

Minimize stop and go

If you find yourself in traffic with lots of traffic lights, try to pace yourself so you miss the red lights. If you have to stop, downshift so you aren't trying to start from a high gear. Put your weight on one foot and position the other pedal in the two o'clock position. When the light changes, push down on the pedal and you'll have enough momentum to balance and begin pedaling. If you're using toe clips, wait until you're through the intersection to clip in.



Keep up the fuel

Eat before you're hungry and drink before you're thirsty. If you follow this advice, you should avoid a state of exhaustion called "the wall." Just as you wouldn't try to drive your car when the tank is on empty, you need to keep you, the bike's engine, fueled for the trip.

Keep relaxed

Smart cycling does take a lot of your attention, but don't let it get the better of you. Take the time to do a personal check. Maintain your comfort by changing hand positions often, keeping your elbows relaxed, and doing neck and shoulder stretches throughout the ride. Take a deep relaxing breath and enjoy the scenery around you.

Safety Note

Predictability is the key to safety when you're sharing the road with motorists. Be alert, follow the traffic laws and signal your intentions to the other road users.

For further information:

General:

The League of American Bicyclists

<http://www.bikeleague.org/>

The International Mountain Biking Association

<http://www.imba.com/>

NYS Governor's Traffic Safety Committee

Ask for the "Sharing the Road Safely" brochure

Empire State Plaza
Swan Street Building, Room 414
Albany, NY 12228
Phone: (518) 474-5777 Fax: (518)473-6946

NYS Department of Transportation

Bicycling Hotline 1 - 888 - BIKE-NYS
Pedestrian Hotline 1 - 888 - WALK-NYS

Local:

Contact your county Cornell Cooperative Extension association.

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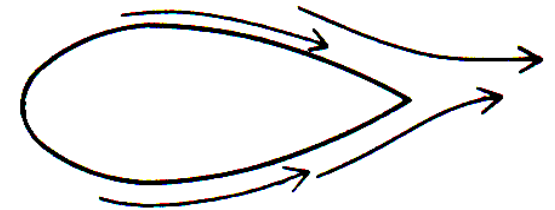
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Efficiency while Bicycling



Bicycling is said to be among the most efficient means of transportation available. If you put these tips into practice, you should find yourself going farther and enjoying it more.

$$\text{Drag coefficient} = \frac{\text{Drag force}}{\text{Dynamic pressure of air X Frontal area}}$$

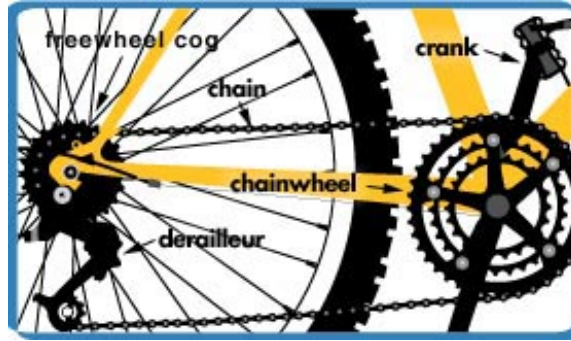
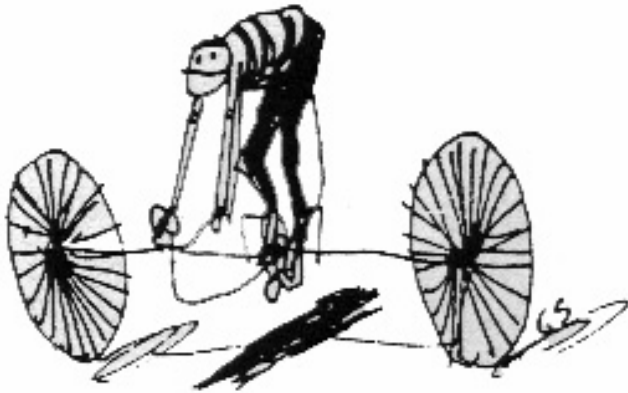


You don't need to be a math wizard or a rocket scientist to learn how to get the most from your energy output while cycling.

A bike that fits

A good fit is essential to avoid discomfort and injury. As a general rule for road bicycles, you should have one inch of clearance between the top tube and your crotch as you stand astride the bike. If you're on a hybrid, clearance should be about two inches. Many cyclists tend to have their seat positioned too low, resulting in an inefficient pedaling situation which places a strain on the knees. The saddle, which adjusts forward and back, should be positioned so that with the cranks level (at the nine o'clock and three o'clock positions), a line descending from just below your forward kneecap will pass through the pedal axle.

Your arms should be slightly bent to provide cushion from road shock; your hands should completely enclose the handlebar and easily reach the brakes. If you experience pain or discomfort in your back, neck and arms, you may want to make adjustments with the stem or handlebar to achieve a better position.



Gears

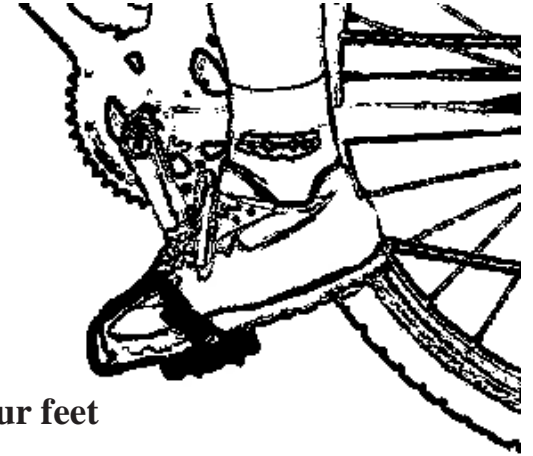
If you look at your bicycle, you will note that there are at least two sprockets where the chain is located, one in the front and one at the rear wheel. If you have more than one sprocket in the back, you are going to have more than one gear on your bike. An 18-speed bicycle will have three sprockets in front and six in the back.

Bicyclists use different combinations depending upon whether they are going up-hill, down-hill or on the flat. Using a multi-speed bike is similar to a standard transmission on a car – you shift gears in order to get the most out of the engine. On a bicycle, you are the engine and you should use the gears so you are able to pedal with minimal effort.

It's important to learn about overlap with your gears. Although your bike may be a "21-speed," because of overlap, you will have fewer gears. This will become evident when you start experimenting with all of your gear options on the road.

Cadence

If you're a casual cyclist or new to the sport, there's a good chance you're pedaling in too hard a gear and not shifting frequently enough. It's better for your knees, lungs and circulation as well as for muscle development to use low gears. The number of times you turn the pedal per minute (your cadence) should be between 70 and 90. It may feel fast at first, so work up to this pace gradually. Pedaling at a higher cadence by taking advantage of multiple gears is much less fatiguing and you'll be saving yourself from future knee injuries.



Your feet

The most important feature of footwear for cycling is a firm sole. The cushioning of a running shoe is unnecessary while on a bike. Firm soles help send more of your energy to the pedal. Going a step further, toe clips contribute a great deal to your pedaling efficiency. They also prevent your feet from slipping off the pedals when you're accelerating or braking. To become comfortable with toe straps, keep them loose until you're accustomed to getting your feet in and out of them.