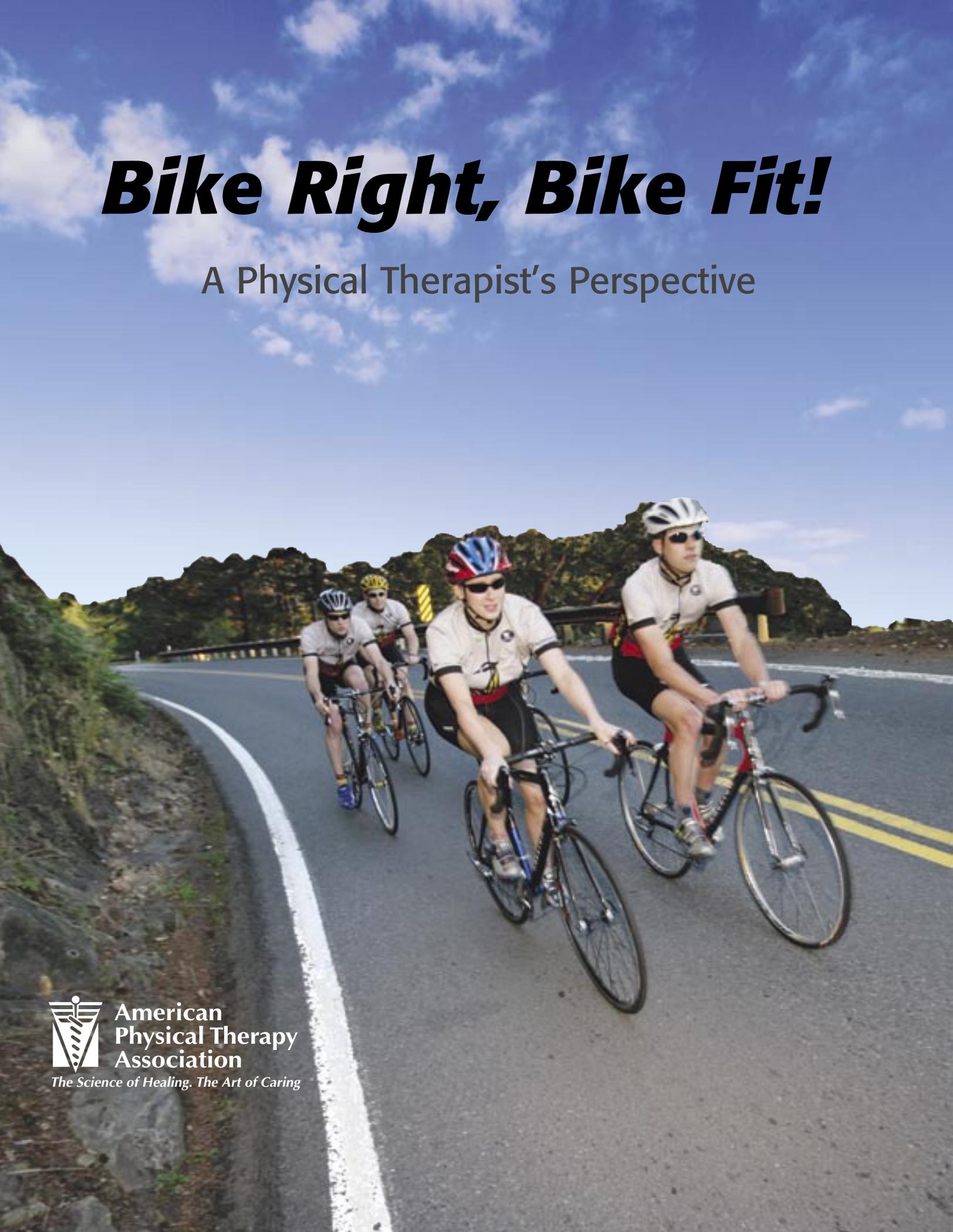


Bike Right, Bike Fit!

A Physical Therapist's Perspective



**American
Physical Therapy
Association**

The Science of Healing. The Art of Caring

A Good Bike Fit for You

Whether you are a serious bicyclist or a recreational rider, when it comes to bicycling, you and your bike should fit well together. A proper bike fit minimizes discomfort, increases efficiency, and helps prevent pain or injury. Physical therapists can evaluate the way your body is positioned on the bike to make sure that your biking style “fits” your functional goals, whether they are for comfort and endurance or for speed and performance.

If adjustments and equipment changes need to be made to your bicycle, consider taking it to your local bicycle dealer. Ask if the dealer knows a physical therapist who can work with you on proper fit. Or, visit APTA's Web site at www.apta.org and click on “Find a PT.” Contact a physical therapist who treats orthopedic or sports conditions.

Trunk Position and Shoulder Angle

For the recreational rider, trunk position should be 40-80 degrees from horizontal. Shoulder angle should be between 80-90 degrees. For the road cyclist, trunk position should be between 30-40 degrees and shoulder angle should be between 90-100 degrees.



The Handlebars

Handlebar position will affect your hand, shoulder, neck, and back comfort as well as the handling of your bicycle. For the road cyclist, correct handlebar positioning will provide better pedaling efficiency, aerodynamics, and improved safety with cornering and braking. The width of the recreational rider's handlebars should allow hands to be slightly wider than shoulders. For the road cyclist, hands should be approximately 2 cm wider than the shoulders for comfort and to help ensure good handling of the bicycle.

Knee to Pedal

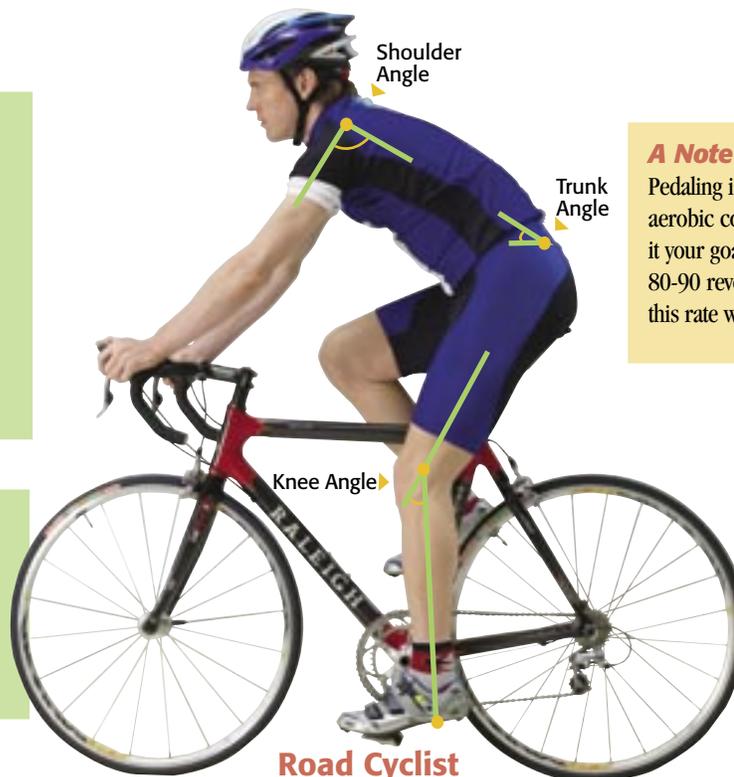
A physical therapist can measure the angle of your knee to the pedal. The closer the angle is to 35 degrees, the better function you will have with less stress on the knee. For the recreational cyclist, the angle should be 35-45 degrees. The road cyclist should have a 30-35 degree angle.

The Saddle

The saddle on your bike should be level. If the saddle tips downward, pressure will be placed on your hands and lower back. The saddle also should be a comfortable distance from the handlebars—too close, and extra weight will be placed on your mid-back and arms; too far away, and you may put extra strain on your lower back and neck.

Foot to Pedal

Position the ball of your foot over the pedal spindle for the best leverage, comfort, and efficiency. A stiff-soled shoe is best for comfort and performance.



A Note About Pedaling

Pedaling is a skilled activity that requires aerobic conditioning. You should make it your goal to work toward pedaling at 80-90 revolutions per minute. Pedaling at this rate will lessen your chance of injury.

Who are physical therapists?

Physical therapists (PTs) diagnose and treat people of all ages who have health-related conditions that limit their abilities to move and function in their daily lives. Through physical fitness and wellness programs, PTs also prevent conditions associated with loss of mobility. Today most physical therapists graduate with a doctor of physical therapy (DPT) degree. To learn more about physical therapists, visit the American Physical Therapy Association (APTA) at www.apta.org. To find a physical therapist in your area, click on “Find a PT.”

Bike Right, Bike Fit!

Physical therapists want you to know that equally important to the way you and your bike fit together is your own physical fitness. Good flexibility of the hamstrings, quadriceps, and gluteal muscles is crucial because they generate the majority of pedaling force and experience a high frequency arc of motion. Proper stretching, balance, and strengthening exercises will help with coordination of bicycling-related skills such as pedaling and maneuvering the bicycle. Also, consider your level of endurance as you determine the distances you would like to ride.

Posture Tips for Cyclists

- Change hand position on the handlebars frequently.
- Keep a controlled but relaxed grip on the handlebars.
- Back strength is important, especially for road bike riders.
- Wear a rigid-soled shoe to avoid foot pain and increase your mechanical efficiency.

Safety Tips

Wear Your Helmet

Always wear a helmet when riding your bike. The straps should fit snug enough to prevent the helmet from slipping. It also should meet certain safety criteria. Look for “Snell Certified” or “Meets ANSI Z904 Standard.”

Be Visible

Wear bright clothing when riding, and use a white light on the front of your bike and a red reflector or light in the rear. Add reflective material on your clothing and bicycle when riding at night. A flag fastened to the back of your bike may be useful to increase visibility.

Obey the Law

Ride with traffic flow, and obey all traffic controls such as stop signs, traffic signals, and one-way streets. Rules of right-of-way for motor vehicles also apply to bikes. Ride in a predictable manner and avoid quick, irregular changes of position or momentum. Ride on bicycle paths whenever possible.

Parked Cars

Watch for cars pulling into traffic or entering the street from driveways as well as for doors opening on parked cars. Don't weave between parked cars!

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