper stretching will aid in warm-up, caution must be taken when muscles are cold. Wear tights while warming up in cool or cold weather and, maybe, warm-up by jogging or riding the bike for a few minutes before stretching. A cold muscle can be compared to a dry sponge. Trying to stretch is usually ineffective and can even result in small tears in the muscle cells. A warm muscle can be compared to a wet sponge, it has more flexibility and is more supple.

Final Words

We hope now that you will at least take one good tip away with after reading this booklet.

All you have to do now is get out on that bike for a few last times and enjoy yourself.

All we ask from you is to cycle safely and have fun over the cycle weekend.

All you need to do is keep pedalling, we will look after the important things like food and craic each evening.

Remember, we are all starting this with the same goal in mind, and that is getting to Cremartin on Saturday evening and to Killyclogher on Sunday evening safe and sound.

There are plenty of rest stops along the way so just get out there and enjoy it.

See you all in the Village Inn on Sunday evening for a celebration of our achievements.

www.killycloghergaa.com