

Riding Technique

HAND POSITIONING

There's More to It Than Meets the Eye

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The design intention and proper use of the drop handlebars is frequently misunderstood - many cyclists do not take full advantage of the handlebars. The design of the modern drop handlebars is the result of years of experience and evolution. They are designed to provide the optimum balance between efficiency and comfort. Properly adjusted, they permit the rider to sue arm, shoulder and back muscles to assists the pedalling stroke. Furthermore, they help decrease wind resistance because of the rider's bent over position.

Although there are many positions for your hands on the handlebars, those positions are minor variations of the three basic ones described here.

Handlebar Position #1 (Riding the Tops)



This position is used for general riding. It is the basic position that allows the most upright angle for the rider's back. There is a disadvantage to this position, however. The rider must move the hands to actuate the hand brakes. For a while, some manufacturers tried to answer this problem by supplying extension brake levers (sometimes called safety brake levers) that permitted use of the hand brakes while in position #1. But use of these levers has its own set of problems and most, if not all manufacturers have stopped their use.

Of course, in this position you offer the most wind resistance and slow yourself down. But for recreational riding when you mostly want to drink in the view, the problem, of wind resistance at these slower speeds is proportionally less important. (The fast you go, the greater the percentage of your effort which must go into overcoming wind resistance.)

When "riding the tops" you can move your head most freely, and your upper body will feel most comfortable riding for a long period of time.

Even in this position, it is important not to rest too much of the body's weight on the handlebars. If you are resting a great deal of weight on the bars check your bike's setup. Seat height, fore and aft adjustment of the saddle, and the saddle tilt will all affect the weight on the handlebars. Too much weight on the cyclist's hand sometimes causes numbness because of pressure on a nerve in or near the wrist.

Also, wrists should not be completely flexed, as over-flexing can tire the wrists or cause weakness there.

¹ *Bicycling*, April 1980.

Handlebar Position #2 (Riding the Hoods)



Riders desiring greater speed will frequently use this position. It permits easy access to the brakes, use of the brakes as additional leverage when hill climbing, and the more stretched out position lowers the rider's body and therefore decreases wind resistance.

This position will place slightly more pressure on the hands than will proper use of position #1. You can also expect more upper body fatigue with it, but you will still have fairly free movement of the head. Overall, the payoff is that you will have better command of the bike in situations when you need it.

This is an ideal position for cycling in traffic when you might need to swerve or brake in an instant's notice.

Handlebar Position #3 (Riding the Drops)



Many cyclists incorrectly assume that this position is the basic all-around optimum. Usually, you should ride the drops (bottom part of the handlebars) when performance is your main objective. This position should be used only when pulling on the bars to maximize pedalling power. It is not designed for comfort. On the drops, the rider's body is very low, which results in minimum wind resistance. The wrists should be straight. Riders who are untrained in using the drops to maximize leverage usually rest on the handlebars. This results in numb fingers; sore hands and shoulders; and most importantly, a potentially dangerous redistribution of weight.

Bicycles are designed for 45% of the weight on the front wheel and 55% on the back wheel. Lying on the drops can result in too much weight on the front of the bicycle. This increases the likelihood of a spill when riding over bumps, gravel or railroad tracks.

Do not use position #3 when climbing a hill since this position causes too much constriction of the lungs. Ride uphill in handlebar positions #1 or #2 to allow free breathing.

In all positions, your elbows should be bent slightly as a buffer to take up any shock should you be bumped by another rider from the side. Also, bent elbows are crucial in helping to determine which muscles are used during the pedal stroke. Something even many competitive riders don't know is that the large, powerful *gluteus maximus* in the rump are not used unless the position of the back is below 45°. You can increase the amount of bend in your elbows to adjust the angle of your back and bring these muscles into play. This is especially useful when you encounter a head wind or a hill. Thus if you want to go faster or apply more force to the pedals, increase the amount of bend in your elbows.

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In most situations it's best to concentrate on relaxing as you ride. You'll save energy that could otherwise be lost by gripping the handlebars too tightly or by excessive movement of your upper body. Change hand positions every now and then to loosen up. Follow both of these tips, and you'll be less likely to experience the numbness not so affectionally called "*cyclist's palsy*" or "*handlebar palsy*."

Of course, two other aids to help prevent this problem are padded cycling gloves and padded handlebars tape or other covering. Certainly you should always consider either or both of these solutions if you are having any discomfort in your hands from riding.