

# What has and could be done to decrease Sports Related Eye Injuries!



**How to take  
Public Health Policy  
and make it  
Change Public Health!**

# Healthy People 2010

- Public health document on health goals and objectives
- Issued by the U.S. Department of Health and Human Services
- 467 Objectives in 28 focus areas

# Healthy People 2010 - Chapter 28: Vision Objectives

- Objective 28.9
- Increase the use of appropriate personal protective eyewear in recreational activities and hazardous situations around the home.
- Healthy Eyes Healthy People

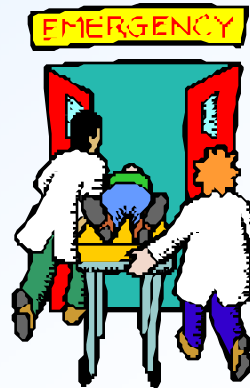


# Document the need

- Eye injury is the leading cause of visual impairment in one eye
- Second only to cataract as reason for visual impairment overall for people with two good eyes

# Document the need

- There are an estimated 600,000 sports related eye injuries per year and approximately 40,000 require trips to the emergency room
- Every thirteen minutes an Emergency Room in the United States treats a sports related eye injury



# Document the need

- More eye injuries occur at home than in the workplace
- 27% of all eye injuries are sports related
- 40% in the 11-14 age group
- 59% of pediatric eye injuries occur during sports and recreation
- 72% of sports related eye injuries occur in people less than 25 years of age

90% of all eye injuries  
are preventable”

(Prevent Blindness America)



**Create a law?**

# Mandate protective eyewear!

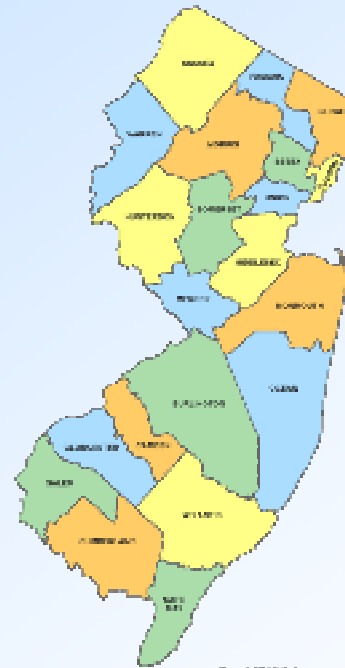


# Create a Coalition!

# Organizations That Support NJ Law

- New Jersey Association for Health, Physical Education, Recreation and Dance
- New Jersey Council on Physical Fitness and Sports
- New Jersey Academy of Ophthalmology
- Lions of Multiple District 16 New Jersey
- NJ Society of Optometric Physicians
- New Jersey Recreation and Park Association
- New Jersey Opticians Association
- Prevent Blindness America – New Jersey
- New Jersey Medical Association
- New Jersey Superintendents of Schools

- Coalition started as New Jersey Coalition to Prevent Sports Eye Injuries





**Spread the law!**

# Formed National Group and Initiative!



A stylized graphic of a human eye, rendered in shades of blue and grey, positioned behind the text. The eye is looking towards the right.

# The Coalition To Prevent Sports Eye Injuries

# Mission

The Coalition to Prevent Sports Eye Injuries was created to substantially reduce the number of avoidable eye injuries that occur in today's sports and recreational environment.

This mission will be achieved through the implementation of

- o Proactive programs targeting the education of eye care professionals
- o Organized sports organizations
- o Government agencies
- o Parents
- o Participants with regards to both the risks of sport-related eye injury, as well as, effective measures of prevention

# Objectives

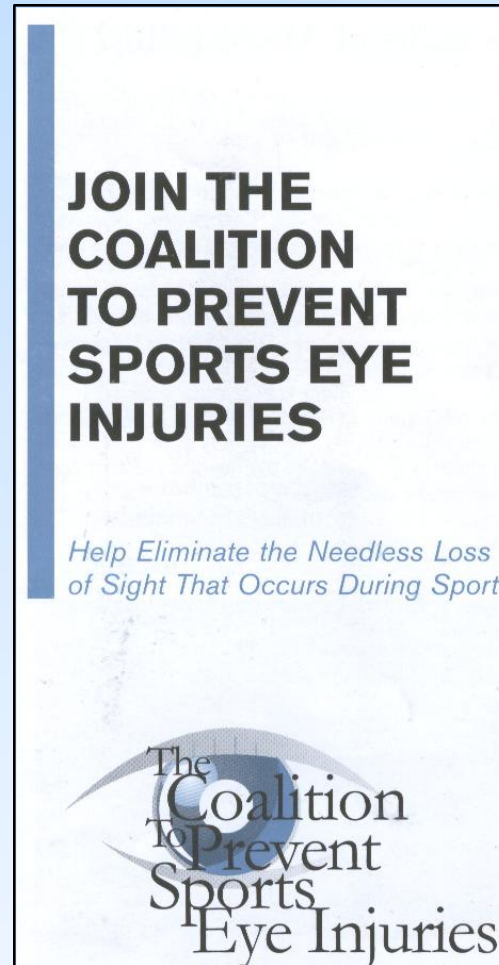
- **Eliminate the use of "street wear" in sports that represent a risk of eye injury**
- **Extension of protective sports eyewear to the non-ophthalmic population**

# Create an Advisory Board

- **Paul Berman, OD**
- **Stuart Dankner, MD**
- **Phil Irion, OD**
- **Richard Palumbo, ABOM.**
- **Katheryn Schramm, FNAO**
- **Douglas Witherspoon, MD**

# Solicit Members

# Brochure



## The "3 I's"

Membership in the Coalition simply means committing to the following steps:

### **Inquire:**

Ask your patients,  
"WHAT SPORTS DO YOU PLAY?"

### **Inform:**

Describe the sport-specific risks of eye injury, as well as the strong recommendations regarding the use of protective eyewear by organizations such as the American Academy of Pediatrics.

### **Introduce:**

Talk with your patients about sport protective eyewear product and write them a prescription.



## **MISSION**

The Coalition To Prevent Sports Eye Injuries was created to substantially reduce the number of avoidable eye injuries that occur in today's sports and recreational environment. This mission will be achieved through the implementation of proactive programs targeting the education of eye care professionals, organized sports organizations, government agencies, parents and participants with regards to both the risks of sport-related eye injury as well as effective measures of prevention.

## **FAST FACTS**

- Eye injury is the leading cause of loss of vision in one eye and second for loss in both eyes.
- Every 13 minutes a person with a sports related eye injury visits an Emergency Room.
- More than 600,000 eye injuries related to sports and recreation occur each year<sup>1</sup>. 42,000 of these injuries are of a severity that requires Emergency Room attention.
- More than 90% of all eye injuries can be prevented with the use of appropriate protective eyewear.
- The American Academy of Pediatrics, American Academy of Ophthalmology and American Optometric Association all strongly recommend protective eyewear for all participants in sports in which there is a risk of eye injury.
- Increasing the use of protective eyewear in sports is a goal of the US Dept. of Health & Human Services "Healthy People 2010".

References upon request.



# **JOIN THE COALITION TO PREVENT SPORTS EYE INJURIES**

*Help Eliminate the Needless Loss  
of Sight That Occurs During Sport*



## Benefits of Membership

- Identify your practice as an eyecare office that is concerned about reducing sports related eye injuries.
- Be listed on the Internet: [www.sportseyeinjuries.com](http://www.sportseyeinjuries.com) on our Practice Locator. Enable new, interested patients to find your practice and protect their eyes.
- Receive a Resource Book that educates you, your staff and your patients about the wisdom of recommending and using Sports Protective Eyewear.
- By joining and committing to the "3 I's" you will receive a decal that will identify your practice as a place to go to reduce the needless loss of sight that occurs during sports.



## To Join

Name \_\_\_\_\_  
Office \_\_\_\_\_  
Profession \_\_\_\_\_  
Address \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_  
Zip \_\_\_\_\_  
Country \_\_\_\_\_  
Phone \_\_\_\_\_  
Fax \_\_\_\_\_  
E-Mail \_\_\_\_\_  
Web Page \_\_\_\_\_  
Signature \_\_\_\_\_

Go to our website: [www.sportseyeinjuries.com](http://www.sportseyeinjuries.com)

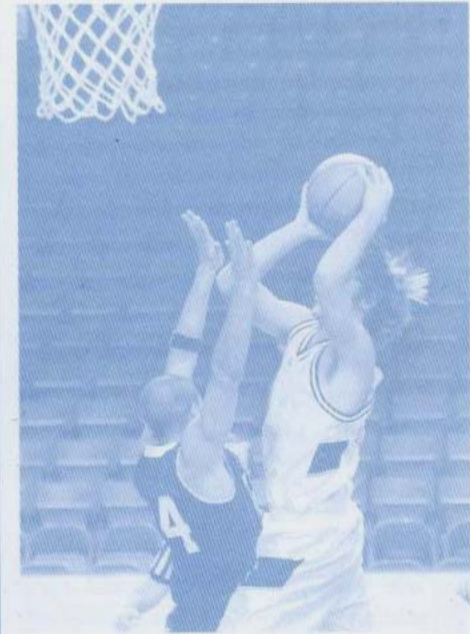
Or mail to:

### Coalition to Prevent Sports Eye Injuries

Dr. Paul Berman, Optometrist  
Chairman, Coalition to Prevent Sports Eye Injuries  
5 Summit Ave.  
Hackensack, NJ 07601

Or fax to: 201-646-0781

Or email: [pberman@sportseyeinjuries.com](mailto:pberman@sportseyeinjuries.com)




We are indeed confident that through our efforts there will be less needless loss of the precious gift of vision that occurs during sports.

Visit us online at

[www.sportseyeinjuries.com](http://www.sportseyeinjuries.com)



# Certified Sports Eye Injury Prevention Center

 Dear Colleague,

Thank you for joining the Coalition to Prevent Sports Eye Injuries. We have almost 1000 members. As you know, the Coalition is in its infancy. One of the concepts that have evolved from meetings with National, Sports, Safety and Health organizations is the need to have a network of Sports Eye Injury Prevention Centers on the internet. This will provide the public with a listing of where they will be able to obtain sports protective eyewear. Some of our members are interested in preventing eye injuries but do not dispense. We, therefore, need a subset of membership who agree to

**Inquire:** Ask your patients, "DO YOU PLAY SPORTS?"

**Inform:** Describe the risks of sports eye injury and the strong recommendations from various national health organizations like the National Eye Institute.

**Introduce:** Show your patients sport protective eyewear product and write them a prescription

and be listed as a Coalition Approved Sports Eye Injury Prevention Center. Therefore, please fill out and return this email to be listed as an Approved Sports Eye Injury Prevention Center. This will generate referrals to your office and establish your office as a unique place to meet the protective eyewear needs of patients. You will also receive a welcome package that includes a decal, a toolkit and other valuable information to increase your knowledge and expertise.

Office:  
Name: \_\_\_\_\_ Profession:  
Address:  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Country: \_\_\_\_\_  
Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

**IMPORTANT**  
To Become a Prevention Center  
Hit Reply  
Fill Out your Office information  
and Hit Send.

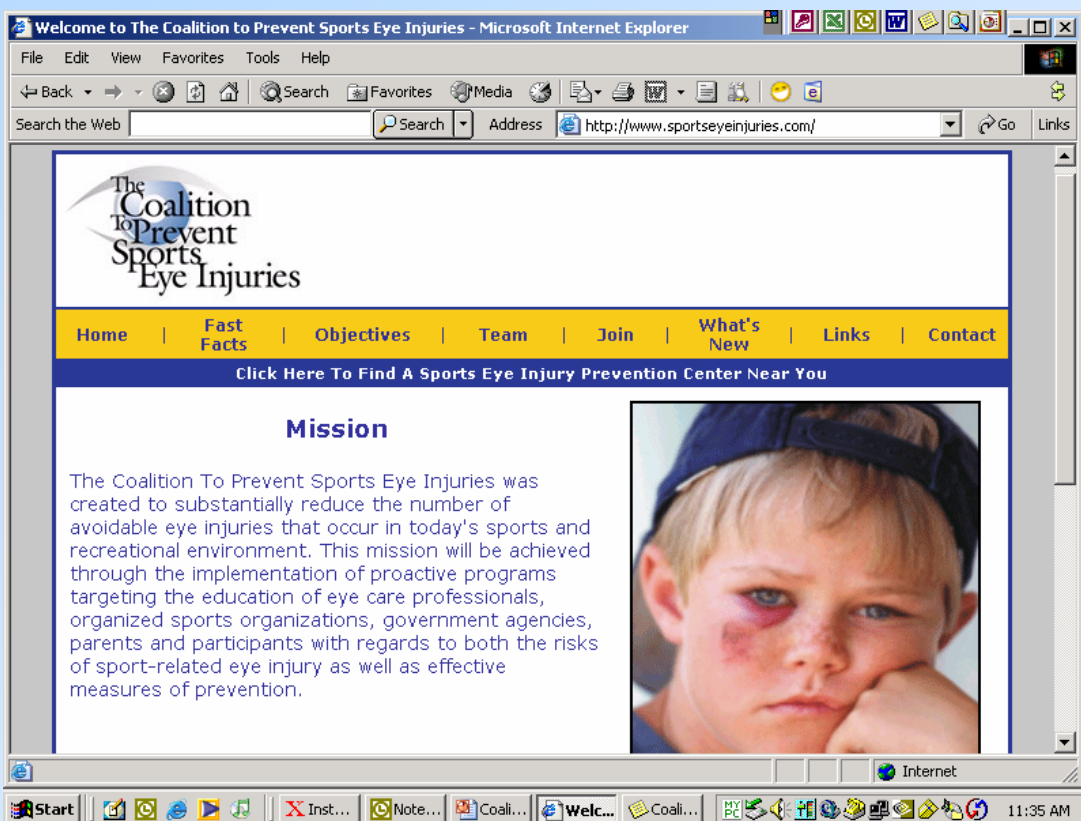
*"We are indeed hopeful that through our efforts there will be less needless loss of the precious gift of vision through appropriate protection."*

Paul Berman, O.D., F.A.A.O.  
Chairman, The Coalition to Prevent Sports Eye Injuries

- Total Membership – over 1,000
- Email response – 3<sup>rd</sup> largest in Jobson history
- Currently 528 Sports Eye Injury Prevention Centers
- Goal – 5,000 Centers

# Create a Website

## <http://www.sportseyeinjuries.com>



Visits: 4,664

Average Per Day: 12

US: 87.56%

International: 12.44%

# Reach out to Sports Groups

# Outreach to Sports, Safety and Health Groups

## CTPSEI Outreach Partner Categories

### Tier I:

- A: National Athletic Trainers Association
- A: National Federation of State High Schools
- A: AAHPERD
- A: Children's Safety Network
- A: American Sports Education Program
- A: Dixie Baseball and Softball
- A: National Center for Sports Safety
- A: Amateur Athletic Union
- A: Youth Basketball of America
- B: American Academy of Pediatrics
- B: American Youth Soccer Organization
- B: US Youth Soccer
- C: Rutgers Youth Sports Research Council
- C: PONY Baseball and Softball
- C: Institute for Preventative Sports Medicine
- C: Boys and Girls Clubs of America
- C: Center for Disease Control
- C: YMCA National Sports
- D: American Amateur Baseball Congress
- D: Amateur Softball Association
- D: Babe Ruth Baseball
- D: National Recreation and Park Association
- D: Little League Baseball
- D: American Legion Baseball
- D: National Rifle Association
- D: USA Baseball
- D: National Association of Police Athletic Leagues

### Tier II:

- A: Safe USA
- A: Institute for the Study of Youth Sports
- A: North American Youth Sports Institute
- A: Amateur Athletic Foundation
- B: National Association of Sports Commissions
- C: USA Football (Vienna, VA)
- C: National Council of Youth Sports
- C: Think First
- C: Women's Sport Foundation
- C: National Safety Council
- C: National Council for Safety Initiatives
- D: Pop Warner

### Tier III

- Safe Kids Worldwide
- Girl Scouts of the USA
- United States Specialty Sports Association

### Category Descriptions:

- Tier I: Direct Channel To At-Risk Sport Populations
- Tier II: Indirect Channel To At-Risk Sport Populations
- Tier III: Remote Relationship To At-Risk Sport Populations
- A: On-site meeting – receptive to cooperation
- B: On-site meeting – receptive but require approval
- C: Phone Contact – willing to meet/learn more
- D: Not responsive to contact and/or reluctant to cooperate

# Outreach Partners

- Tier I
  - National Athletic Trainers Assoc
  - National Federation of State High Schools
  - AAHPERD
  - Children's Safety Network
  - American Sports Education Program
  - Dixie Baseball and Softball
  - National Center for Sports Safety
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  - Amateur Athletic Foundation
- Category Description
  - Tier I: Direct Channel to At-Risk Sport Populations
  - Tier II: Indirect Channel to At-Risk Sport Populations
  - A: On-site meeting – receptive to cooperation

# **Reach out to Public Health and Eye Care Groups**

# Organizations Supporting Increased Use of Sports Protective Eyewear

- ***THE AMERICAN ACADEMY OF PEDIATRICS***
- ***THE AMERICAN ACADEMY OF OPHTHALMOLOGY***
- ***THE AMERICAN OPTOMETRIC ASSOCIATION***
- ***THE UNIVERSITY OF MICHIGAN'S KELLOGG EYE CENTER***
- ***PREVENT BLINDNESS AMERICA***
- ***THE NATIONAL EYE INSTITUTE***
- ***THE US INSTITUTE OF HEALTH (HEALTHY PEOPLE 2010)***
- ***THE WORLD EYE INJURY REGISTRY***
- ***THE US COUNCIL ON CHILD AND ADOLESCENT HEALTH***









American Optometric Association

# House of Delegates Resolution

## 2007 AOA HOUSE OF DELEGATES

### PROPOSED RESOLUTION

LETTER ASSIGNED: A TITLE: Preventing Sports-Related Eye Injuries And Mandating The Use Of Protective Eyewear For Children

SOURCE: New Jersey Society of Optometric Physicians

STATUS: Submitted to Resolutions Committee

DATE: June 27, 2007 TIME: 8:00 am

WHEREAS, the American Optometric Association (AOA) has adopted the 10 Vision Objectives of the National Institutes of Health People 2010 as Healthy People Healthy Eyes; and

WHEREAS, Objective 28.9 is to increase the use of appropriate personal protective eyewear in recreational activities and hazardous situations around the home; and

WHEREAS, there are approximately 100,000 annual eye injuries in the United States; and

WHEREAS, every 13 minutes a person in the United States is taken to the Emergency Room with a sports related eye injury; and

WHEREAS, eye injuries are the leading cause of loss of vision in one eye and second for two eyes; and

WHEREAS, the functionally monocular athlete has the potential for serious consequences; and

WHEREAS, the American Public Health Association strongly recommends that all participants in defined moderate- to high-risk sports utilize protective eyewear appropriately certified for the specific sport; and

WHEREAS, The American Public Health Association has passed a policy that, "urges state legislatures to mandate that all children wear sports protective eyewear that meets the lens and frame standards of ASTM F803.18 and other ASTM

# KIDS (Keep Injuries Down in Sports) Grant Program

- \$100,000 fund for starters to:
- To educate optometrists, public, media, coaches, superintendents, athletic directors, schools, parks and recreation, and legislators about public health policy needed to help eliminate sports related eye injuries



# Recipients of Grant

- Armed Forces Optometric Society – Operation See Victory
- Arkansas Optometric Association – Let's Play Ball! Safely
- Maine Optometric Association – K.I.D.S. for ME
- Oklahoma Association of Optometric Physicians – Focus on K.I.D.S.
- Oregon Optometric Physicians Association – Eye on the Ball
- Rhode Island Optometric Association – Sports Eyes Need Defense (S.E.N.D.)
- Northern Virginia Optometric Society/Shenandoah Valley Optometric Society – Youth Eye Protection for Sports (YEPPS)


# **Speak to the International Association of Optometric Executives**

**Nov. 8, 2007**

**Miami, FL**



# Policy Statement



**American Public Health Association**  
800 I Street, NW • Washington, DC 20001-3710  
(202) 777-APHA • Fax: (202) 777-2534  
comments@apha.org • <http://www.apha.org>

**Promoting the Use of Protective Eyewear For Children In Sports**

**Policy Date:** 11/8/2006  
**Policy Number:** 20067

**BACKGROUND**  
Each year in the United States, there are approximately 600,000 documented sports-related eye injuries, 1 over 42,000 of which require emergency room attention 2 and an estimated 13,500 of which result in a permanent loss of sight. 3 Approximately 72 percent of sports eye injuries occur in individuals younger than 25 years, and approximately 43 occur in individuals younger than 15 years. 4

Different sports carry differing degrees of risk of eye injury. The following sports have been identified in the literature as representative of having a moderate-to-high risk of eye injury: basketball, baseball, softball, cricket, lacrosse, field hockey, ice hockey, squash, racquetball, fencing, boxing, full-contact martial arts, air rifle, tennis, badminton, soccer, volleyball, water polo, football, fishing, golf and wrestling. 5, 6, 7

**CURRENT POLICIES AND POSITIONS ON PROTECTIVE SPORTS EYEWEAR**  
Various studies conclude that upwards of 90 percent of sports eye injuries can be prevented through the use of protective eyewear properly suited for the respective sport. 8-10 A number of organizations have initiated programs and/or published policy and/or position statements that strongly recommend the use of appropriately certified protective eyewear when participating in sports that represent a risk of eye injury. These include: The U.S. Department of Health and Human Services [Healthy People 2010 objective 28-9], 11 The American Academy of Pediatrics, 7, The American Academy of Ophthalmology, 12 The American Optometric Association, 13 The International Federation of Sports Medicine, 14 Prevent Blindness America 15 and the Coalition To Prevent Sports Eye Injuries. 16 The American Public Health Association, in previous policy statements, has drawn attention to



- PBA Goals

- Reduce vision loss by ensuring all children receive appropriate vision care as they enter school
- Reduce vision loss by doubling the number of adults receiving eye exams
- Reduce injury-related vision loss by 50% by promoting eye safety.



- One of PBA's three objectives is to decrease eye injuries by 50% by the year 2020



# Policy Statement

## Children's Sports Eye Safety Position Statement

### Introduction

Children and adolescents who participate in athletics are at a heightened risk for serious eye injury and potential blindness. To reduce the occurrence of sports-related eye injury and blindness, Prevent Blindness America strongly supports efforts to insure that children involved in athletics utilize appropriate safety eyewear for every sport in which they participate.

Acute eye injuries can occur when athletes fail to wear eye protection or use goggles, glasses or face shields that are poorly-fitted or inappropriate for a particular sport. Common sports-related injuries among athletes who do not wear approved eye protection include scratched corneas, detached retinas, and blood in the eye among others. While many sports played without protective eyewear pose a threat to children's vision, eye injuries are most common in basketball, baseball, water and racquet sports. Currently, the majority of children's athletic leagues and teams do not require children to wear sports eye protection.

Contact lenses and prescription and non-prescription street eyewear designed for daily use do not protect a child's eyes during sports. Lenses crafted from non-polycarbonate material can shatter upon impact, increasing the severity of an eye injury and putting a child at risk for blindness. Sports safety eyewear must meet the safety standards set forth by the American Society for Testing and Materials (ASTM) or the American National Standards Institute (ANSI).

### Statistics

- 43 percent of sports eye injuries occur in children under the age of fifteen
- Only 15% of children wear protective eyewear when playing sports
- 97% of schools do not have a policy regarding protective eyewear in sports
- 38% of children are involved in organized sports
- 24% of children wear prescription eyewear or contact lenses during sports
- 45% of kids have played sports without prescription safety eyewear
- The use of appropriate sports eye protection can reduce the risk of significant eye injury by at least 90%

### Current children's sports eye safety efforts

In New Jersey, State Assembly Bill A-2091/State Senate Bill 1970, passed in 2006, requires that any child who wears corrective glasses while participating in racquetball, squash, tennis, women's lacrosse, basketball, women's field hockey, badminton, paddleball, soccer, volleyball, baseball, or softball games sponsored by a school, community or government agency must wear protective eyewear that meets the American Society for Testing and Materials (ASTM) F803





- Formed new Eye Safety Committee

# Toolkit

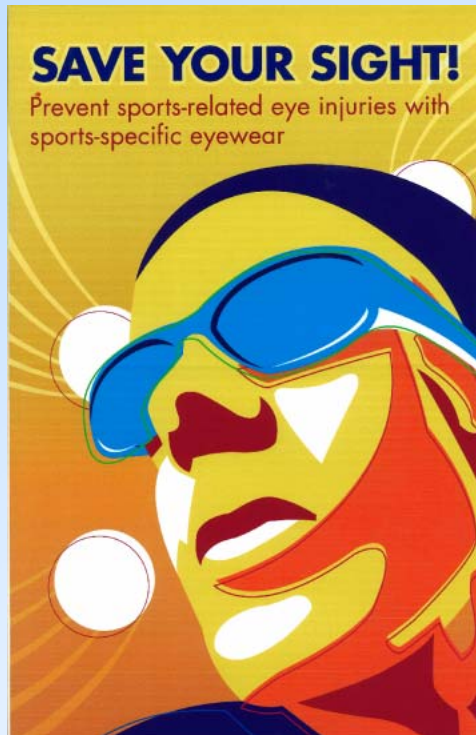
- For PBA and their affiliates



HOW TO ACHIEVE  
STATE MANDATES  
FOR SPORTS  
PROTECTIVE EYEWEAR  
TOOLKIT!



- School Poster
  - Distribute to 25,000 National Association for Sport and Physical Education (NASPE) members



**EMERGENCY EYECARE TREATMENT**

**DO**

- Protect the eye and relieve pressure by placing an object against the bones surrounding the eye.
- Bandage any cuts around the eye to prevent contamination or infection.
- Avoid touching or rubbing the eye following injury. Any contact can spread germs and/or cause additional injury.
- Use a cold compress to treat a blunt trauma injury such as a black eye. Take care to avoid applying additional pressure to the eye.

**Remember:** the severity of an eye injury may not always be immediately apparent, so it's important to take caution in any treatment. The Vision Council of America (VCA) recommends follow-up care by an eyecare professional or emergency room physician after any eye injury.

**DON'T**

- Do not remove any objects that are stuck in the eye.
- Do not wash out the eye unless there is small debris such as sand, dirt or a chemical burn.
- Do not attempt to self-medicate, especially if the extent of damage is not known. Applying ointment can obstruct the medical exam and make treatment more difficult. Over-the-counter products may not be sterile and can cause infection.
- Do not take any medications to treat pain, including over-the-counter drugs containing aspirin, ibuprofen or any other non-steroidal, anti-inflammatory drugs. Non-prescription medications might not help and can cause additional bleeding.



# Model Law

## **A BILL**

### **For An Act To Be Entitled**

AN ACT TO MANDATE THE USE OF EYE PROTECTION IN YOUTH SPORTS THAT PRESENT A HIGH-RISK OF EYE INJURY.

### **Subtitle**

YOUTH SPORTS EYE PROTECTION ACT OF 2008

BE IT ENACTED BY THE \_\_\_\_\_ OF THE STATE OF XX:

### **SEC. 1. FINDINGS.**

The state of XX makes the following findings:

- 1) Every year, more than 30,000-40,000 documented sports-related eye injuries require a trip to the Emergency Room in the United States.
- 2) Approximately 85% of children do not utilize protective eyewear in situations that represent a risk of eye injury.
- 3) Over 90 percent of sports-related eye injuries in children can be prevented with the use of protective eye wear.
- 4) Approximately 72% of sports-related eye injuries occur in persons under the age of 25, 43% happen to persons under the age of 15, and 8% afflict children under the age of 5.
- 5) Sports-related eye injuries are the number one type of eye injury in children under 16 years of age.
- 6) The most common types of eye injuries resulting from sports and recreational activities are blunt trauma, corneal abrasion, radiation injuries, and penetrating injuries.
  - i. Blunt trauma injuries: The most common type of eye injury, the severity of blunt trauma injuries depends on the size, hardness, and velocity of the blunt object, and the force it applies directly to the eye. Examples of blunt trauma injuries include orbital blowout fracture, iris injury, traumatic iris, ruptured globe, subconjunctival hemorrhage, hyphema, retinal hemorrhage, commotion retinae, vitreous hemorrhage, choroidal rupture, retinal tears,



- Formed new Vision Protection Committee

**NASPE**

*National Association for Sport & Physical Education*

**Presented to the  
National Association of  
Sport & Physical Education**



# Work with the National Eye Institute

# National Eye Institute Meeting

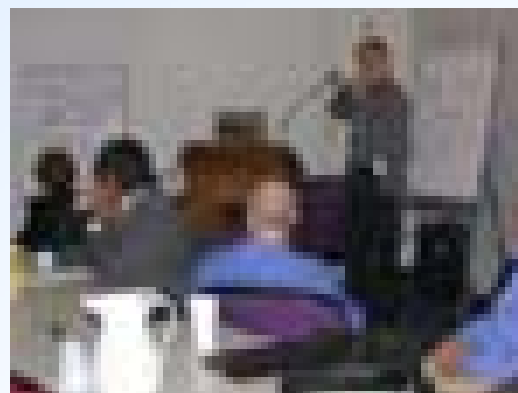
- “Safe Eyes While Playing Sports”
- National Eye Institute
- June 1-2, 2006
- Location:
  - National Institutes of Health Campus
  - Washington, DC





# National Eye Institute

U.S. National Institutes of Health *Research Today...Vision Tomorrow*



# Healthy Vision 2010

## Focus Objective – May, 2008

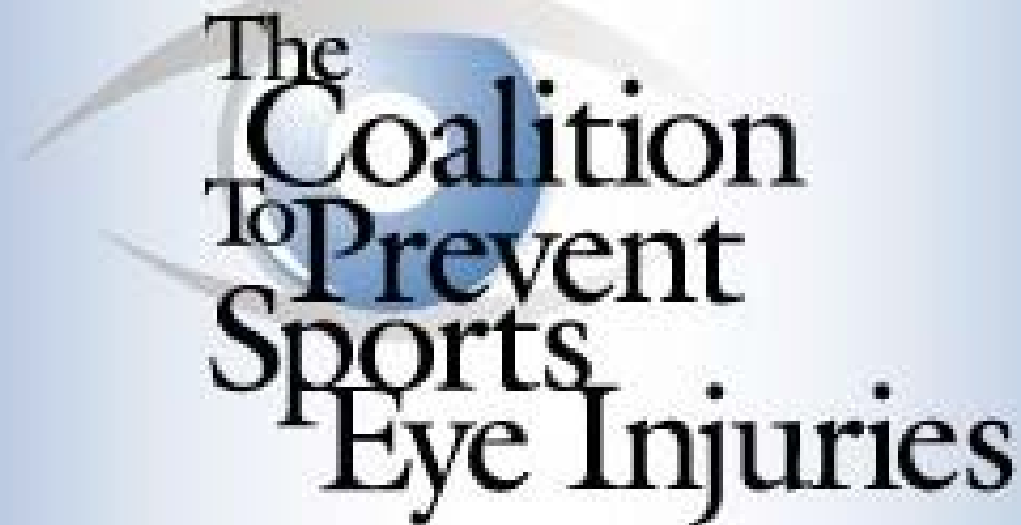
- The goal of HVM 2008 is to raise awareness about the importance of using protective eyewear for children.



- Proposed Meeting in Spring 2009

# Community Resources

# ***Sports Eye Injury Prevention Center***



The  
Coalition  
to Prevent  
Sports  
Eye Injuries



# Create Eyecare Practitioner Materials

DO YOU PLAY  
SPORTS?

This eye care practice is a  
**Sports Injury Prevention Center**  
approved by the  
**Coalition To Prevent Sports Eye Injuries**



# Recreational Eye Injuries are a Major Public Health Concern

## FREQUENT

- | **More than 600,000 eye injuries related to sports and recreation occur each year<sup>1</sup>**
- | **42,000 of these injuries are of a severity that requires Emergency Room attention<sup>2</sup>**
- | **It is estimated that approximately 13,500 legally blinding sports eye injuries occur each year**
- | **One-in-eighteen college athletes will sustain an eye injury each season. The odds increase to one-in-ten for basketball players<sup>7</sup>**

## SEVERE

- | **Eye injury is the leading cause of visual impairment in one eye**
- | **30% of sports related eye injuries in children have the potential to cause a permanent loss of eyesight**
- | **Sports participants using “street wear” (corrective eyewear or sunwear that does not conform to ASTM certified protective standards) are at a far more severe risk of eye injury than participants using no eye protection at all<sup>4</sup>**

## PREVENTABLE

- | **More than 90% of all eye injuries can be prevented with the use of appropriate protective eyewear<sup>3</sup>**
- | **According to the 2002 National Health Interview Survey, 84.6% of children do not utilize protective eyewear in situations that represent a risk of eye injury**

# Federal and Institutional Programs to Reduce Sports Eye Injuries



US Department of Health & Human Services  
The National Eye Institute  
*Healthy People 2010*

## **Objective 28-9: Protective Eyewear**

Increase the use of appropriate personal protective eyewear in recreational activities and hazardous situations around the home.



American Optometric Association

**Healthy Eyes  
Healthy People**

The American Optometric Association  
*Healthy Eyes – Healthy People*

## **One of Ten Core Objectives: Protective Eyewear**

Increase use of personal protective eyewear

The following organizations have issued position statements that *strongly recommend the use of protective eyewear when participating in risk-prone sports...*

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



AMERICAN ACADEMY  
OF OPHTHALMOLOGY

*The Eye M.D. Association*

 **National Eye Institute**  
U.S. National Institutes of Health *Research Today...Vision Tomorrow*

 *United States Department of*  
**Health & Human Services**



American Optometric Association



**The International Federation  
of Sports Medicine**

Fédération Internationale de Médecine du Sport

# Sport Risk Categories

<b>High Risk</b>	<b>Small/Fast Projectiles:</b> Air Rifle, BB Gun, Paintball <b>Hard Projectiles, “Sticks”, Close Contact:</b> Basketball, Field Hockey, Ice Hockey, Lacrosse, Racquetball, Baseball, Softball, Squash, Fencing, Cricket <b>Intentional Injury:</b> Boxing, Full Contact Martial Arts
<b>Moderate Risk</b>	Soccer, Football, Tennis, Volleyball, Fishing, Golf, Water Polo, Badminton
<b>Low Risk</b>	Swimming, Wrestling, Diving, Skiing (snow and water), Non-contact Martial Arts, Bicycling
<b>Eye Safe</b>	Track & Field, Gymnastics

# Frequency of Eye Injuries by Sport and Age

Based on a 1998 Sports and Recreational Eye Injury Study by Prevent Blindness America involving NEISS statistics related to 39,297 emergency room visits

	Total Estimated Injuries	Under 5 Years Old	5-14 Years Old	15-24 Years Old	Over 24 Years Old
Basketball	<b>22.2%</b>	1.7%	26.8%	<b>44.2%</b>	27.3%
Swimming and Pool Sports	<b>11.7%</b>	2.9%	38.8%	15.2%	<b>39.6%</b>
Baseball	10.3%	4.5%	<b>54.5%</b>	20.4%	20.6%
Racquet and Court Sports	7.0%	0.0%	<b>36.1%</b>	33.5%	29.7%
Hockey	4.1%	0.0%	31.9%	<b>38.9%</b>	29.2%
Football	3.7%	0.0%	36.4%	<b>39.8%</b>	23.8%
Soccer	3.4%	0.0%	<b>55.9%</b>	28.5%	15.5%
Ball Sports	3.2%	9.1%	<b>45.7%</b>	29.5%	12.6%
Golf	2.1%	0.8%	17.1%	9.1%	<b>72.9%</b>
Combatives	1.1%	0.0%	12.5%	18.3%	<b>69.2%</b>
Select Sport Total	68.9%	2.2%	<b>36.5%</b>	31.1%	30.2%
Other Sports	31.1%	11.9%	28.5%	24.3%	<b>35.3%</b>
Total	100.0%	5.2%	<b>34.0%</b>	29.0%	31.8%

# RECOMMENDED EYE PROTECTION

Sport	Minimal Recommended Protection
Baseball - Batting / Base Running	ASTM Standard F910 (Face Guard Attached To The Helmet)
Baseball - Fielding	ASTM Standard F803 For Baseball (ASTM Specifies Age Ranges)
Softball - Batting / Base Running	ASTM Standard F910 (Face Guard Attached To The Helmet)
Softball - Fielding	ASTM Standard F803 For Baseball (ASTM Specifies Age Ranges)
Basketball	ASTM Standard F803 For Basketball (ASTM Specifies Age Ranges)
Field Hockey	ASTM Standard F803 For Women's Lacrosse
Ice Hockey	ASTM Standard F513 Face Mask On Helmet
Ice Hockey - Goalie	ASTM Standard F1587 Face Mask On Helmet
Street Hockey	ASTM Standard F513 Face Mask On Helmet (Must Be HECC or CSA Certified)
Men's Lacrosse	NOCSAE Face Mask Attached To Helmet
Women's Lacrosse	ASTM Standard F803 For Women's Lacrosse
Squash	ASTM Standard F803 or CSA Standard P400
Racquetball	ASTM Standard F803 For Racquetball
Paintball	ASTM Standard F1776
Air Rifle	ANSI Z87+ and/or the Military Ballistic Test For Eye Armor
BB Gun	ANSI Z87+ and/or the Military Ballistic Test For Eye Armor
Full Contact Martial Arts	Not Available / Not Permitted In The Sport (Contraindicated For Functionally One-Eyed Athletes)
Boxing	Not Available / Not Permitted In The Sport (Contraindicated For Functionally One-Eyed Athletes)
Fencing	Protector With Neck Bib
Cricket	ASTM Standard F803 For Baseball
Soccer	ASTM Standard F803 For Any Sport (No Specific ASTM Standard Yet Developed For Soccer)
Football	Polycarbonate Eye Shield Attached To Helmet Mounted Wire Face Mask
Tennis	ASTM Standard F803 or CSA Standard P400
Volley Ball	ASTM Standard F803 For Basketball
Golf	Streetwear/ Fashion Eyewear with Polycarbonate or Trivex Lenses
Water Polo	Polycarbonate Swim Goggles
Badminton	ASTM Standard F803 or CSA Standard P400
Paddle Tennis	ASTM Standard F803 or CSA Standard P400
Handball	ASTM Standard F803 or CSA Standard P400
Fishing	Streetwear/ Fashion Eyewear with Polycarbonate or Trivex Lenses
Bicycling	Helmet Plus Streetwear or Fashion Eyewear with Polycarbonate or Trivex Lenses
Swimming	Standard Swim Goggles
Wrestling	Not Available / Not Permitted In The Sport
Skiing	Streetwear/ Fashion Eyewear with Polycarbonate or Trivex Lenses
Diving	Standard Swim Goggles
Track & Field	Streetwear/ Fashion Eyewear with Polycarbonate or Trivex Lenses
Gymnastics	Streetwear/ Fashion Eyewear with Polycarbonate or Trivex Lenses

# Critical Lens Materials: Polycarbonate or Trivex



## Polycarbonate 2.0

- 21 x stronger than CR 39 (standard ophthalmic plastic lens material) on impact with a 1/8" missile
- 100 x stronger than CR 39 on impact with a 1" missile
- Compulsory ballistic testing for Polycarbonate 2.0 includes impact with a 1/4" missile fired at 150 feet/second

Photochromic lenses in Polycarbonate or Trivex are an excellent choice for indoor/outdoor sports



## Risks to the One-Eyed Athlete

Eye injuries are the leading cause of monocular blindness

The one-eyed athlete is 150 times more likely to go completely blind than an athlete with two fully functioning eyes

Protective eyewear should be mandated for all one-eyed athletes participating in risk-prone sports



# Basketball Eye Injuries

Basketball represents the greatest risk for eye injury when compared to all other sports and has been shown to be the leading cause of sports eye injuries requiring emergency room treatment (22.2%)

One in ten college basketball players will suffer an eye injury each season

It is estimated that 2800 basketball players are legally blinded each year due to sports eye injuries

Less serious basketball eye injuries are typically minor abrasions, lacerations, contusions, corneal abrasions and traumatic iritis caused by opponents fingers or elbows striking the players eye, frequently during aggressive play under the boards

Avulsion of the optic nerve, usually due to the force transmitted by the extended finger, was most commonly reported in basketball than in any other sport

Players that have had LASIK or incisional refractive surgery are at a greater risk due to the possibility of ruptured RK incisions or late LASIK flap dislocation

Basketball represents the greatest risk for eye injury when compared to all other sports and has been shown to be the leading cause of sports eye injuries requiring emergency room treatment (22.2%)

ASTM F803 protective eyewear certified for basketball is tested for the sport's specific injuries (including a finger poke test) and should be worn by all players





# Baseball and Softball Eye Injuries

Baseball represents the greatest risk of sports eye injuries to players aged 5-14 years old

Women's softball has approximately half the incidence of eye injury as men's baseball

It is estimated that over 2,000 baseball players are legally blinded each year due to sports eye injuries

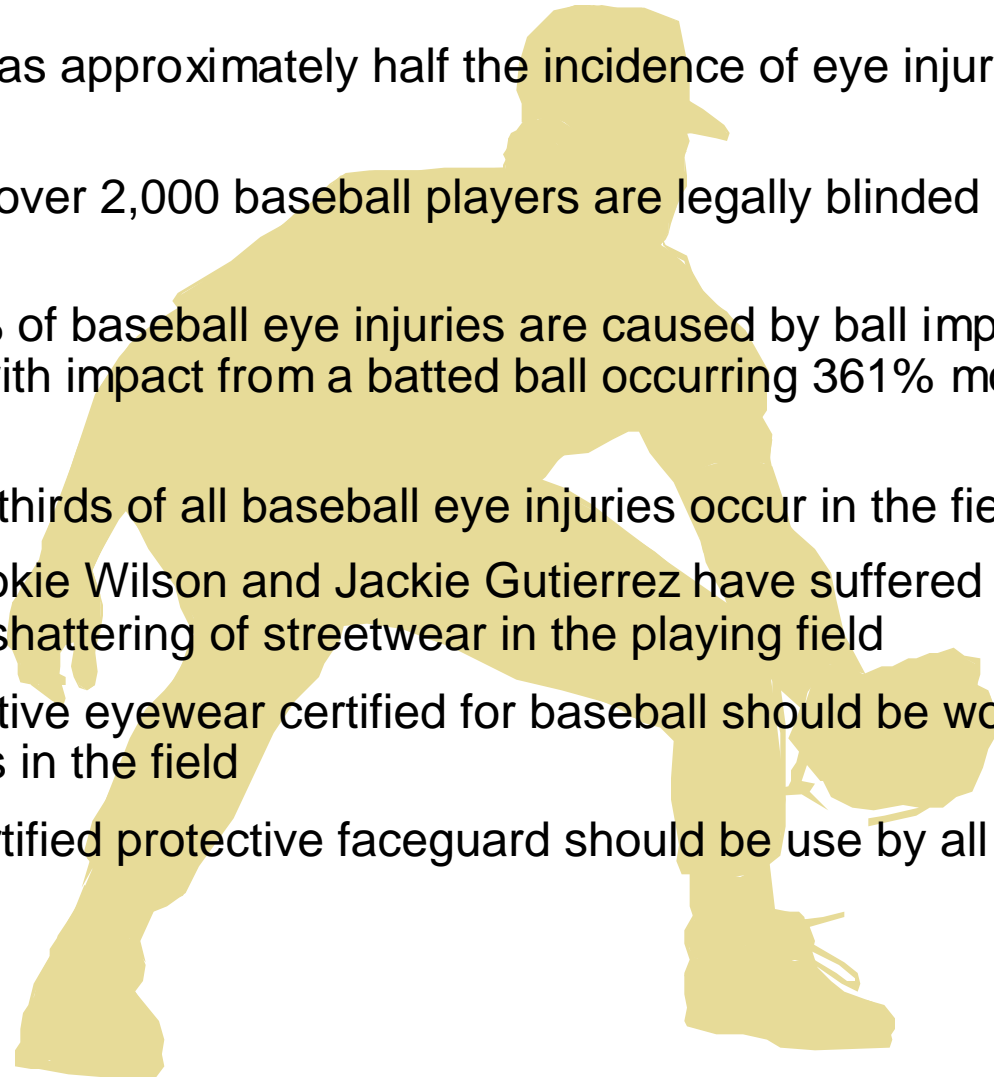
Approximately 55% of baseball eye injuries are caused by ball impact among kids aged 5-14 years, with impact from a batted ball occurring 361% more often than a pitched ball

Approximately two thirds of all baseball eye injuries occur in the field

Baseball Stars Mookie Wilson and Jackie Gutierrez have suffered serious eye injuries due to the shattering of streetwear in the playing field

ASTM F803 protective eyewear certified for baseball should be worn by all baseball and softball players in the field

An ASTM F910 certified protective faceguard should be use by all baseball and softball batters





# Ice and Field Hockey Eye Injuries

Hockey full face protectors worn by over 1.2 million North American ice hockey players has reduced eye and face injuries by approximately 70,000 and societal medical bills by approximately USD \$10 million

The widespread use of protective devices has virtually eliminated serious eye and face injuries to protected players

Field hockey eye injuries tend to be severe and include ruptured globes from impact with the stick

One in twenty-five field hockey players will experience an eye injury over an eight year career

ASTM standard F513 face mask attached to the helmet should be worn by all ice hockey players

ASTM standard F1587 face mask attached to the helmet should be worn by all ice hockey goalies

ASTM F803 protective eyewear certified for women's lacrosse should be worn by all players



# Soccer Eye Injuries

Soccer is the leading cause of sports eye injuries in Europe

Approximately one in fifty soccer players will suffer an eye injury in the course of an eight year career

Contrary to previous ophthalmology teaching that eye injuries are rarely caused by balls larger than 4" in diameter, the 8.6" diameter soccer ball is responsible for approximately 80% of soccer eye injuries. The risk of ball related eye injury drops to approximately 66.6% for experienced (older) players.

Because of its deformative characteristics (i.e. softness), on impact the soccer ball can remain in the eye orbit longer than any other sports ball

Soccer eye injuries can be serious (hyphema, vitreous hemorrhage, retinal tear, chorioretinal rupture, angle recession) as well as minor (corneal abrasions and contusions)

ASTM F803 protective eyewear (certified for any sport) should be worn by all soccer players

Due to the absence of proper techniques necessary to protect the brain and retina, heading should be discouraged for younger players



# Football and Lacrosse Eye Injuries

The average football team will experience four eye injuries each season, and one severe eye injury every two seasons

Although single and double bar facemasks have reduced facial injuries in football by approximately 80-90%, facial injuries continue to represent approximately 10% of all football injuries

All presently available football helmets allow penetration of a finger through facemasks that are not supplemented with a polycarbonate visor, with enough force to result in retinal detachment or visual loss to the injured eye

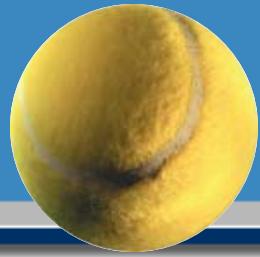
Prior to the mandating of protective eyewear, eye injuries occurred fifteen times more frequently in women's lacrosse than in men's lacrosse

Fractured orbits, hyphema, angle recession with lifelong tendency to glaucoma and ocular contusions are historically the most common injuries in women's lacrosse

Polycarbonate shields should be encouraged for all football players

NOCSAE facemask attached to the helmet is mandated for all men's lacrosse players

ASTM standard F803 certified for women's lacrosse is mandated by the International Federation of Women's Lacrosse Associations



# Racket Sports Eye Injuries

In a Canadian study, racket sports accounted for 24.5% of all reported eye injuries and 8.8% of all eyes blinded by sports

In a US study, racket sports were responsible for 40.3% of sports eye injuries seen in a private practice, and 23% of all admissions for Hyphema to the Massachusetts Ear and Eye Infirmary

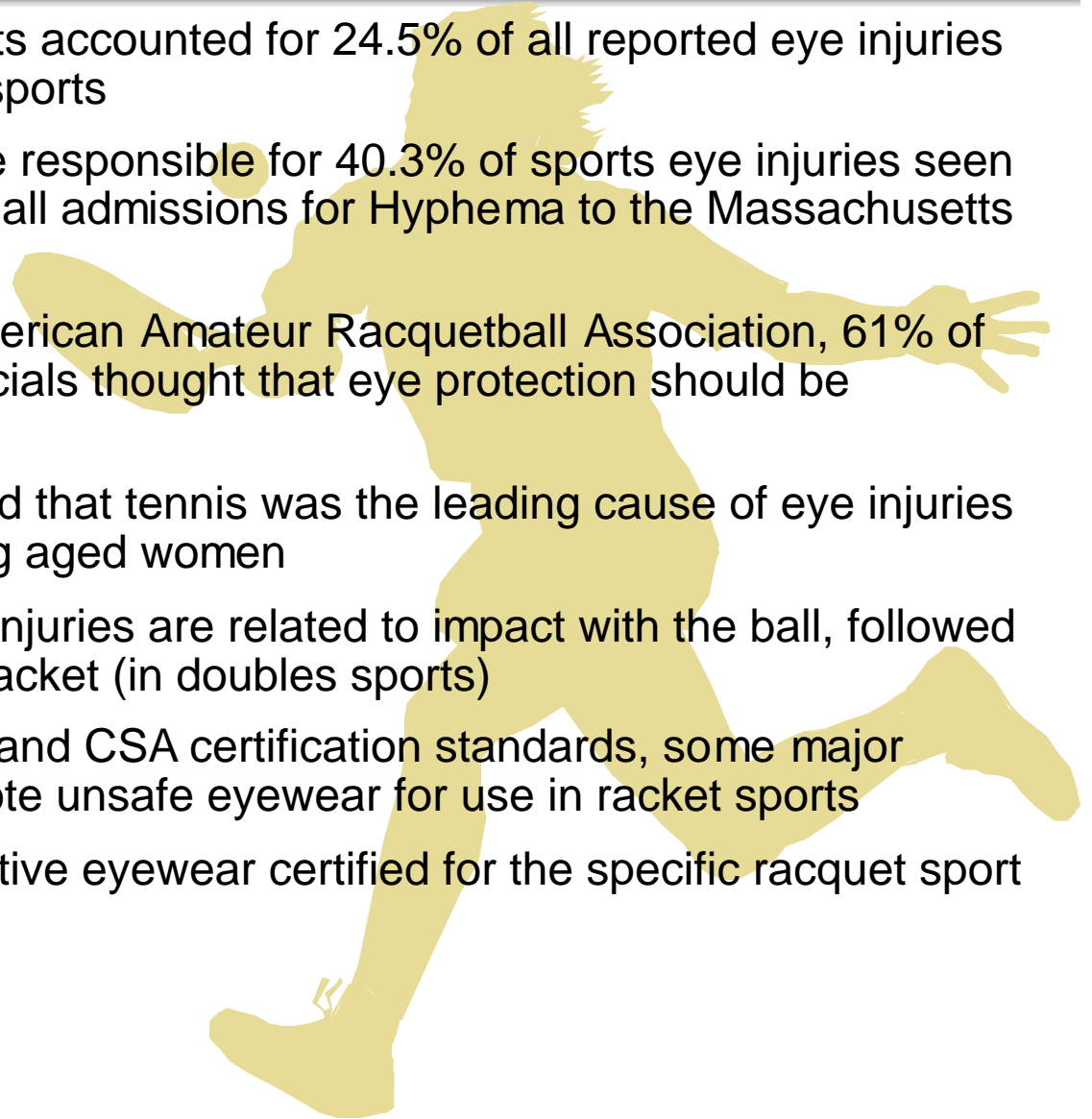
In a survey conducted by the American Amateur Racquetball Association, 61% of members and 77% of former officials thought that eye protection should be mandated for the sport

A study in Massachusetts showed that tennis was the leading cause of eye injuries in west-suburban-Boston working aged women

The majority of racket sport eye injuries are related to impact with the ball, followed by impact with another player's racket (in doubles sports)

Despite the availability of ASTM and CSA certification standards, some major manufacturers continue to promote unsafe eyewear for use in racket sports

ASTM F803 or CSA P400 protective eyewear certified for the specific racquet sport should be worn by all players





The Coalition To Prevent Sports Eye Injuries is a nonprofit organization supporting a nationwide network of eye care professionals that represent a consistent, knowledgeable and proactive source of sports eye injury risk and prevention information, as well as ASTM certified protective equipment.

For more information or to find a Coalition Approved **Sports Injury Prevention Center** in your area, log on to

[www.sportseyeinjuries.com](http://www.sportseyeinjuries.com)

“We are indeed hopeful that through our efforts there will be less needless loss of the precious gift of vision through appropriate protection.”

– *Paul Berman, O.D., F.A.A.O.*  
*Chairman, The Coalition to Prevent Sports Eye Injuries*



**The Coalition To Prevent Sports Eye Injuries** gratefully acknowledges the efforts of Dr. Paul Vinger, Prevent Blindness America, the American Academy of Ophthalmology, the American Optometric Association and other eyecare organizations providing the source material that made this work possible, including:

- *The Mechanisms and Prevention of Sports Eye Injuries*, PF Vinger
- *Risk of Eye Injury and Effectiveness of Protective Devices for Specific Sports: Small Projectiles, Golf and Racket Sports*, PF Vinger
- *Risk of Eye Injury and Effectiveness of Protective Devices for Specific Sports: Stick and Ball (or Puck), Large Ball, Combat and Water Sports*, PF Vinger
- *The Mechanism and Prevention of Soccer Eye Injuries*, PF Vinger and JA Capao Filipe
- *Sports and Recreational Eye Injury Study*, Prevent Blindness America



American Optometric Association



AMERICAN ACADEMY  
OF OPHTHALMOLOGY

*The Eye M.D. Association*



**Educate the public**



# Public Service Announcements

**TEACH YOUR KIDS TO SWITCH THEIR GLASSES BEFORE THE GAME AND ODDS ARE YOU WON'T BE TEACHING THEM TO READ WITH THEIR FINGERS...**

Wearing everyday sun or corrective eyewear when playing sports can turn a minor bump in the face into a gaping hole in the eyeball. Sports eye wear and sports don't mix - it puts athletes' big and small athletes' eyes at risk of injury and simply does not belong on the playing field.

Approximately 25% of the estimated 2.4 million eye injuries that occur in the United States each year happen during sports and recreational activities. That's why The American Academy of Pediatrics and other prominent medical organizations strongly recommend the use of protective eyewear when playing baseball, basketball, soccer, football, tennis and other sports that represent a risk of eye injury.

So why do we still see kids on the field in their wear?

In order to help people understand the risks of sports eye injuries and preventative alternatives available for young athletes, we created the **Coalition To Prevent Sports Eye Injuries** - a nationwide network of eye care professionals dedicated to the prevention of eye injury in sport.

Just go to [www.sportsveinjuries.com](http://www.sportsveinjuries.com) and plug in your zip code to find a Coalition approved **Sports Injury Prevention Center** in your area.

And don't wait until it's too late to protect the sight of your young athletes.

**SOMETIMES PREVENTION IS THE ONLY CURE**



Swapping specs before the game is a lot easier than surgically removing lens fragments from your eyeball...


The American Academy of Pediatrics knows that recreational eye injuries are a serious problem in this country - that's why they strongly recommend the use of protective eyewear when playing baseball, basketball, softball, soccer, football, tennis and other sports that represent a risk of eye injury.

Unfortunately a lot of athletic directors, coaches and parents don't know about the risks of sports eye injuries or preventative alternatives available for young athletes. Which is why we created the **Coalition To Prevent Sports Eye Injuries** - a nationwide network of eye care professionals who represent a knowledgeable source of risk and prevention information, as well as a choice of certified protective equipment appropriate for the majority of sports.

Just go to [www.sportsveinjuries.com](http://www.sportsveinjuries.com) and plug in your zip code to find a Coalition approved **Sports Injury Prevention Center** in your area.

And don't wait until it's too late to protect the sight of your young athletes.

**SEE TO PLAY ANOTHER DAY**



**GLASSES CAN DAMAGE YOUR EYESIGHT - PERMANENTLY**

Wearing everyday sun or corrective eyewear when playing sports can turn a minor bump in the face into a gaping hole in the eye ball. Sports eye wear and sports don't mix - it puts athletes' big and small athletes' eyes at risk of serious eye injury and simply does not belong on the playing field.


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**SOMETIMES PREVENTION IS THE ONLY CURE**



**Injuries - Maneuvering Out Of The Country's Blind Spot**

Every fifteen minutes an emergency room in the United States treats a sports eye injury that could have been prevented.

Annually, two and a half million eye injuries occur in the US each year. Approximately forty thousand result in permanent loss of vision. More than a quarter of the injuries are the result of playing sports or recreational activities and are almost entirely preventable with the use of certified protective equipment.

The frequency, severity and preventability of recreational eye injuries has prompted the American Academy of Pediatrics and other prominent medical institutions to issue policy statements strongly recommending the use of protective eyewear when participating in risk-prone sports. The US Department of Health and Human Services has made "increasing the use of protective eyewear" a national priority and hazardous situations a objective in *Healthy People 2010* initiative. But despite the fact that the medical community has made its position clear, the majority of athletic programs, schools, parents and players aren't even aware that sports eye injury is an epidemic. And every fifteen minutes an emergency room treats another preventable sports eye injury.

Given the consensus in the medical community, it is a virtual certainty that the use of protective eyewear will be legally mandated for risk-prone sports at some time in the future. But legislation can be a long and hazy road to process. For example, the 14" bicycle helmet standard was introduced in 1970, but states did not begin to mandate use until the middle of the 1990's. In the twenty-five years between introduction and mandating, riders suffered approximately five million bicycle-related head injuries - an estimated 8% of which could have been prevented through the use of helmets.


**DON'T WAIT FOR A DEBILITATING EYE INJURY TO FIND OUT THAT ALMOST ALL EYE INJURIES CAN BE PREVENTED...**

Thirty percent of sports-related eye injuries in children have the potential to cause a permanent loss of eyesight. And in the United States, more than 600,000 athletes suffer sports eye injuries every year - almost all of which could have been prevented with the right protective equipment.

That's why the American Academy of Pediatrics and other national health organizations have released policy statements strongly recommending the use of protective eyewear when playing baseball, basketball, softball, soccer, football, tennis and other sports that represent a risk of eye injury. Unfortunately this information hasn't been reached a many sports programs and athletes...

The **Coalition To Prevent Sports Eye Injuries** provides athletic directors, coaches, parents and players with a local resource for information about the risk and prevention of sports eye injuries, as well as ASTM certified protective equipment. Just go to our practice locator at [www.sportsveinjuries.com](http://www.sportsveinjuries.com) and plug in your zip code to find a Sports Injury Prevention Center near you.

**MAKE SURE THEY SEE TO PLAY ANOTHER DAY**



**Spread mandate to other  
States (NJ) and sports  
(hockey, female lacrosse)**

**Keep seeking advice**

# Insurance Incentives

**Public Health Policy  
Does Matter  
and it  
Does Change  
Public Health!**

**Thank you!**