

CONFIDENT CYCLING

COMMUTING

Bike Selection and Fit

This will assist participants in finding the right bicycles for their needs and getting these bicycles fit to their body. Topics include types of bikes, bikes for different riding, cost, where to look, sizing, and bike adjustments to fit the rider.

Purpose:

This presentation is designed to assist participants in finding the right bicycles for their needs and getting these bicycles fit to their body. Participants will learn to identify types of bikes, bikes for different riding, cost, where to look, sizing, and bike adjustments to fit the rider.

Time and Place:

This module is designed to be presented indoors using the associated PowerPoint file. The presentation is expected to last about 20 minutes with a 10 minute discussion period

Learning Objectives:

Participants will learn:

- how different bikes are used and what makes them different
- how to match a bike to different kinds of riding
- how to choose a bike that is right for their circumstance
- what are the important adjustments that make a bike fit well

Materials:

The instructor will need the following materials:

- PowerPoint presentation with script
- Projector, screen and computer and laser pointer
- bicycle(s) and work stand
- tools to make common adjustments



<i>Slide Text</i>	Description and script
1. <i>Splash intro of the series and sponsors with logos and titles</i>	The Confident Cycling presentations were produced by the League of American Bicyclists in partnership with the Safe and Active Flint Coalition. The Safe and Active Flint project is funded through the Ruth Mott Foundation and facilitated by the Michigan Fitness Foundation in partnership with the Crim Fitness Foundation.
<i>Overview of the series</i>	Bike selection and Fit , Driving Your Bike, Confident Commuting, How to Ride in Inclement Weather, and Creating a Bicycle Friendly Workplace
a. <i>Bike Selection and Fit</i>	The correct bicycle adjusted to fit can make any ride more fun and enjoyable. Some simple basics can insure that your bicycle is the right one for the kind of riding that you do and is one that you can enjoy
2. <i>Review of the issues in choosing a bike</i>	Bicycles come in many styles and sizes so you can find exactly the right one for your brand of riding. Some of the issues that are important include the distance, whether you will be carrying loads and the speed you want to achieve.
a. <i>What kind of bike is right for you?</i>	Choosing the right bike depends on what kind of riding you are going to be doing. If you expect to ride a couple of miles to the library, grocery or work the bike can be almost anything. If you are going to be riding 5-10 miles and have to be at work on time you may need a better bike.
b. <i>What other equipment do you need?</i>	If you are going to be riding many miles in the country you'll need some kind of tools to repair common parts that may break. If you expect to ride in the dark or inclement weather you'll need to think about equipment for your bike and yourself.
c. <i>When price is an issue.</i>	If price is critical there are some things that you must have and some that you may want to have. Just remember how much money you can save by not driving your care for those short trips.

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3. <i>What kind of bike is the right bike for you?</i>	There are many different kinds of bicycles. Some are made to ride on the road and some are more generalized, able to ride on smooth pavement but also on dirt trails and bike paths.
a. <i>How long is the ride?</i>	One of the first criteria is the length of the ride. Almost any bicycle can be used if you're only going a couple of miles but you may want to find a bike that is designed for long-distance if you are riding 10 miles or more.
i. <i>Road</i>	Road bikes are designed to go fast for long distances on smooth pavement. They have options for moving your hands around so you can vary your posture during the ride. A specialized type of road bike (touring bike) is frequently used for commuting and general in-town riding.
ii. <i>Mountain bike</i>	Mountain bikes are designed to ride on dirt trails, up and down steep hills. They can be ridden on smooth surfaces too but aren't as efficient as a bicycle designed for the roads.
iii. <i>Hybrid</i>	Hybrid bicycles are a combination of a road bike and a mountain bike using the best of both. They are not as efficient on smooth pavement as a road bike and not able to take the roughest trails. They do however let you ride hike and bike paths and rough pavement with ease.
iv. <i>Special types</i>	There are lots of "special" bikes on the market. Recumbents that let you sit back when you ride, cruisers that give a more relaxed ride, tandems that let two people ride together and many combinations of these.
b. <i>What surfaces will you be riding on</i>	As you can tell, the surfaces you will be riding on make a difference in the bike you will enjoy. Many of the "pure" road bikes can be fitted with fatter tires that will let you handle some paths and trails if those are on your route.

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c. <i>How much will you be carrying</i>	Mountain bikes and racing road bikes usually don't have much in the way of carrying capacity. Touring, city and some cruisers are better equipped and have attachments for adding racks and lights to make getting around town easier.
d. <i>What experience do you have</i>	Have you done enough cycling to be able to fix your own bike or modify one that you pick up in a garage sale? You may be able to visit pawn shops or garage sales and get a good price on a great bike. Are you a novice just getting back into cycling after being off for years? You'll probably want to go to the local bicycle dealer and let them help you get the right bike for you and your riding style. Make sure you get a sales person that will listen to you and not try to sell you something that isn't right for your needs.
4. <i>What other equipment do you need?</i>	You don't need a lot of additional equipment if you don't ride much or for short distances. Of course you should always carry identification and your medical insurance card if you have one. Your cell phone is also handy and there is one piece of equipment that you should never be without and that's a helmet.
a. <i>Helmet</i>	Helmets are designed to protect your brain in the case of a slow speed crash where your head hits the ground or stationary object. That describes over 80% of the crashes that most riders have so it just makes sense to wear a helmet whenever you get on the bicycle.
b. <i>Tools</i>	<p>If you are going to be out and about and want to avoid walking home after getting a flat tire you need to carry and know how to use some basic tools. A set of levers to take the tire off of the rim, a patch kit or extra tube (both is best) and a pump to put air back in the tube after you have replaced it. Don't forget a bag to carry them in.</p> <p>As you start riding longer distances you can add in a few other tools and learn to use them. After the tire repair tools I normally recommend a spoke wrench, a chain tool and some Allen keys.</p>

<p>c. <i>Lights and reflectors</i></p>	<p>Description and script (cont.)</p> <p>In all states a light on the front is required for riding in the dark and it makes good sense. Most states also require a red reflector on the rear and some require a red light on the rear. This is the absolute minimum but you will want to add other lights and reflective materials if you think your may be riding in the dark. If you are considering commuting you need to add these items.</p>
<p>d. <i>Rack and panniers</i></p>	<p>If you are going to choose to commute you need to add racks and some way to carry loads on the racks. Fancy panniers (saddle bags) can be very expensive but simple black plastic garbage bags can serve in many cases.</p>
<p>e. <i>Fenders and mud flaps</i></p>	<p>If you live in a rainy climate you should invest in fenders and mud flaps. This is a cheap way to keep yourself dry and clean if you are going to be riding regularly in the rain.</p>
<p>5. <i>When price is an issue</i></p>	<p>It would be great to be able to go out and spend any amount you want on your equipment. Most of us can't so let's look at some ways to work up to a fully equipped system.</p>
<p>a. <i>Reduce the use of your car?</i></p>	<p>Even though you may not be able to get rid of one of your family's cars but riding your bike, if you can reduce the number of short trips you make with today's gasoline prices you should be able to save significant amounts over a few months.</p>
<p>b. <i>Phased purchases</i></p>	<p>So what are the most important things you need and consider getting a few each month.</p>
<p>i. <i>Bike and Tools</i></p>	<p>Bike, helmet and tools are the first items and this will be your biggest outlay of money.</p>
<p>ii. <i>Lights and reflectors</i></p>	<p>Lights and reflectors come next and shouldn't cost more than about \$50 total.</p>

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<i>iii. Rack and panniers</i>	Racks and panniers should be put off for a couple of months as they will likely add a couple of hundred to your bill. Use a backpack in the mean time or carry you clothes to work by car once a week.
<i>iv. Fenders and mud flaps</i>	Fenders and mud flaps should cost less than \$100 and don't need to be added until the rainy season.
<i>6. Critical fit issues</i>	The bicycle is the most efficient vehicle ever invented. You should be able to ride for miles without any pain. If you bike hurts it doesn't fit you and needs to be adjusted.
<i>a. Why is fit important?</i>	Fit is for comfort but it also for efficiency. A bicycle that doesn't fit its engine (you) will not be able to operate at peak efficiency.
<i>i. Mechanical operation of leg/joints</i>	<p>The biggest issue is the mechanical operation of the leg muscles and joints. With the proper fit you should be able to rides all day without wearing yourself out.</p> <p>The leg is a marvelous design and operates at maximum efficiency at or near full extension. Try walking around with your knees bent and see if you don't wear out you thigh muscles quickly.</p>
<i>b. Rule of thumb</i>	All of the measurements that we are going to talk about are great starting points. Each person is different so a little tweaking away from the following measurements is not unusual...but don't tweak too much unless there is a very good reason.
<i>c. Which measurements make the most difference?</i>	Riding for a long distance requires that your posture on the bike is proper or you will get tired quickly and your back and neck with hurt. However, your legs are what drive your bike and the most important measurements are to get them in the right position to operate efficiently.

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<i>i. Frame size</i>	<p>If the frame is too small it is difficult to get the bike to fit well and if it is too big it is harder to control. The traditional way to fit a bike is to stand over the frame forward of the saddle and lift the bike to see how much clearance you have over the frame.</p> <p>For traditional diamond frame road bikes you should have 1-2 inches and on a mountain bike you should have 3-4. On different types of frames like recumbents, crank forward or compact frames this measurement is harder to make.</p>
<i>ii. Saddle height</i>	<p>Most people talk about saddle height but the real thing we are adjusting is your leg extension. You want the saddle (or seat) adjusted to that when you have your foot on the pedal at the greatest distance from your body your leg is straight or only slightly bent.</p> <p>This should work on any kind of bicycle. If you are uncomfortable sitting up as high as this will put you lower your saddle a little until you get more experience or find a “crank forward” design that lets you put your feet on the ground and still get good let extension.</p>
<i>iii. Saddle tilt</i>	<p>Your saddle should start flat with the ground (use a level) and only be adjusted a little bit either up or down. When you get a good position, mark it so you can get back if you have to change anything. Check your leg extension when you have finished this adjustment.</p>
<i>iv. Saddle position</i>	<p>Most modern saddles can be adjusted from front to back. The traditional position is to find the position so that when you are seated comfortably on the saddle the bump below your knee cap is directly over the spindle of the pedal. A weight on a string can help find this position. I you are touring and carrying a lot of weight you may want to move your saddle back a little and if you are doing triathlons you may want to move it up a little.</p>

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