

Basic Cyclist Equipment for Training

Mandatory Items

- Bicycle (mechanically safe and in good working order)
- Helmet (ASTM, Snell, ANSI or CPSC approved)
- Water bottles (two are highly recommended)
- Portable pump
- Patch kit
- At least one tire iron (Pedro's is great)

Recommended Items

- Small bicycle tool kit
- Band-Aids
- Hand wipes or hand sanitizer
- Hydration pack
- Under seat bag to carry extras
- Spare tube (highly recommended)
- Lip balm with sunscreen
- Sunscreen
- Sunglasses

Cycling Clothes

- Prepare for all weather conditions - use perspiration wicking layers
- Padded cycling shorts
- Cycling jersey
- Rain jacket
- Fleece vest
- Leg or knee warmers or tights (not padded)
- Arm warmers
- Headband
- Padded cycling gloves
- Bike socks
- Bike shoes

Nutrition and Hydration

- Water in bottle or hydration pack
- Electrolyte drink in bottle (Gatorade or similar)
- Nutrition bar (Cliff, Power, Luna, Met-Rx)
- Banana

Choosing the Right Bike

The first, and most important, question to ask yourself is what bike will you be most comfortable riding? Since you will be spending many hours in the saddle, it is very important that you choose a bike that you'll be comfortable on. Two of the most important things you'll need to do are to have your bike checked by a reputable mechanic and get your bike fit checked by a bike fit professional.

Getting Your Bike Inspected by a Professional

When you take your bike to a mechanic, he or she should inspect the frame and all the bicycle parts to ensure that they are in good condition. Be sure you tell them you'll be putting in hundreds of miles to train for the century. Equally as important as checking your hardware is making sure your bike is fit properly to your body. You should have your bike fit by a professional, this might not be the same person who sells you the bike. Most bike shops will do a very basic check, but you'll want someone who will look at the nuances of your body, including your physiology, flexibility, strengths, weaknesses and past injuries.

A good bike fit will take at least an hour, probably a bit longer. They will look at the frame size in relation to your body, as well as your saddle, handlebar and cleat positions. More detailed information on the importance of bike fit and injury prevention is provided in the next section of this handbook.

Long-term Bike Use

The second question you should ask yourself is how much and what kind of riding do you expect to do once the century is over? Your answer should help steer you towards the right bike for you. Do you plan to do a lot more road riding? If so, then a road bike might be the best choice for you. Or do you think you might stick to those leisurely weekend rides? You might decide that a hybrid is most practical. Maybe you are more into mountain biking, and, once the century is over, you'd like to hit the trail. If that's you, then it might make sense for you to do the ride on a mountain bike.

Types of Bicycles

The third question is how much money do you want to invest? As a general rule, road bikes will be more expensive than hybrids and most mountain bikes. And the more you spend, the better the quality. So, if you decide to go with a road bike, you might want to look at it as an investment and spend the extra money to buy a mid-range or higher-end bike, which will give you better components and better durability. It would be a shame to try and save money by buying a cheaper bike, only to end up replacing it a year from now.

Road Bikes

Many people prefer road bikes. The lighter weight and narrow tires will help you conserve energy, and the handlebars on road bikes offer a variety of hand positions so you can move your hands around to avoid staying in a static position for hours on end. Road bikes come in a wide range of makes and models, and each will feel a little different. A good road bike will run \$800 and above, depending on the make, model and components.

Hybrid Bikes

Other people find hybrid bikes more comfortable. They offer a more upright position, which can be helpful if you have back problems. Hybrid bikes tend to be heavier than most road bikes, but many people find that the added weight and upright body position help them feel more stable while riding. A good hybrid bike will run \$400 or more.

Mountain Bikes

For those who prefer the trail to the open road, a mountain bike might be the best choice. You can make some modifications to help make a mountain bike more road-friendly, such as putting on slick (skinny/flat) tires and locking or adjusting the shocks. A good mountain bike will run \$500 or more.

Shopping for a New Bike

If you're shopping for a new bike, we recommend trying as many different brands and models as possible, so that you get a really good feel for the differences in frame size and geometry (which will affect your position and level of comfort on the bike), the different types of gearing systems and the different frame materials (which will affect how the bike feels and how sensitive it is to road texture). Be sure to ask a lot of questions when you visit the bike shops, and tell them specifically what you'll be using the bike for and how many hours you'll be spending on it. Finally, buy your bike from a shop where you like the people who work there and where you feel comfortable asking questions. This will make a difference down the road when you return to the store for tune-ups, to buy other accessories, or if you simply have more questions about the bike you've chosen.

The next important step is to make sure you get your bike properly fitted. The next section will tell you all you need to know about proper bike fit.

The Importance of Proper Bike Fit

You should be comfortable on your bike, whether you're on a 20-mile easy ride, or a longer, more challenging ride. You should not have saddle sores, hand or foot numbness, neck or back pain. If you are having any of these

symptoms, you need to look at your bike fit. Remember, you will spend many hours in that saddle, and in one position. It is imperative that the fit is correct.

There are many books on bike fit, but unless you are comfortable working on your bike, you should seek out a professional and by all means ask questions during your bike fit. Many bike fit technicians will give you much valued advice on your riding technique.

See a Professional

If your bike was adjusted at the local bike shop when you purchased it, don't assume that it's the right fit for you. One reason to be cautious about relying on the bike store fittings is that many times the folks behind the counter are not trained to detect and understand the many nuances that bike fittings involve.

Often these technicians do not understand the biomechanics involved, such as flexibility and strength of the body. This is something that only a trained professional such as a physical therapist or an experienced cycling coach can fully determine.

Make sure you ask your bike store if they have trained bike fit professionals. If they don't, then seek out a trained professional on your own. The shop where you purchased your bike should be able to recommend someone in the area.

Getting Your Bike Adjusted

When seeking out a professional bike technician, often you will need to make an appointment well in advance. If you are having even the slightest discomfort - which will probably get worse as you start to add on the miles and eventually keep you off the bike for good - we would advise that you seek out such a professional.

You go for a 50-mile bike ride, riding at a pace of 15 MPH and keeping a cadence of 85 RPM (rotations per minute of your pedals). At the end of that ride, you will have spent three hours and 15 minutes in the same position, and your knees, ankles and hips have bent and straightened approximately 16,000 times!

Now consider at the end of 600 training miles, which you will do getting ready for this ride. Those statistics come to 40 hours on the bike and more than 200,000 revolutions!

Given the amount of time that you will spend on your bike and the number of times your legs will complete a pedal stroke, you absolutely need to be aware of how you fit on your bike. And conversely, how your bike fits you!

Along with comfort, fit has the greatest effect on aerodynamics and pedal stroke efficiency. A saddle height - just one inch too high or too low - can cause unequal distribution of forces through the pedal stroke. This will lead to an unequal distribution of work on some muscles and give others a free ride. The relative position of the handle bar height to saddle height will change how well you either "cut through" or "hit" the wind.

Helmets

Wearing a bike helmet is mandatory when riding in the century, and we strongly encourage the use of helmets on all training rides. But simply wearing a helmet is not enough to protect you from injury in the case of an accident. It is extremely important that your helmet fits your head correctly. If you have difficulty adjusting your helmet, take it to your local bike shop, and ask them for a demonstration. Most bike stores will be happy to make the adjustments for you.

Replace any helmet that has been involved in a crash regardless of its appearance. Not all helmets involved in an accident will show external damage, but the helmet under the cover will have been compromised and most likely won't handle another accident to the best of its ability.

Helmets are made of high impact foam under the shell. Over time this foam will degrade and weaken. It is recommended that you replace your helmet approximately every two to three years regardless of whether or not it has been involved in an accident.

It is not recommended that you buy a used helmet. If you do choose to do this, buy from someone you know and trust. Find out how old the helmet is and if it has ever been involved in an accident. If the helmet has been in an accident or is more than two years old, you should not buy it.

Helmets range in price from reasonable to expensive. As long as you are buying a helmet that has the approved safety standards mentioned above you will have a safe design. Cost is not relative to a better-made helmet.

The rule of thumb: the more vents the more expensive. More vents allow the air to cool your head more efficiently. The cost to produce a helmet with more vents is reflected in the price you pay. No matter how many vents your helmet has, it will protect your head in the same manner.

Safety

Buy a helmet that has been tested and meets the uniform safety standard issued by the U.S. Consumer Product Safety Commission (CPSC), or one or more of the voluntary bicycle helmet standards like ASTM, Snell or ANSI. You can tell this by looking for a label or sticker that says the helmet meets the standard.

Brands

Select a brand and size that fits well prior to any adjustments. Adjustable sizing pads are often included to help ensure a better fit. Buy one that's comfortable and attractive - this way, you'll be more likely to wear it. Wearing a helmet is not about fashion sense; it is all about keeping our heads free from injury. Remember, we all look pretty much the same in helmets!

Five-Step Helmet Fit Test

1. With one hand, gently lift the front of the helmet up and back. If helmet moves back to uncover the forehead, tighten front strap. Also adjust padding thickness and/or position, especially in back. Make sure chin strap is snug. If this doesn't work, the helmet may be too big.
2. With one hand, gently lift the back of the helmet up and forward. If helmet moves forward to cover the eyes, tighten back strap. Again, make sure chin strap is snug. Also, adjust padding thickness and/or position, especially in front.
3. Put a hand on each side of the helmet and rock from side to side. Shake your head "no" as hard as possible. If helmet slips from side to side, check padding on sides and make sure straps are evenly adjusted. Open your mouth (lower jaw) as wide as possible, without moving your head. The top of your helmet should pull down. If helmet does not pull down when opening your mouth, tighten chin strap. Make sure the front and back strap junction is under each ear.
4. Check to see if the front edge of helmet covers your forehead. The front edge of the helmet should not be more than 1 to 2 finger-widths from your eyebrow. If helmet does not cover the forehead, position helmet no more than 1 to 2 finger-widths above eyebrows. Tighten any loose straps. Make adjustments so the helmet stays over the forehead.
5. If you are still unsure if your helmet fits correctly or not, then have someone else test your helmet fit by doing the Five-Step Test outlined above. Hold your head still during the test. Your helmet should pass each of the five steps.