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# In Motion

## How to Choose a Sports Medicine Physician

By Laura A. Vogel, Alec A. Macaulay, and William N. Levine, MD

Choosing a sports medicine physician can be a daunting task. To assist with the process of choosing, the following qualities should be considered:

- **Basic certification:** Ensure that the physician has an M.D. or D.O. in good standing, and has no restrictions on their medical license. Additional training in musculoskeletal injuries, trauma, and medical conditions that affect athletes is also important.
- **Knowledge of specific sport or injury:** When involved in a specific sport, it may be preferable to find a physician who has worked extensively with athletes in that sport. A person who has served as the team physician for a sports team is likely to have treated the injuries that are common in that particular sport.
- **Experience treating specific populations:** Children, adolescents, adults, and senior citizens often face different health-related problems when participating in sports. Finding a sports medicine physician that is familiar with treating athletes in your age group can help ensure optimal sports medicine care.<sup>1,2</sup>
- **Physician-patient relationship:** It is important to feel comfortable with the sports medicine physician you choose. In addition to feeling confident in the physician's knowledge and skills, patients should always feel that their questions and concerns have been adequately addressed. Ideally, treatment and rehabilitation after a sports injury is a cooperative process between athletes and their healthcare team, with the unifying goal being a safe return to sport.

Visit [www.sportsmed.org](http://www.sportsmed.org) and click on the **Find A Doctor** link to search for a sports medicine professional in your area.

### References

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## Proper Fit Important to Prevent Cycling Overuse Injuries

By Kevin Shea, MD

Cycling remains a popular sport for both recreation and competition. Many runners and other endurance athletes use cycling as a form of cross-training and recovery from hard training sessions. However, too much of a good thing can cause injury just like any other sport.

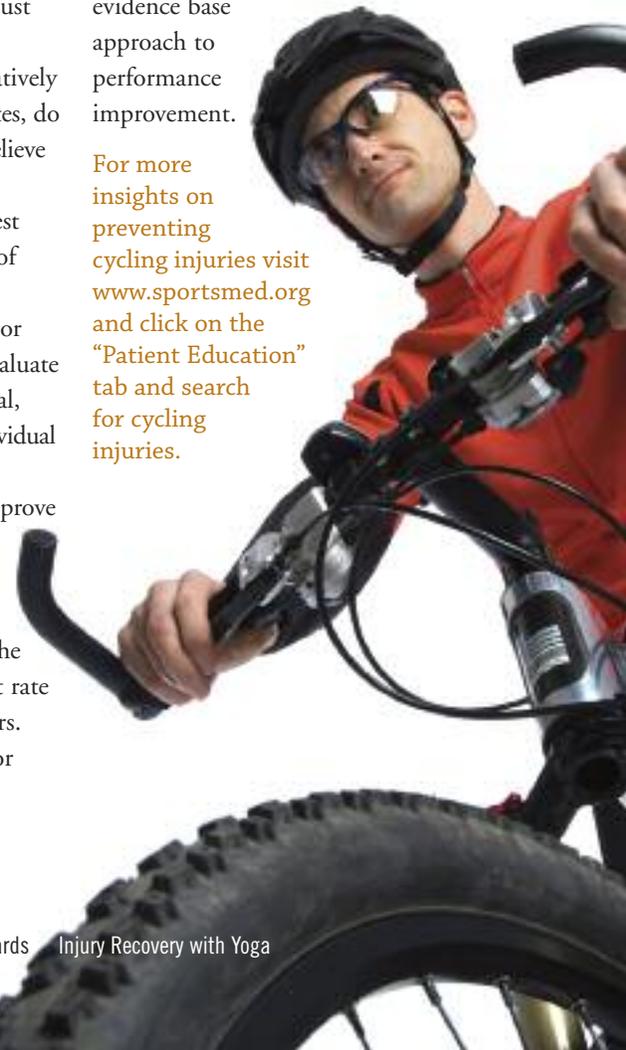
Overuse injuries, although relatively rare compared with running athletes, do occur in cyclists. Many experts believe that errors in riding position and ill-fitting equipment are the biggest contributors to the development of overuse injuries.

Many high quality bike shops or endurance training centers can evaluate the fit of the bike to the individual, including seat positioning and individual riding style. These bike-fitting evaluations can also be used to improve body position which in turn may improve overall performance.

In addition, the science of cycling training has advanced in the last decade due to the use of heart rate monitors and power output meters. These measurement tools allow for precise monitoring of the athletes

performance, and can be used to optimize training, and avoid physiologic training overload, which may lead to loss of conditioning and performance. The use of these tools, when combined with bike fitting, have provided a more evidence base approach to performance improvement.

For more insights on preventing cycling injuries visit [www.sportsmed.org](http://www.sportsmed.org) and click on the "Patient Education" tab and search for cycling injuries.



### Inside

Shoulder Stiffness   Mouthguards   Injury Recovery with Yoga

## Mouthguards May Not Be Beautiful But They Prevent More Serious Cosmetic Issues

By Kenneth L. Cameron, PhD, ATC,  
and Brett D. Owens, MD



Injuries to the teeth, lips, and gums are some of the most common injuries sustained by athletes. These injuries affect athletes of all ages and skill levels, regardless of the level of competition. Though the risk of dental injuries is greatest in contact and collision sports, injuries are also common in non-contact sports like bicycling, racquetball, volleyball, gymnastics and ice skating.<sup>1</sup> Despite the increased risk of dental injuries associated with participating in sport, many of these injuries are preventable with properly fitted mouthguards.

When compared to mouthguard users, non-mouthguard users are 1.6 to 1.9 times more likely to experience a dental injury according to a recent research.<sup>4</sup> Though it has been suggested that mouthguards may also help prevent concussions, there is currently inadequate scientific evidence to suggest that they provide any protection from head injuries.<sup>3-5</sup>

Though scientific evidence supports the use of mouthguards, many athletes still elect to participate without proper protective equipment, particularly in sports and activities where mouthguard use is not required. Barriers to mouthguard use include lack of knowledge of injury risk, negative perceptions about mouthguard use, poor fit, and perceived impairment with speech and breathing.

### Non-mouthguard users are 1.6 to 1.9 times more likely to experience an mental injury according to a recent meta-analysis.

Several criteria should be considered when selecting a mouthguard. Generally there are three types of mouthguards:

- **Stock mouthguards** that are not fitted
- **Off the shelf boil and bite mouthguards** that can be form fitted to the athlete's teeth and gums
- **Custom fitted mouthguards** made by a dentist using an individual's dental impression.

Each type of mouthguard offers varying degrees of fit and protection. While stock and boil and bite mouthguards are less expensive, custom fitted mouthguards often fit better and can be tailored to the demands of the athlete and the activity. Both the American Dental Association<sup>1</sup> and the International Academy for Sports Dentistry<sup>2</sup> have established criteria for a properly fitted mouthguard. It should:

- Adequately cover and protect the teeth and surrounding tissues
- Stay in position during impact

- Have adequate thickness in all areas (at least 3mm) to redistribute the force associated with a blow to lips, teeth, or jaw
- Provide for the speech requirements commensurate with the athlete's sport and playing status
- Be fabricated from a material that meets FDA approval
- Not interfere with breathing.

A properly fitted mouthguard can prevent significant injuries to the teeth, lips, gums, and jaws, and should be a standard part of the uniform for athletes at all levels of competition.

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# Loosen Up Shoulder Stiffness with Proper Stretching

By Grant Jones, MD

A wide variety of disorders can result in a stiff shoulder. These conditions range from tightness in certain areas of the shoulder joint as in a throwing athlete with tightness in the back of the shoulder to a more global loss of motion as in a person with a “frozen shoulder.”

Throwing or overhead athletes can develop a disorder called glenohumeral internal rotation deficit (GIRD). Repetitive throwing causes scarring of the back of the shoulder joint. This, in turn, changes the mechanics of the shoulder resulting in loss of internal rotation of the shoulder, pain, and often, muscle tears. Overhead athletes complain of pain in the back part of their shoulder when their arm is in the “cocking” and/or “acceleration” phases of throwing and complain of tightness when the arm is brought across the body or behind the back. Treatment should be centered on stretching the back shoulder muscles and strengthening the rotator cuff or front muscles of the shoulder. It’s also important for pitchers to work on stabilizing and strengthening the shoulder blade. Also, overhead athletes, particularly young throwers, should adhere to pitch count guidelines and continually have their throwing motion evaluated to look for flaws that may contribute to this condition. For information on preventing youth pitching injuries, visit [www.STOPSportsInjuries.org](http://www.STOPSportsInjuries.org).

A “frozen shoulder” is a more global loss of motion, where the shoulder is tight in several different positions. “Primary frozen shoulder,” also known as “adhesive capsulitis,” is a condition which is more common in 40- to 60-year-old women or people with diabetes or thyroid problems. It can be following a minor injury to the shoulder, or more commonly, develop without a particular event. The cause of this condition is not entirely clear, but scar tissue forms in all portions of the joint, most often starting in the front of the shoulder. This disorder goes through the following distinct phases: the “freezing” or inflammatory stage during which pain develops and motion loss occurs, the “frozen” stage where there is significant loss of motion, but decreased pain, and the “thawing” phase where there is a gradual return of motion. In a majority of patients, the



shoulder “thaws out” on its own without surgical intervention, but this process may take anywhere from six months to two years. Cortisone injections in the early inflammatory phases and gentle physical therapy may expedite the process. Rarely, manipulation of the shoulder under anesthesia with surgical release of the scar tissue is needed to regain motion.

If one starts developing shoulder stiffness, it is important to be evaluated by a medical professional familiar with shoulder disorders to get an appropriate diagnosis and treatment plan. Often these conditions are misdiagnosed and inappropriate treatment is undertaken initially, prolonging recovery.

For more information on shoulder injuries be sure to visit [www.sportsmed.org](http://www.sportsmed.org) and click on the “Patient Education” tab.





#### About AOSSM and *In Motion*

As a world leader in sports medicine education, the American Orthopaedic Society for Sports Medicine (AOSSM) is pleased to provide you with this complimentary copy of *In Motion: Active Living for All Ages*. We have designed the publication to highlight relevant information for multiple age groups from exercise and rehabilitation to nutrition and psychology.

This important educational tool is published quarterly and can be purchased in bulk for a nominal fee for distribution in waiting rooms and other public areas. **If you purchase 50 or more copies of any three issues (Spring, Summer, Fall, Winter) you'll get the fourth set of issues free!**

*In Motion* is now also available electronically! AOSSM members can add their practice name and logo to an electronic version of *In Motion*. Personalizing *In Motion* is an easy way to get pertinent, patient-friendly sports medicine information to your patients with just a click of a mouse. For more information, please e-mail Lisa Weisenberger at [lisa@aossm.org](mailto:lisa@aossm.org) or contact the Society at 847/292-4900.

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## Yoga May Help Improve Recovery After Injury

By Daniel J.  
Solomon, MD



Participation in yoga for fitness, flexibility, and relaxation has increased dramatically over the past decade. More than 15 million Americans practiced some form of yoga in 2009. According to the National Sporting Goods Association, yoga is one of the fastest growing athletic activities in the United States with increased participation of nearly 50 percent in the past three years.

Yoga encourages balance, strength, proper posture, improved breathing, control, and awareness of one's body, and has potential mental benefits as well. With increased participation, injuries have also become more common. With a few simple guidelines, many of these injuries can be prevented or limited. Additionally, when working with an experienced instructor, yoga may be helpful for injury recovery from numerous orthopaedic conditions such as common strains and sprains.

There are several types or disciplines of yoga. Not every form is friendly for beginners and some can be quite strenuous. Depending on your athleticism, fitness, flexibility, and conditioning as well as pre-existing medical conditions, you should choose a style that

fits you well. You should also communicate your goals and needs with the instructor before embarking on a new program.

Injuries can be avoided by knowing your limitations. If you have pre-existing medical problems or extremity injuries, consult your physician or orthopaedic surgeon prior to starting or renewing a yoga program. Discuss any pre-existing conditions with the yoga instructor before starting a class. They may want you to avoid certain poses or positions.

Typically, injuries occur when participants attempt a challenging pose or posture without having the initial capability, flexibility, or strength to perform that maneuver or when the pose is performed improperly. In yoga, it is better to do a portion of the maneuver perfectly than to push from poor alignment into a full pose.

With proper techniques and guidance, yoga can be extremely rewarding both physically and mentally. Following this straightforward advice, injuries are unusual and the disciplines can be quite beneficial for core and postural strength, balance, and flexibility.