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A PUBLICATION OF THE AMERICAN ORTHOPAEDIC SOCIETY FOR SPORTS MEDICINE

SPRING 2012

Provided in Conjunction with Town Center Orthopaedic Associates, P.C.



It's All Fun and Games Until Someone Gets an Eye Injury

By Robert Gallo, MD

Traumatic eye injury remains the second most common cause of visual impairment, behind only cataracts. Each year, nearly 15 percent of the 2.5 million eye injuries in the United States occur during sporting activities.¹ Of these injuries, 42,000 are severe enough to warrant an emergency department visit, and approximately 13,500 result in legal blindness.²

While many of these injuries involve recreational athletes, an estimated one in 18 college athletes suffers an eye injury each year.³ Athletes who are particularly vulnerable to injury are those participating in sports that involve hard and/or fast-moving projectiles (e.g., squash, baseball), sticks (e.g., hockey, lacrosse), close contact (e.g., basketball, football, wrestling), and intentional injury (e.g., martial arts, boxing). Among athletes 5–14 years of age, eye injuries most commonly occur in baseball; in those 15–64 years of age, basketball is the leading cause of eye injury in sports.⁴

Despite the high prevalence of eye injuries among athletes, it has been estimated that greater than 90 percent of eye injuries can be prevented by the use of protective eye wear. Two sports, ice hockey and women's lacrosse, which have instituted rules requiring use of protective eye wear, have a significantly decreased incidence of eye injury among their athletes.^{5,6} Several organizations, including the American Academy of Pediatrics, American Academy of Ophthalmology, American Optometric Association, and the United States Department of Health and Human Services have issued position statements that strongly advocate the use of protective eye-wear in risk prone sports. Eye protection is especially important for functionally one-eyed athletes (best corrected visual acuity in weaker eye, 20/400): these athletes must wear eye protection and should not participate in high risk sports such as boxing or full contact martial arts.⁷

However, not all available eye wear protects against trauma. In fact, athletes using “street wear” (i.e., corrective eye wear and/or sunglasses) may be at higher risk of sustaining an eye injury than those without eye protection. Therefore, parents and athletes participating in sports that pose risk for eye injury should ensure that any purchased eye wear meet the standards of the sport as certified by the American Society for Testing Materials, American National Standards Institute, and/or National Operating Committee on Standards for Athletic Equipment. Generally, polycarbonate and/or Trivex lenses offer substantial protection against most projectiles encountered in sport.

References

1. American Academy of Ophthalmology and American Society of Ocular Trauma, United States Eye Injury Registry Summary Report, 1998-2002. Available at: <http://www.aaof.org/newsroom/guide/upload/Eye-Injuries-BkgnderLongVersFinal-1.pdf>.
2. US Consumer Product Safety Commission, Sports and Recreational Eye Injuries. Washington, DC: US Consumer Product Safety Commission. 2000.
3. Vinger PF. A practical guide for sports eye protection. *Phys Sportsmed*. 2000;28(6):49-69.
4. Rodriguez J, Lavina A, Agarwai A. Prevention and treatment of common eye injuries in sports. *Am Fam Physician*. 2003;67:1481-1496.
5. Pashby TJ. Eye injuries in Canadian amateur hockey. *Am J Sports Med*. 1979;7(4):254-7.
6. Lincoln AE, Caswell SV, Almquist JL, Dunn RE, Clough MV, Dick RW, Hinton RY. Effectiveness of the Women's Lacrosse Protective Eyewear Mandate in the Reduction of Eye Injuries. *Am J Sports Med*. 2011. Dec 8. [Epub ahead of print]
7. American Academy of Pediatrics, Committee on Sports Medicine and Fitness; American Academy of Ophthalmology, Eye Health and Public Information Task Force. Protective eyewear for young athletes. *Pediatrics*. 2004. 113 (3): 619-622.





Recreational Activity Injury Rates Common Across All Age Groups

By Kevin W. Farmer, MD

Participation in recreational athletics has become increasingly popular and common. In the 2008 census, more than 250 million Americans noted they were actively involved in recreational athletics and exercise.¹ Risks for injury and injury types vary greatly by age. More than 3.7 million people visit the emergency department (ED) each year for sports-related injuries.² Another 3.5 million people seek care in an outpatient setting. With the aging population, and emphasis on active life-styles, the injury rate and public health burden is only expected to increase.

Statistics for all age groups to consider:

- The estimated injury rate for athletes 5–14 years old is 59.3 injuries per 1,000 persons. The top 5 activities associated with injury are pedal cycling, basketball, football, playground equipment, and baseball.
- In athletes aged 15–24, the injury rate is estimated at 56.4 injuries per 1,000 persons. The top 5 activities in this age group were basketball, football, exercising, soccer, and leisure sports (golf, tennis, bowling, etc).³
- Sports injuries in people age 5–24 account for 68 percent of ED visits for sports related injuries.²
- In athletes older than 25, golf, racquet sports, bowling, hiking and similar leisure sports account for 2.1 injuries per 1,000 persons. Exercising (including running and walking) produces a similar injury rate, at 1.9 injuries per 1,000 persons.
- Injury rates in athletes over 45 were significantly less than their younger counterparts. In 1996, there were more than 53,000 sports-related injuries in athletes over 65, which was a 54 percent increase from 1990 (Centers for Disease Control and Prevention). Nearly one-third of all sports-related injuries in this population were fractures.⁴

Injuries in recreational athletics are a common problem. Education and proper safety techniques may help to decrease risks. The aging population presents a unique set of risks in athletes. Sports medicine physicians can help work with patients and athletes to help minimize risks and keep people active throughout the year.

References

1. US Census Bureau. Participation in selected sports activities: 2008. Washington, DC: US Census Bureau; 2011. Available at <http://www.census.gov/compendia/statab/2011/tables/11s1248.pdf>. Accessed March 2, 2012.
2. Burt CW and Overpeck MD. Emergency visits for sports-related injuries. *Ann Emer Med.* 2001. 37:301-308.
3. Conn JM et al. Sports and recreation related injury episodes in the US population, 1997-1999. *Injury Prevention.* 2003. 9: 117-123.
4. Gerson LW and Stevens JA. Recreational injuries among older Americans. 2001. *Injury Prevention.* 2004.10:134-138.



Keep the Youth Sports Experience Positive

Richard Hinton, MD, MPH

So often we drop our kids off at their team practices and games no questions asked. A neighbor picks them up a couple of hours later and when they get back home we assume they had fun. Most of the time they have, but as a parent don't ignore the infrequent possibilities of injury, emotional burnout, or even sexual abuse that can occur in the youth sports environment. Again, the vast majority of youth sports experiences are positive. Here are a few tips to help your child's be positive too:

1. Ask questions of recreational league administrators at the beginning of season meetings including:

- What are the organization's emergency medical plans for a major injury, including availability and utilization of automated external defibrillators (AEDs), hospital transport, and parental notification?
- Are league coaches required to have sport and age specific coaching certification? Many organizations like U.S. Lacrosse, U.S. Soccer, USA Football and Positive Coaching Alliance sponsor such courses. If not required, direct the league to appropriate resources.
- Are coaches screened with appropriate criminal background checks? Which organizations are being utilized for these services?

2. Ask questions of your child's coach

Questions shouldn't be asked in the heat of game day but at a scheduled time early in the season that is convenient for you and the coach. Questions might include:

- How can you be involved as a positive partner without interfering?
- What is the coach's general philosophy concerning teaching and molding young athletes?

- What does the coach view as success for the team and individual players?
- How will your child's playing time be determined and improvement be assessed?
- What are the time expectations for practice and play?

3. Go and see both practices and games

Seeing what happens during both games and practices is a critical piece to understanding how your child is enjoying or not enjoying the activity. Things to look for:

- During practices most of the kids should be active, most of the time. There may be periods of standing around and watching when learning new skills or drills but that should be limited.
- Practice should include significant time for skills development and teaching, not just scrimmaging at all times.
- Ample water and rest breaks should be provided.
- At games, a calm demeanor and the ability to make positive statements should be shown by coaches, officials, team members, and opponents.
- Are coaches' interactions with the kids reflecting your values?

4. Talk with your children regularly about the activities

Talking with your children regularly about what is taking place both on and off the field will allow for open lines of communication and the ability to hopefully spot a problem ahead of time. Remember to:

- Stress to them that you value success both on and off the playing field and that sports should be a fun way to learn many of life's great lessons.



- Stress sportsmanship and respect of the game and that improvement can be measured in many ways not just on the scoreboard.
- Ask them if they are having fun and to tell you about their day at practice or the game.
- Ask them directly if there are any unusual or uncomfortable interactions with any of the supervising adults on the team.
- Look for any warning signs such as them dreading going to practice, frequently talking about dropping out for no reason, or coming home unhappy.

Don't take your kids sporting environment for granted. Get involved. The more you put in, the more you and your kids will get out.



About AOSSM and *In Motion*

As a world leader in sports medicine education, the American Orthopaedic Society for Sports Medicine (AOSSM), 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 distributed electronically.

AOSSM members can add their practice name and logo to *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 or contact the Society at 847/292-4900.

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Look Out for Alcohol Use in Athletes

By John D. Kelly IV, MD

Alcohol consumption is widespread, in fact it is the most commonly used drug worldwide and athletes are no exception.

Prevalence

Sadly many of today's youth have turned to alcohol in order to deal with mounting modern day stressors. In fact, it is estimated that about 80 percent of college athletes reported alcohol use in the past 12 months.

Effects on Performance

Alcohol is a neurotoxin and compromises mood, balance, steadiness, reaction time, and fine motor skills. The results on sports performance are self evident. Hangovers, characterized by headache, nausea, and fatigue, may affect performance up to several days after indulging. Alcohol also impairs body temperature regulation resulting in potential hypothermia in the cold. Its diuretic effect may lead to profound dehydration in extreme heat.

Alcohol can also interfere with deep or stage 4 sleep. Not only is restful, restorative sleep impaired, growth hormone secretion — essential for muscle growth — is greatly compromised.

Longer term effects of alcohol consumption include gradual cognitive impairment, heart issues, liver damage, malnutrition, fat gain, and possibly blood clotting disorders. Alcohol increases estrogen and decreases testosterone

levels; thus a decrease in lean body mass may ensue with chronic consumption.

Intervention

Suspicion of alcohol abuse in athletes might be a consideration when performance diminishes and emotional instability and chronic fatigue are present. The athlete must understand that alcohol abuse is a progressive disorder — without treatment consumption will tend to gradually increase. The enlistment of a physician, athletic trainer, and parents is necessary in cases where severe abuse is suspected.

Empathy

Genetics play a strong role in the development of alcohol abuse. The indulging athlete likely has a strong family history of alcoholism, drug usage, or mood disorders and should not be judged as weak. Some studies suggest that alcohol abuse is commonly used as a means to self-medicate as treatment for depression and or anxiety — two conditions that can be treated by both medication and psychotherapy.

Alcohol abuse by athletes is prevalent and there are no benefits. Performance is impaired, health risks abound and progression to full blown alcoholism may occur in time. Athletes need to be instructed that if they want to bring their "A game" to competition, even a few drinks is a bad idea.

