



***Riding a Bicycle is healthy, relaxing,
and fun!***

Linda Johnston, PT

For maximum comfort level, to prevent potential injury, and to improve performance; fitting your bike is essential.

The most common bike fit errors include saddle heights that are either too high or too low, handlebar reach that is either too long or too short, and misalignments of the pedal and shoe. A bike fitting is the custom measuring and adjustment of these key parts of the bicycle and are fine tuned based on what kind of cyclist you are or want to be. Bike fit is a sequential process starting with the saddle height.

First, keep the saddle level. Tilted forward or backward can put undue stress on hands, arms, and lower back. Adjusting the saddle height so the knee angle of the fully downward leg is between 35-45 degrees for the recreational cyclist and between 30-35 degrees for the road cyclist improves function with less stress on the knees. The saddle also should be a comfortable distance from the handlebars. A reach that is too long or too short can also stress the hands, arms, and low back, and can be adjusted with forward or aft positioning of the saddle. While sitting on the bicycle with the feet on the pedals and the crank arms parallel to the ground, a plumb line dropped from the bottom of the knee cap should bisect the pedal axle.

Handlebar position will affect hand, shoulder, neck and back comfort. Optimal trunk angle for the road bike cyclist is 30-40 degrees and for the comfort/recreational rider is 40-80 degrees and can be achieved with raising or lowering the handlebars. The width of the handlebars should allow hands to be slightly wider than the shoulders to allow for shoulder comfort and better handling of the bicycle.

The ball of the foot should be positioned over the pedal spindle for comfort, proper body mechanics, and the most power to the pedal. A stiff-soled shoe is best for comfort and performance. When using cleats; position the center of the cleat to the center of the ball of the foot.

Cycling is a repetitive sport/recreation. Pedaling 80 rpm for 4 hours per week works out to be 1 million revolutions in a year. Even a slight misalignment can be causing damage that leads to injury later. Whether you want to race, tour, ride off road, or ride just around town a proper bike fit makes it easier and safer to handle and a much more enjoyable ride.

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