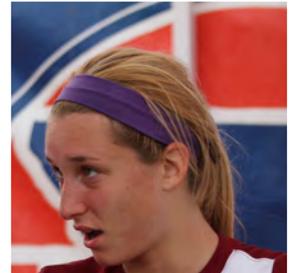
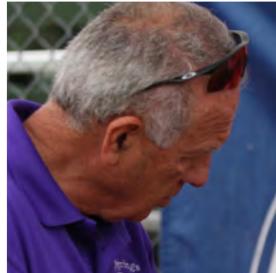
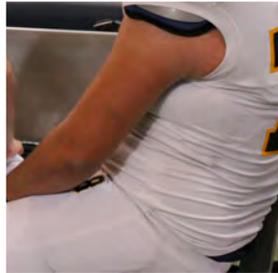


2015-2016



# Interscholastic Youth Sports Brain Injury Report

# MSHSAA

Missouri State High School Activities Association



## Interscholastic Youth Sports Brain Injury Prevention Report

SCS HCS HB 300, 334, and 387 became law in August 2011, and it mandates that an organization with public schools as members must publish and distribute an annual report regarding the impact of student athlete concussions and head injuries which should include efforts that may be made to minimize damages from school sports injuries. The Department of Health and Senior Services, along with a statewide association of school boards [Missouri School Board Association (MSBA)], a statewide activities association that provides oversight for athletic or activity eligibility for students and school districts, [Missouri State High School Activities Association (MSHSAA)], and an organization named by the Department of Health and Senior Services that specializes in support services, education, and advocacy of those with brain injuries [Brain Injury Association of Missouri (BIA-MO)] developed guidelines, pertinent information, and forms to educate coaches, staff members, athletes, and parents or guardians of youth athletes of the nature and risk of concussion and brain injury including continuing to play after a concussion or a brain injury (1).

MSHSAA has distributed and updated head injury materials annually since August of 2009 to its member schools using a variety of sources (2). These materials provide information that will educate parents, coaches, staff members, and athletes on the prevention, management, and dangers of head injuries in interscholastic sports (3). In December of 2011, MSHSAA conducted its first annual survey of member schools and the impact of head injuries. During the summer of 2016, a sixth survey was conducted to collect data from the MSHSAA member schools. Seven hundred and forty-five schools were contacted to complete the survey (4). The survey window was from May 1 through July 30, 2016. Information that could not be completed on the survey was forwarded by e-mail to [headinjury@mshsaa.org](mailto:headinjury@mshsaa.org). Working with the Brain Injury Association of Missouri, Department of Health and Senior Services, Missouri Athletic Trainers Association, Missouri School Nurses Association and Missouri School Board Association a pilot program was put in place for the winter and spring of 2014, Sports Concussions: Facts, Fallacies and New Frontiers. The program was conducted in five regional sites presenting a one day seminar educating staff members, coaches, nurses and Athletic trainers on the new research and policies pertaining to head injuries (5). Because of the great success and attendance of the program it will be offered again in 2017 at five regional sites. The program this year will make a special effort to reach out to youth sports organizations and local medical personnel.

Harvey Richards, Retired Associate Executive Director formerly in charge of Sports Medicine for MSHSAA (6), was a part of the state legislative process for the head injury bill, responsible for the distribution of educational materials to member schools, and conducted the Head Injury Survey. Greg Stahl (7) is the current Assistant Executive Director in charge of Sports Medicine for MSHSAA.

- (1) Time table of meetings, Appendix A.
- (2) Fall membership mailing, e-mails, website ([mshsaa.org](http://mshsaa.org)), district in-services.
- (3) Educational packet for member schools, Appendix B.
- (4) 2015-16 Head Injury Survey, Appendix C.
- (5) Sports Concussions: Facts, Fallacies and New Frontiers, Appendix D.
- (6) Harvey Richards, Retired Associate Executive Director, 1 N Keene St, Columbia MO 65201; [richarvey14@gmail.com](mailto:richarvey14@gmail.com)
- (7) Greg Stahl, Assistant Executive Director, 1 N Keene St., Columbia, MO 65201; [greg@mshsaa.org](mailto:greg@mshsaa.org); (573) 875-4880.

## Head Injury Survey

| School Level                               | Total Schools |      |      | Completed Survey |      |      | Did Not Complete the Survey |      |      | % of Member Schools that Completed Survey |      |      |
|--|---------------|------|------|------------------|------|------|-----------------------------|------|------|---|------|------|
|  | 2016          | 2015 | 2014 | 2016             | 2015 | 2014 | 2016                        | 2015 | 2014 | 2016                                      | 2015 | 2014 |
| High Schools 9-12<br>Combined Schools 7-12 | 590           | 589  | 591  | 526              | 530  | 578  | 64                          | 59   | 13   | 89%                                       | 90%  | 98%  |

## Use of Online Video

The National Federation of High School Activities (NFHS) has produced and made available for free, the online course “Concussions in Sports: What You Need to Know.” MSHSAA has approved this course for coaches to take as their educational component of the law. Many districts viewed this course as an in-service with the entire coaching staff, while others have taken it separately to meet this requirement. For the year July 1, 2015 through June 30, 2016, a total of 4,980 online courses were completed in Missouri.

Did your school district use the NFHS video “Concussion in Sports-What you Need to Know,” to educate your coaching staff for the 2015-16 school year?

Total Schools Responding: 526  
 Yes: 498 (95%)  
 No: 28 (5%)

Note: The 28 schools not using the NFHS online course did in fact have district wide in services for this information.

The next table reflects the number of participants for each sport and/or activity by our member schools. This number will include duplicates for students who are in multiple activities. Music/Band, Sideline Cheerleading (Spirit) and Dance begin in the fall, but some schools will only participate in the winter or spring. The following table reflects the participation rates for the 2014-15 and 2015-16 school years.

| High School Sport/Activity     | Participants   |                |
|--------------------------------|----------------|----------------|
|                                | 2015-16        | 2014-15        |
| Baseball                       | 15,261         | 15,191         |
| Sideline Cheerleading (Spirit) | 9,795          | 9,811          |
| Field Hockey                   | 1,099          | 1,095          |
| 11-man Football                | 21,678         | 21,862         |
| 8-man Football                 | 458            | 475            |
| Dance/Pom Team                 | 3,116          | 2,996          |
| Water Polo                     | 535            | 536            |
| Winter Guard                   | 1,026          | 801            |
| Wrestling                      | 6,479          | 6,706          |
| Music-Band                     | 23,662         | 23,593         |
| Basketball-Boys                | 13,769         | 13,892         |
| Cross Country-Boys             | 5,863          | 5,574          |
| Cross Country-Girls            | 4,491          | 4,272          |
| Soccer-Boys                    | 8,608          | 8,391          |
| Swimming and Diving-Boys       | 1,799          | 1,805          |
| Softball-Girls                 | 9,683          | 9,772          |
| Tennis-Girls                   | 3,837          | 3,934          |
| Volleyball-Girls               | 10,362         | 10,202         |
| Softball-Boys                  | 103            | 111            |
| Golf-Boys                      | 3,870          | 3,940          |
| Tennis-Boys                    | 3,497          | 3,298          |
| Track and Field-Boys           | 14,895         | 14,549         |
| Volleyball-Boys                | 1,160          | 1,106          |
| Basketball-Girls               | 9,999          | 10,145         |
| Golf-Girls                     | 1,846          | 1,723          |
| Soccer-Girls                   | 8,181          | 8,086          |
| Swimming and Diving-Girls      | 2,848          | 2,793          |
| Track and Field-Girls          | 11,845         | 11,512         |
| Lacrosse-Girls                 | 1,424          | 1,272          |
| <b>Totals</b>                  | <b>201,227</b> | <b>199,443</b> |

| High School Sport/Activity                       | Total Participation |
|--|---------------------|
| Sport  | 164,654             |
| *Taking into Account 20% Duplication of Athletes | 32,931              |
| Total Adjustment Participation Sport             | 131,723             |
| Activity   | 36,573              |
| *Taking into Account 20% Duplication of Students | 7,315               |
| Total Adjustment Participation Activity          | 29,258              |
| Total Adjustment Participation Sport/Activity    | 160,981             |

\*20% duplication is only an estimate and not an actual number.

## Data Collected

Schools were asked to provide information that related to possible head injuries. If signs or symptoms of a head injury were present the student was to be withheld from that sport and or activity for a minimum of 24 hours and must have been seen by a medical professional. They must also provide to the school a return to play form before continuing the sport or activity. The information below is a reflection of those students who had to see a medical professional and provide a return to play form. Not all incidents would have resulted in a concussion.

### HIGH SCHOOL ACTIVITIES

| Level         | Activity              | Sport Related | Non-Sport Related | Days/Class Sport | Days/Class Non-Sport | Days Missed Sport | Days Missed Non-Sport | Reporting Schools |
|---------------|-----------------------|---------------|-------------------|------------------|----------------------|-------------------|-----------------------|-------------------|
| HS            | Scholar Bowl          | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| HS            | Sideline Cheerleading | 260           | 15                | 393              | 28                   | 4453              | 481                   | 109               |
| HS            | Music Activities      | 9             | 4                 | 2                | 8                    | 169               | 20                    | 11                |
| HS            | Dance/Pom Team        | 21            | 5                 | 31               | 14                   | 362               | 51                    | 21                |
| HS            | Speech and Debate     | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| HS            | Winter Guard          | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| HS            | Bass Fishing          | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| HS            | Bowling               | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| HS            | Chess                 | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| HS            | Target Shooting       | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| <b>TOTALS</b> |                       | <b>290</b>    | <b>24</b>         | <b>426</b>       | <b>50</b>            | <b>4,984</b>      | <b>552</b>            | <b>141</b>        |

### HIGH SCHOOL SPORTS

| Level         | Activity                       | Sport Related | Non-Sport Related | Days/Class Sport | Days/Class Non-Sport | Days Missed Sport | Days Missed Non-Sport | Reporting Schools |
|---------------|--------------------------------|---------------|-------------------|------------------|----------------------|-------------------|-----------------------|-------------------|
| HS            | Baseball - Spring Season       | 82            | 8                 | 130              | 21                   | 973               | 67                    | 67                |
| HS            | Basketball - Boys              | 174           | 9                 | 353              | 9                    | 1957              | 92                    | 134               |
| HS            | Basketball - Girls             | 228           | 22                | 333              | 57                   | 3058              | 405                   | 161               |
| HS            | Cross Country - Boys           | 2             | 2                 | 1                | 3                    | 28                | 85                    | 4                 |
| HS            | Cross Country - Girls          | 7             | 5                 | 6                | 12                   | 146               | 114                   | 10                |
| HS            | Field Hockey                   | 14            | 0                 | 16               | 0                    | 182               | 0                     | 10                |
| HS            | 11-Man Football                | 1260          | 59                | 1386             | 97                   | 15930             | 730                   | 256               |
| HS            | 8-Man Football                 | 19            | 0                 | 24               | 0                    | 172               | 0                     | 10                |
| HS            | Golf - Boys                    | 1             | 0                 | 0                | 0                    | 11                | 0                     | 1                 |
| HS            | Golf - Girls                   | 3             | 2                 | 5                | 0                    | 27                | 19                    | 5                 |
| HS            | Soccer - Boys                  | 187           | 15                | 139              | 16                   | 2145              | 188                   | 106               |
| HS            | Soccer - Girls                 | 297           | 28                | 349              | 45                   | 3813              | 644                   | 133               |
| HS            | Softball - Boys                | 0             | 0                 | 0                | 0                    | 0                 | 0                     | 0                 |
| HS            | Softball - Girls Fall Season   | 85            | 10                | 107              | 10                   | 1127              | 235                   | 63                |
| HS            | Swimming and Diving - Boys     | 8             | 6                 | 6                | 0                    | 94                | 109                   | 11                |
| HS            | Swimming and Diving - Girls    | 21            | 2                 | 33               | 1                    | 359               | 63                    | 16                |
| HS            | Tennis - Boys                  | 1             | 1                 | 0                | 0                    | 5                 | 13                    | 2                 |
| HS            | Tennis - Girls                 | 5             | 7                 | 3                | 24                   | 33                | 159                   | 11                |
| HS            | Track and Field - Boys         | 10            | 9                 | 14               | 5                    | 93                | 156                   | 18                |
| HS            | Track and Field - Girls        | 19            | 15                | 31               | 15                   | 291               | 193                   | 28                |
| HS            | Volleyball - Boys              | 3             | 0                 | 1                | 0                    | 19                | 0                     | 3                 |
| HS            | Volleyball - Girls             | 115           | 10                | 160              | 58                   | 1467              | 176                   | 90                |
| HS            | Water Polo                     | 17            | 2                 | 7                | 0                    | 385               | 36                    | 8                 |
| HS            | Wrestling                      | 233           | 6                 | 303              | 7                    | 3750              | 96                    | 107               |
| HS            | Baseball - Fall Season         | 6             | 0                 | 40               | 0                    | 95                | 0                     | 5                 |
| HS            | Softball - Girls Spring Season | 7             | 1                 | 5                | 2                    | 43                | 14                    | 7                 |
| HS            | Lacrosse - Girls               | 47            | 4                 | 63               | 12                   | 596               | 79                    | 17                |
| <b>TOTALS</b> |                                | <b>2851</b>   | <b>223</b>        | <b>3515</b>      | <b>394</b>           | <b>36799</b>      | <b>3673</b>           | <b>1283</b>       |

## 2015-16 Concussion Survey Results

| Sports       | Number of Athletic Reports | Number of Days Sport was Missed    | Number of Days Class Time Missed |
|--------------|----------------------------|------------------------------------|----------------------------------|
| Male         | 2,003                      | 25,657                             | 2,404                            |
| Female       | 848                        | 11,142                             | 1,111                            |
| <b>Total</b> | <b>2,851</b>               | <b>36,799</b>                      | <b>3,515</b>                     |
| Activities   | Number of Activity Reports | Number of Days Activity was Missed | Number of Days Class Time Missed |
| <b>Total</b> | <b>290</b>                 | <b>4984</b>                        | <b>614</b>                       |

There were a total of 2,003 males and 848 females held out of practices and contests due to a head injury, for a total of 25,657 and 11,142 days respectively. This means that the male athletes were held out on an average of 12.8 days per incident and females were held out 13.1 days. This does show a good correlation to the gradual return-to-play guidelines which indicate at a minimum 5-7 day return rate. The number of days that a student missed class time still remains a low number compared to the total number of days missed in the sport or activity. A major point of emphasis this year will be on Return to Learn and the policies and procedures that should be put in place.

| 2015-16<br>Top 7 Head Injury Sports/Activities |                         | 2014-15<br>Top 7 Head Injury Sports/Activities |                         |
|--|-------------------------|--|-------------------------|
| Sport/Activity                                 | Number of Head Injuries | Sport/Activity                                 | Number of Head Injuries |
| Football                                       | 1,260                   | Football                                       | 1,332                   |
| Soccer (G)                                     | 297                     | Soccer (G)                                     | 273                     |
| Sideline Cheer                                 | 260                     | Sideline Cheer                                 | 253                     |
| Wrestling                                      | 233                     | Wrestling                                      | 236                     |
| Basketball (G)                                 | 228                     | Basketball (G)                                 | 204                     |
| Soccer (B)                                     | 187                     | Soccer (B)                                     | 202                     |
| Basketball (B)                                 | 174                     | Basketball (B)                                 | 152                     |

According to the Article, *Athletic Trainer, Doctors Assess, Manage Most Concussions in High School Sports*: “Nearly half (47.2%) of the total number of concussions were sustained by football players.” Our data is reporting 46.7% of the total number is by football players.

| Percentage of Head Injuries per Total Occurrences |                                   |
|---|-----------------------------------|
| Sport/Activity                                    | % of total reported Head Injuries |
| Football  | 46.7                              |
| Soccer (B/G)                                      | 16.6                              |
| Basketball (B/G)                                  | 12.5                              |
| Wrestling   | 8.3                               |
| Cheerleading                                      | 8.0                               |

\*Marar M. McIlvain NM, Fields SK, Comstock RD. Epidemiology of Concussions Among United States High School Athletes in 20 Sports. *Am J Sports Med* 2012;40(4):747-755.

| <b>Concussion Rates per 10,000 athletic exposures<br/>From the top 10 high school sports*</b> |           |
|---|-----------|
| Sport/Activity  | Rate      |
| Football  | 6.4 – 7.7 |
| Soccer (G)  | 3.4       |
| Wrestling   | 2.2       |
| Basketball (G)  | 2.1       |
| Soccer (B)  | 1.9       |
| Basketball (B)  | 1.6       |
| Sideline Cheerleading   | 1.4       |

MSHSAA Athletic exposure was calculated from the first day of practice to the end of districts for that sport. This is not a true actual count of participation but very accurate assumption. Example:

Football had on the average 72 days of practice and/or contests.  
 72 x 22,337 participates= 1,608,264 exposures.  
 1,260 reported head injuries.

$$\frac{1,260}{1,608,264} = \frac{X}{10,000}$$

| <b>MSHSAA 2015-16<br/>Concussion Rates per 10,000 Athletic Exposures</b> |      |
|--|------|
| Sport/Activity   | Rate |
| Football   | 7.83 |
| Wrestling  | 4.98 |
| Soccer (G)   | 5.04 |
| Soccer (B)   | 2.92 |
| Basketball (G)   | 3.17 |
| Basketball (B)   | 1.76 |
| Sideline Cheerleading  | 3.79 |

There were several questions asked on this year's survey:

1. Does your school district have an emergency action plan in place for all home contest sites?
2. Does your school district use the services of an athletic trainer or other medical support throughout the year (Practices - Contests)?
3. Does your school district have ambulance at all athletic contests?
4. If your school plays football, do you have an ambulance at the contests?

Below are the results from these questions:

| High School Responses   |   |                     |
|---|---|---------------------|
| Question  | Answer  | Number of Responses |
| Does your school district have an emergency action plan in place for all home contest sites?  | Yes   | 470                 |
| Does your school district have an emergency action plan in place for all home contest sites?  | No  | 56                  |
| Does your school district use the services of an athletic trainer or other medical support throughout the year?<br>(Practices - Contests) | No  | 150                 |
| Does your school district use the services of an athletic trainer or other medical support throughout the year?<br>(Practices - Contests) | Yes Full time at the school for both practices and contests. (All levels)   | 148                 |
| Does your school district use the services of an athletic trainer or other medical support throughout the year?<br>(Practices - Contests) | Yes Part-time, check-up on injuries and covering the contests. (All levels) | 104                 |
| Does your school district use the services of an athletic trainer or other medical support throughout the year?<br>(Practices - Contests) | Yes Part-time covering contests only. (All levels)                          | 32                  |
| Does your school district use the services of an athletic trainer or other medical support throughout the year?<br>(Practices - Contests) | Yes Part-time covering most of the varsity contests but not all.            | 92                  |
| Does your school district have ambulance at all athletic contests?  | Yes   | 38                  |
| Does your school district have ambulance at all athletic contests?  | No  | 488                 |
| If your school plays football, do you have an ambulance at the contests?  | Yes, at the varsity games only.   | 133                 |
| If your school plays football, do you have an ambulance at the contests?  | Yes, at all of the contests, Freshman, JV, and Varsity                      | 124                 |
| If your school plays football, do you have an ambulance at the contests?  | No, we do not have an ambulance at the contests.                            | 84                  |
| If your school plays football, do you have an ambulance at the contests?  | N/A, we do not play football.   | 185                 |

There were a total of 526 responses to the questions, with 89% of the schools stating that they did have an emergency action plan in place. This is a good number, but we want 100% of our schools to have, by site, emergency action plans in place. These plans must also be practiced just like their sport or activity to make sure that they are successful.

There were 150 schools that reported not using the services of an athletic trainer at their school. This means that 28.5% of our schools rely upon the coaches, administration and/or the school nurse to provide onsite medical attention. On the other hand, I was encouraged to see that 148 schools (28%) had full time athletic trainers for both practices and contests.

Only 38 schools reported having an ambulance at all of their contests during the school year (7%).

Football-playing schools at the high school level reported that 37% have an ambulance present at the varsity games only, with 34% covering all levels of football competition. It was reported that 23% of the schools did not have an ambulance at their home contest for any level of competition.

Educational materials were distributed to all member schools and are available for the public to access through our website ([www.mshsaa.org](http://www.mshsaa.org)). Awareness of this serious issue has come to the forefront. Several schools have requested an in-service to educate their coaching staff, with professionals conducting the program. Our staff, along with several others, has put programs in place to continue the educational effort and stay abreast of any new research available.

This past year, MSHSAA supported the Brain Injury Association of Missouri in putting together a program that was presented at five different locations in the state of Missouri: Sports Concussions: Facts, Fallacies and New Frontiers.

SEMINAR TOPICS included:

- Concussion Signs and Symptoms
- Current approaches in evaluation of sports-related concussions
- Appropriate management of a possible concussion
- Sports-related concussion law in Missouri Personal and Case Study presentations
- Personal and case study presentations
- Panel of Experts

MSHSAA will conduct an annual survey during each summer to collect year-long data. The Sports Medicine Committee will evaluate the questions and the report each December.

# APPENDIX A

## 2015-16 Time Table of Meetings

| Place  | Date of Meeting        |
|--|------------------------|
| MSHSAA Office<br>- Sports Medicine Committee   | April 28, 2010         |
| NFHS Summer Meeting<br>- Sports Medicine Committee   | July 6-9, 2010         |
| Parkway School District<br>- Concussion Presentation   | August 12, 2010        |
| MSHSAA Office<br>- Sports Medicine Committee   | January 6, 2011        |
| Capitol, Jefferson City, MO<br>- Concussion Bill   | January 11, 2011       |
| Capitol, Jefferson City, MO<br>- Meeting – House Bill 300  | February 7, 2011       |
| Phone Conference<br>- House Bill 300   | February 25, 2011      |
| St. Louis Children’s Hospital<br>- Press Conference House Bill 300   | March 4, 2011          |
| MSHSAA Office<br>- Phone Conference - House Bill 300   | March 7, 2011          |
| NFHS Summer Meeting<br>- Sports Medicine Committee   | June 27 – July 1, 2011 |
| MSHSAA Office<br>- Conference Call - Concussions   | August 16, 2011        |
| MSHSAA Office<br>- Concussion Meeting  | August 25, 2011        |
| MSHSAA Office<br>- Sports Medicine Committee   | January 5, 2012        |
| Conference Call<br>- Adult Brain Injury (MO Dept. of Health/Sr. Svc.)  | January 19, 2012       |
| Conference Call<br>- Adult Brain Injury (MO Dept. of Health/Sr. Svc.)  | February 14, 2012      |
| Meeting in St. Louis<br>- St. Louis Brain Association Meeting  | March 1, 2012          |
| Mercy Sports Medicine Conference<br>- Exertional Heat Illnesses  | March 30-31, 2012      |
| MSHSAA Office<br>- Adult Brain Injury (MO Dept. of Health/Sr. Svc.)  | August 30, 2012        |
| University of Missouri Research<br>- Survey of all Injuries  | June 1, 2012           |
| Coaches Training Meeting (Chillicothe)<br>- Head/Spinal Injuries (Hedrick Medical Building)<br>- St. Luke’s College of Health Sciences | October 12, 2012       |
| MSHSAA Office<br>- Sports Medicine Committee   | December 13, 2012      |
| MSHSAA Office<br>- Meeting with Dr. Hubbard, St. Luke’s  | April 3, 2013          |
| Conference Call<br>- Brain Injury Association of Missouri  | April 16, 2013         |
| University of Missouri Research<br>- Survey of all Injuries  | June 2, 2013           |

|  |                        |
|--|------------------------|
| NFHS Summer Meeting<br>- Sports Medicine Committee   | June 24-28, 2013       |
| Stoney Creek Inn<br>- Brain Injury Association of Missouri<br>- Annual Meeting Planning                  | September 6, 2013      |
| Coaches Training Meeting<br>- St. Luke's College of Health Sciences                                      | October 2, 2013        |
| Conference Call<br>- St. Luke's College of Health Sciences   | October 23, 2013       |
| Conference Call<br>- University of Missouri Journalism<br>- Concussion Interview                         | November 12, 2013      |
| NFL – Chiefs<br>- Head's Up Mom's Football Safety Clinic   | December 3, 2013       |
| MSHSAA Office<br>- Sports Medicine Committee   | December 12, 2013      |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Springfield, MO | January 14, 2014       |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Kansas City, MO | January 22, 2014       |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Columbia, MO    | January 27, 2014       |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- St. Louis, MO   | February 4, 2014       |
| NFHS Summer Meeting<br>- Sports Medicine Committee   | June 27 – July 2, 2014 |
| MIAAAA Meeting<br>- Emergency Action Planning<br>- School Policies for Return To Play                    | April 6-7, 2014        |
| Summer's AD Workshop<br>- Emergency Action Planning  | July 31, 2014          |
| Stoney Creek Inn<br>- Brain Injury Association of Missouri<br>- Concussion Seminar Planning              | October 8, 2014        |
| MSHSAA Office<br>- Sports Medicine Committee   | December 11, 2014      |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Springfield, MO | January 16, 2015       |
| NFHS Football Meeting<br>- Indianapolis, IN  | January 23-25, 2015    |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Columbia, MO    | January 27, 2015       |
| Missouri United Schools Insurance Council<br>- Concussion Seminar<br>- Lake of the Ozarks                | January 29-30, 2015    |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- St. Louis, MO   | February 5, 2015       |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Kansas City, MO | February 12, 2015      |

|   |                        |
|---|------------------------|
| MSHSAA Office<br>- Sports Medicine Committee  | February 18, 2015      |
| USA/NFL Football Meeting<br>- Indianapolis, IN  | February 22, 2015      |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Cape Girardeau, MO | February 26, 2015      |
| USA/NFL Football Meeting<br>- New York, New York  | March 26-27, 2015      |
| MIAAAA Meeting<br>- Concussion Information Booth/Heads Up Football<br>- Lake Ozark, MO                      | April 10-14, 2015      |
| Sports Medicine Advisory Committee Meeting<br>- Overuse Injuries in Baseball<br>- Indianapolis, IN          | June 8-10, 2015        |
| NFHS Summer Meeting<br>- Sports Medicine Committee<br>- New Orleans, LA                                     | June 26 – July 3, 2015 |
| Officiate Missouri Day<br>- St. Louis, MO   | July 24-25, 2015       |
| SERC Sports Medicine Symposium<br>- Kansas City, MO   | August 1, 2015         |
| Brain Injury Association<br>- Statewide Conference Call   | August 18, 2015        |
| KBIA Radio Interview<br>- Athletic Trainers at High School Sporting Events                                  | September 18, 2015     |
| Brain Injury Association Meeting<br>- St. Louis, MO   | September 23, 2015     |
| MSHSAA Office<br>- Sports Medicine Committee  | December 10, 2015      |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Columbia, MO       | February 17, 2016      |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Cape Girardeau, MO | February 18, 2016      |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- St. Louis, MO      | February 22, 2016      |
| Sports Concussion: Facts, Fallacies and New Frontiers<br>- Brain Injury Association<br>- Springfield, MO    | February 25, 2016      |
| USA/NFL Football Meeting<br>- Indianapolis, IN  | March 21-23, 2016      |
| MIAAAA Meeting<br>- Concussion Information Booth<br>- Lake Ozark, MO  | April 8-12, 2016       |
| NFHS Summer Meeting<br>- Sports Medicine Committee<br>- Reno, NV  | June 25 – July 2, 2016 |

# APPENDIX B

# REMINDERS For ALL ATHLETIC DIRECTORS

## Concussion Information and Materials

- All coaches must take a course on the signs, symptoms, and prevention of concussions.
  - There is a free-of-charge course that is located on the NFHS Learning Center website ([www.nfhslearn.com](http://www.nfhslearn.com)). Once there, go to the FREE/ELECTIVE COURSES section. Click on the right arrow until you come to the “Concussion in Sports – What You Need To Know” course.
  - There is also a link to this course on our website located at ([www.mshsaa.org](http://www.mshsaa.org)) located on the Sports Medicine Tab in the CONCUSSION section.
- All **parents and athletes** must receive and sign for the concussion materials as indicated on the MSHSAA Preparticipation Physical Form.
- The concussion information for parents and athletes can be found in the following three locations:
  - The free NFHS “Concussion in Sports” course described above;
  - The materials that are provided on our website ([www.mshsaa.org](http://www.mshsaa.org)) by clicking on the Sports Medicine Tab and then on “MSHSAA Concussion Information Packet;” and
  - The Concussion Information PowerPoint located on our website ([www.mshsaa.org](http://www.mshsaa.org)) by clicking on the Sports Medicine Tab and then on “MSHSAA Concussion Video Introduction.”
- **Athletic Directors** must keep accurate records of this information and be able to provide it to MSHSAA if asked to do so.

## Emergency Action Planning Guide (HIGH SCHOOL ONLY)

- Enclosed in your packet is information for your school to set up and implement the “Anyone Can Save a Life” program.
- This program is free of charge.
- If you have any question, please contact me.

## Online Sports Medicine Information

- Please note that printed copies of the MSHSAA Sports Medicine Manual are no longer being sent in the MSHSAA rules book mailings.
- The Sports Medicine information is located online by going to the MSHSAA website ([www.mshsaa.org](http://www.mshsaa.org)) and clicking on the Sports Medicine tab.

# MSHSAA



All concussions are serious.  
If you think you have a

# CONCUSSION:

- \* Don't hide it.
- \* Report it.
- \* Take time to recover.



**It's better to miss one game  
than the whole season.**

For more information and to order additional materials  
*free-of-charge*, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION



# Heads Up to Schools: KNOW YOUR CONCUSSION ABCs

**A**ssess the situation | **B**e alert for signs and symptoms | **C**ontact a health care professional



## A Fact Sheet for Parents

### What is a concussion?

A concussion is a type of brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolt to the head. Concussions can also occur from a blow to the body that causes the head and brain to move rapidly back and forth. Even what seems to be a mild bump to the head can be serious.

Concussions can have a more serious effect on a young, developing brain and need to be addressed correctly.

### What are the signs and symptoms of a concussion?

You can't see a concussion. Signs and symptoms of concussion can show up right after an injury or may not appear or be noticed until hours or days after the injury. It is important to watch for changes in how your child or teen is acting or feeling, if symptoms are getting worse, or if s/he just "doesn't feel right." Most concussions occur without loss of consciousness.

If your child or teen reports *one or more* of the symptoms of concussion listed below, or if you notice the symptoms yourself, seek medical attention right away. Children and teens are among those at greatest risk for concussion.

## SIGNS AND SYMPTOMS OF A CONCUSSION

### SIGNS OBSERVED BY PARENTS OR GUARDIANS

- Appears dazed or stunned
- Is confused about events
- Answers questions slowly
- Repeats questions
- Can't recall events *prior* to the hit, bump, or fall
- Can't recall events *after* the hit, bump, or fall
- Loses consciousness (even briefly)
- Shows behavior or personality changes
- Forgets class schedule or assignments

### SYMPTOMS REPORTED BY YOUR CHILD OR TEEN

#### Thinking/Remembering:

- Difficulty thinking clearly
- Difficulty concentrating or remembering
- Feeling more slowed down
- Feeling sluggish, hazy, foggy, or groggy

#### Physical:

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness
- Fatigue or feeling tired
- Blurry or double vision
- Sensitivity to light or noise
- Numbness or tingling
- Does not "feel right"

#### Emotional:

- Irritable
- Sad
- More emotional than usual
- Nervous

#### Sleep\*:

- Drowsy
- Sleeps *less* than usual
- Sleeps *more* than usual
- Has trouble falling asleep

*\*Only ask about sleep symptoms if the injury occurred on a prior day.*

To download this fact sheet in Spanish, please visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion). Para obtener una copia electrónica de esta hoja de información en español, por favor visite: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

# DANGER SIGNS

Be alert for symptoms that worsen over time. Your child or teen should be seen in an emergency department right away if s/he has:

- One pupil (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

Children and teens with a concussion should **NEVER** return to sports or recreation activities on the same day the injury occurred. They should delay returning to their activities until a health care professional experienced in evaluating for concussion says they are symptom-free and it's OK to return to play. This means, until permitted, not returning to:

- Physical Education (PE) class,
- Sports practices or games, or
- Physical activity at recess.

## What should I do if my child or teen has a concussion?

1. **Seek medical attention right away.** A health care professional experienced in evaluating for concussion can determine how serious the concussion is and when it is safe for your child or teen to return to normal activities, including physical activity and school (concentration and learning activities).
2. **Help them take time to get better.** If your child or teen has a concussion, her or his brain needs time to heal. Your child or teen may need to limit activities while s/he is recovering from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games may cause concussion symptoms (such as headache or tiredness) to reappear or get worse. After a concussion, physical and cognitive activities—such as concentration and learning—should be carefully managed and monitored by a health care professional.
3. **Together with your child or teen, learn more about concussions.** Talk about the potential long-term effects of concussion and the dangers of returning too soon to normal activities (especially physical activity and learning/concentration). For more information about concussion and free resources, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

## How can I help my child return to school safely after a concussion?

Help your child or teen get needed support when returning to school after a concussion. Talk with your child's teachers, school nurse, coach, speech-language pathologist, or counselor about your child's concussion and symptoms. Your child may feel frustrated, sad, and even angry because s/he cannot return to recreation and sports right away, or cannot keep up with schoolwork. Your child may also feel isolated from peers and social networks. Talk often with your child about these issues and offer your support and encouragement. As your child's symptoms decrease, the extra help or support can be removed gradually. Children and teens who return to school after a concussion may need to:

- Take rest breaks as needed,
- Spend fewer hours at school,
- Be given more time to take tests or complete assignments,
- Receive help with schoolwork, and/or
- Reduce time spent reading, writing, or on the computer.

\*To learn more about concussion and to order materials **FREE-OF-CHARGE**, go to: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion) or call 1.800.CDC.INFO.

# HEADS+UP

## CONCUSSION IN HIGH SCHOOL SPORTS

A FACT SHEET FOR **ATHLETES**

### What is a concussion?

A concussion is a brain injury that:

- Is caused by a bump, blow, or jolt to the head or body.
- Can change the way your brain normally works.
- Can occur during practices or games in any sport or recreational activity.
- Can happen even if you haven't been knocked out.
- Can be serious even if you've just been "dinged" or "had your bell rung."

All concussions are serious. A concussion can affect your ability to do schoolwork and other activities (such as playing video games, working on a computer, studying, driving, or exercising). Most people with a concussion get better, but it is important to give your brain time to heal.

### What are the symptoms of a concussion?

You can't see a concussion, but you might notice **one or more** of the symptoms listed below or that you "don't feel right" soon after, a few days after, or even weeks after the injury.

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Bothered by light or noise
- Feeling sluggish, hazy, foggy, or groggy
- Difficulty paying attention
- Memory problems
- Confusion

### What should I do if I think I have a concussion?

- **Tell your coaches and your parents.** Never ignore a bump or blow to the head even if you feel fine. Also, tell your coach right away if you think you have a concussion or if one of your teammates might have a concussion.
- **Get a medical check-up.** A doctor or other health care professional can tell if you have a concussion and when it is OK to return to play.
- **Give yourself time to get better.** If you have a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to have another concussion. Repeat concussions can increase the time it takes for you to recover and may cause more damage to your brain. It is important to rest and not return to play until you get the OK from your health care professional that you are symptom-free.

### How can I prevent a concussion?

Every sport is different, but there are steps you can take to protect yourself.

- Use the proper sports equipment, including personal protective equipment. In order for equipment to protect you, it must be:
  - The right equipment for the game, position, or activity
  - Worn correctly and the correct size and fit
  - Used every time you play or practice
- Follow your coach's rules for safety and the rules of the sport.
- Practice good sportsmanship at all times.

**If you think you have a concussion:**  
Don't hide it. Report it. Take time to recover.

**It's better to miss one game than the whole season.**

For more information and to order additional materials **free-of-charge**, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

# MSHSAA Concussion Return to Play Form

This form is adapted from the Acute Concussion Evaluation (ACE) care plan on the CDC website ([www.cdc.gov/injury](http://www.cdc.gov/injury)). All medical providers are encouraged to review this site if they have questions regarding the latest information on the evaluation and care of the scholastic athlete following a concussion injury. **Please initial any recommendations that you select below.**

Athlete's Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Date of Injury: \_\_\_\_\_

## THIS RETURN TO PLAY IS BASED ON TODAY'S EVALUATION

Date of Evaluation: \_\_\_\_\_ Care Plan Completed By: \_\_\_\_\_

Return to This Office (Date/Time): \_\_\_\_\_

Return to School On (Date): \_\_\_\_\_

### RETURN TO SPORTS

PLEASE NOTE:

1. Athletes should not return to practice or play for at least 24 hours after their head injury has occurred.
2. Athletes should never return to play or practice if they still have **ANY symptoms**.
3. Athletes: Be sure that your coach and/or athletic trainer are aware of your injury and symptoms, and that they have the contact information for the treating physician.

### The following are the return to sports recommendations at the present time:

Physical Education:  Do **NOT** return to PE class at this time.

May return to PE class at this time.

Sports:  Do **NOT** return to sports practice or competition at this time.

May gradually return to sports practices under the supervision of the healthcare provider for your school or team.

May be advanced back to competition after phone conversation with attending physician (MD/DO/PAC/ATC/ARNP/Neurophysiologist)

Must return to physician (MD/DO/PAC/ATC/ARNP/Neurophysiologist) for final clearance to return to competition.

- OR -

Cleared for full participation in all activities and restrictions. Return of symptoms should result in re-evaluation by physician (MD/DO/PAC/ATC/ARNP/Neurophysiologist) for assessment.

### Medical Office Information (Please Print/Stamp):

Evaluator's Name: \_\_\_\_\_ Office Phone: \_\_\_\_\_

Evaluator's Signature: \_\_\_\_\_

Evaluator's Address: \_\_\_\_\_

## Return to Play (RTP) Procedures After a Concussion

1. Return to activity and play is a medical decision. The athlete must meet all of the following criteria in order to progress to activity:

Asymptomatic at rest and with exertion (including mental exertion in school) AND have written clearance from their primary care provider or concussion specialist (athlete must be cleared for progression to activity by a physician other than an Emergency Room physician, if diagnosed with a concussion).
2. Once the above criteria are met, the athlete will be progressed back to full activity following the step-wise process detailed below. (This progression must be closely supervised by a Certified Athletic Trainer. If your school does not have an athletic trainer, then the coach must have a very specific plan to follow as directed by the athlete's physician).
3. Progression is individualized, and will be determined on a case by case basis. Factors that may affect the rate of progression include: previous history of concussion, duration and type of symptoms, age of the athlete, and sport/activity in which the athlete participates. An athlete with a prior history of concussion, one who has had an extended duration of symptoms, or one who is participating in a collision or contact sport may be progressed more slowly.
4. Stepwise progression as described below:
  - Step 1:** Complete cognitive rest. This may include staying home from school or limiting school hours (and studying) for several days. Activities requiring concentration and attention may worsen symptoms and delay recovery.
  - Step 2:** Return to school full-time.
  - Step 3:** Light exercise. This step cannot begin until the athlete is no longer having concussion symptoms and is cleared by a physician for further activity. At this point the athlete may begin walking or riding an exercise bike. No weight-lifting.
  - Step 4:** Running in the gym or on the field. No helmet or other equipment.
  - Step 5:** Non-contact training drills in full equipment. Weight-training can begin.
  - Step 6:** Full contact practice or training.
  - Step 7:** Play in game. Must be cleared by physician before returning to play.
  - The athlete should spend 1 to 2 days at each step before advancing to the next. If post-concussion symptoms occur at any step, the athlete must stop the activity and the treating physician must be contacted. Depending upon the specific type and severity of the symptoms, the athlete may be told to rest for 24 hours and then resume activity at a level one step below where he or she was at when the symptoms occurred.



# Heads Up to Schools: KNOW YOUR CONCUSSION ABCs

**A**ssess  
the  
situation

**B**e alert for  
signs and  
symptoms

**C**ontact a  
health care  
professional

## A Fact Sheet for Teachers, Counselors, and School Professionals

### THE FACTS:

- \* All concussions are serious.
- \* Most concussions occur without loss of consciousness.
- \* Recognition and proper response to concussions when they first occur can help aid recovery and prevent further injury, or even death.

### What is a concussion?

A concussion is a type of brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolt to the head. Concussions can also occur from a fall or blow to the body that causes the head and brain to move rapidly back and forth. Even what seems to be a mild bump to the head can be serious.

Children and adolescents are among those at greatest risk for concussion. The potential for a concussion is greatest during activities where collisions can occur, such as during physical education (PE) class, playground time, or school-based sports activities. However, concussions can happen any time a student's head comes into contact with a hard object, such as a floor, desk, or another student's head or body. Proper recognition and response to concussion can prevent further injury and help with recovery.

To download this fact sheet in Spanish, please visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).  
Para obtener una copia electrónica de esta hoja de información en español, por favor visite: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

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CENTERS FOR DISEASE CONTROL AND PREVENTION



# What are the signs and symptoms of concussion?

The signs and symptoms of concussion can show up right after an injury or may not appear or be noticed until hours or days after the injury. Be alert for any of the following signs or symptoms. Also, watch for changes in how the student is acting or feeling, if symptoms are getting worse, or if the student just “doesn’t feel right.”



## SIGNS OBSERVED BY TEACHERS AND SCHOOL PROFESSIONALS

- Appears dazed or stunned
- Is confused about events
- Answers questions slowly
- Repeats questions
- Can’t recall events *prior* to the hit, bump, or fall
- Can’t recall events *after* the hit, bump, or fall
- Loses consciousness (even briefly)
- Shows behavior or personality changes
- Forgets class schedule or assignments

## SYMPTOMS REPORTED BY THE STUDENT

### Thinking/Remembering:

- Difficulty thinking clearly
- Difficulty concentrating or remembering
- Feeling more slowed down
- Feeling sluggish, hazy, foggy, or groggy

### Physical:

- Headache or “pressure” in head
- Nausea or vomiting
- Balance problems or dizziness
- Fatigue or feeling tired
- Blurry or double vision
- Sensitivity to light or noise
- Numbness or tingling
- Does not “feel right”

### Emotional:

- Irritable
- Sad
- More emotional than usual
- Nervous

### Sleep\*:

- Drowsy
- Sleeps *less* than usual
- Sleeps *more* than usual
- Has trouble falling asleep

*\*Only ask about sleep symptoms if the injury occurred on a prior day.*

## What are concussion danger signs?

Be alert for symptoms that worsen over time.

The student should be seen in an emergency department right away if s/he has:

- One pupil (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)



Children and teens with a concussion should NEVER return to sports or recreation activities on the same day the injury occurred. They should delay returning to their activities until a health care professional experienced in evaluating for concussion says they are symptom-free and it's OK to return to play. This means, until permitted, not returning to:

- Physical Education (PE) class,
- Sports practices or games, or
- Physical activity at recess.

For more information and tool kits for youth sports coaches and high school coaches, visit [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

## How can I recognize a concussion?

Teachers and school counselors may be the first to notice changes in their students. The signs and symptoms can take time to appear and can become evident during concentration and learning activities in the classroom.

**Send a student to the school nurse, or another professional designated to address health issues, if you notice or suspect that a student has:**

1. Any kind of forceful blow to the head or to the body that results in rapid movement of the head,  
**-and-**
2. Any change in the student's behavior, thinking, or physical functioning. (See the signs and symptoms of concussion.)

## What do I need to know about my students returning to school after a concussion?

Supporting a student recovering from a concussion requires a collaborative approach among school professionals, health care providers, and parents, as s/he may need accommodations during recovery. If symptoms persist, a 504 meeting may be called. Section 504 Plans are implemented when students have a disability (temporary or permanent) that affects their performance in any manner.



## What to look for after a concussion

When students return to school after a concussion, school professionals should watch for:

- Increased problems paying attention or concentrating
- Increased problems remembering or learning new information
- Longer time needed to complete tasks or assignments
- Difficulty organizing tasks
- Inappropriate or impulsive behavior during class
- Greater irritability
- Less ability to cope with stress or more emotional



Students who return to school after a concussion may need to:

- Take rest breaks as needed,
- Spend fewer hours at school,
- Be given more time to take tests or complete assignments,
- Receive help with schoolwork, and/or
- Reduce time spent on the computer, reading, or writing.

Services and accommodations for students may include speech-language therapy, environmental adaptations, curriculum modifications, and behavioral strategies.

Students may need to limit activities while they are recovering from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms (such as headache or tiredness) to reappear or get worse.

It is normal for students to feel frustrated, sad, and even angry because they cannot return to recreation or sports right away, or cannot keep up with their schoolwork. A student may also feel isolated from peers and social networks. Talk with the student about these issues and offer support and encouragement. As the student's symptoms decrease, the extra help or support can be removed gradually.



\*For more information on concussion and to order additional materials for school professionals **FREE- OF-CHARGE**, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).



# Heads Up to Schools: KNOW YOUR CONCUSSION ABCs

**A**ssess the situation    **B**e alert for signs and symptoms    **C**ontact a health care professional

## A Fact Sheet for School Nurses

### What is a concussion?

A concussion is a type of brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolt to the head. Concussions can also occur from a fall or blow to the body that causes the head and brain to move rapidly back and forth. Even what seems to be a mild bump to the head can be serious.

### How can I recognize a concussion?

To help you recognize a concussion, ask the injured student or witnesses of the incident about:

1. Any kind of forceful blow to the head or to the body that resulted in rapid movement of the head.

-and-

2. Any change in the student's behavior, thinking, or physical functioning. (See the signs and symptoms of concussion.)

### THE FACTS:

- \* All concussions are serious.
- \* Most concussions occur without loss of consciousness.
- \* Recognition and proper response to concussions when they first occur can help aid recovery and prevent further injury, or even death.

To download this fact sheet in Spanish, please visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).  
Para obtener una copia electrónica de esta hoja de información en español, por favor visite: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

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## How can concussions happen in schools?

Children and adolescents are among those at greatest risk for concussion. Concussions can result from a fall, or any time a student's head comes into contact with a hard object, such as the floor, a desk, or another student's head or body. The potential for a concussion is greatest during activities where collisions can occur, such as during physical education (PE) class, playground time, or school-based sports activities.

Students may also get a concussion when doing activities outside of school, but then come to school when symptoms of the concussion are presenting. For example, adolescent drivers are at increased risk for concussion from motor vehicle crashes.

Concussions can have a more serious effect on a young, developing brain and need to be addressed correctly. Proper recognition and response to concussion symptoms in the school environment can prevent further injury and can help with recovery.



# What are the signs and symptoms of concussion?

Students who experience **one or more** of the signs and symptoms listed below after a bump, blow, or jolt to the head or body should be referred to a health care professional experienced in evaluating for concussion.

There is no one single indicator for concussion. Rather, recognizing a concussion requires a symptom assessment. The signs and symptoms of concussion can take time to appear and can become more noticeable during concentration and learning activities in the classroom. For this reason, it is important to watch for changes in how the student is acting or feeling, if symptoms become worse, or if the student just “doesn't feel right.”

## SIGNS OBSERVED BY SCHOOL NURSES

- Appears dazed or stunned
- Is confused about events
- Answers questions slowly
- Repeats questions
- Can't recall events *prior* to the hit, bump, or fall
- Can't recall events *after* the hit, bump, or fall
- Loses consciousness (even briefly)
- Shows behavior or personality changes

## SYMPTOMS REPORTED BY THE STUDENT

### Thinking/Remembering:

- Difficulty thinking clearly
- Difficulty concentrating or remembering
- Feeling more slowed down
- Feeling sluggish, hazy, foggy, or groggy

### Emotional:

- Irritable
- Sad
- More emotional than usual
- Nervous

### Physical:

- Headache or “pressure” in head
- Nausea or vomiting
- Balance problems or dizziness
- Fatigue or feeling tired
- Blurry or double vision
- Sensitivity to light or noise
- Numbness or tingling
- Does not “feel right”

### Sleep\*:

- Drowsy
- Sleeps *less* than usual
- Sleeps *more* than usual
- Has trouble falling asleep

*\*Only ask about sleep symptoms if the injury occurred on a prior day.*



Remember, you can't see a concussion and some students may not experience or report symptoms until hours or days after the injury. Most young people with a concussion will recover quickly and fully. But for some, concussion signs and symptoms can last for days, weeks, or longer.



## What are concussion danger signs?

In rare cases, a dangerous blood clot may form on the brain in a person with a concussion and crowd the brain against the skull. The student should be taken to an emergency department right away if s/he exhibits any of the following danger signs after a bump, blow, or jolt to the head or body:

- One pupil larger than the other
- Is drowsy or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination

- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Cannot recognize people or places
- Becomes increasingly confused, restless, or agitated
- Has unusual behavior
- Loses consciousness (even a brief loss of consciousness should be taken seriously)

For more information and tool kits for youth sports coaches and high school coaches, visit [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

## What can school nurses and school professionals do?

Below are steps for you to take when a student comes to your office after a bump, blow, or jolt to the head or body.

1. **Observe student for signs and symptoms of concussion for a minimum of 30 minutes.**
2. **Complete the *Concussion Signs and Symptoms Checklist* and monitor students consistently during the observation period.** The form includes an easy-to-use checklist of signs and symptoms that you can look for when the student first arrives at your office, fifteen minutes later, and at the end of 30 minutes, to determine whether any concussion symptoms appear or change.
3. **Notify the student's parent(s) or guardian(s) that their child had an injury to the head.**
  - > **If signs or symptoms are present:** refer the student right away to a health care professional with experience in evaluating for concussion. Send a copy of the *Concussion Signs and Symptoms Checklist* with the student for the health care professional to review. Students should follow their health care professional's guidance about when they can return to school and to physical activity.

- > **If signs or symptoms are not present:** the student may return to class, but should not return to sports or recreation activities on the day of the injury. Send a copy of the *Concussion Signs and Symptoms Checklist* with the student for their parent(s) or guardian(s) to review and ask them to continue to observe the student at home for any changes. Explain that signs and symptoms of concussion can take time to appear. Note that if signs or symptoms appear, the student should be seen right away by a health care professional with experience in evaluating for concussion.



Children and teens with a concussion should NEVER return to sports or recreation activities on the same day the injury occurred. They should delay returning to their activities until a health care professional experienced in evaluating for concussion says they are symptom-free and it's OK to return to play. This means, until permitted, not returning to:

- Physical Education (PE) class,
- Sports practices or games, or
- Physical activity at recess.



## What do I need to know about students returning to school after a concussion?

Supporting a student recovering from a concussion requires a collaborative approach among school professionals, health care professionals, parents, and students. All school staff, such as teachers, school nurses, counselors, administrators, speech-language pathologists, coaches, and others should be informed about a returning student's injury and symptoms, as they can assist with the transition process and making accommodations for a student. If symptoms persist, a 504 meeting may be called. Section 504 Plans are implemented when students have a disability (temporary or permanent) that affects their performance in any manner. Services and accommodations for students may include speech-language therapy, environmental



### School Policies:

#### *Students Returning to School after a Concussion*

Check with your school administrators to see if your district or school has a policy in place to help students recovering from a concussion succeed when they return to school. If not, consider working with your school administration to develop such a policy. Policy statements can include the district's or school's commitment to safety, a brief description of concussion, a plan to help students ease back into school life (learning, social activity, etc.), and information on when students can safely return to physical activity following a concussion.

adaptations, curriculum modifications, and behavioral strategies.

Encourage teachers and coaches to monitor students who return to school after a concussion. Students may need to limit activities while they are recovering from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms (such as headache or tiredness) to reappear or get worse. After a concussion, physical and cognitive activities—such as concentration and learning—should be carefully monitored and managed by health and school professionals.

If a student already had a medical condition at the time of the concussion (such as chronic headaches), it may take longer to

recover from the concussion. Anxiety and depression may also make it harder to adjust to the symptoms of a concussion.

School professionals should watch for students who show increased problems paying attention, problems remembering or learning new information, inappropriate or impulsive behavior during class, greater irritability, less ability to cope with stress, or difficulty organizing tasks. Students who return to school after a concussion may need to:

- Take rest breaks as needed,
- Spend fewer hours at school,
- Be given more time to take tests or complete assignments,
- Receive help with schoolwork, and/or
- Reduce time spent on the computer, reading, or writing.

It is normal for a student to feel frustrated, sad, and even angry because s/he cannot return to recreation or sports right away, or cannot keep up with schoolwork. A student may also feel isolated from peers and social networks. Talk with the student about these issues and offer support and encouragement. As the student's symptoms decrease, the extra help or support can be gradually removed.

## What can I do to prevent and prepare for a concussion?

Here are some steps you can take to prevent concussions in school and ensure the best outcome for your students:

**Prepare a concussion action plan.** To ensure that concussions are identified early and managed correctly, have an action plan in place before the start of the school year. This plan can be included in your school or district's concussion policy. You can use the online action plan for sports and recreation activities at: [www.cdc.gov/concussion/response/html](http://www.cdc.gov/concussion/response/html). Be sure that other appropriate school and athletic staff know about the plan and have been trained to use it.

**Educate parents, teachers, coaches, and students about concussion.** Parents, teachers, and coaches know their students well and may be the first to notice when a student is not acting normally. Encourage teachers, coaches, and students to:

- Learn about the potential long-term effects of concussion and the dangers of returning to activity too soon.
- Look out for the signs and symptoms of concussion and send students to see you if they observe any or even suspect that a concussion has occurred.
- View videos about concussion online at: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

**Prevent long-term problems.** A repeat concussion that occurs before the brain recovers from the previous concussion—usually within a short period of time (hours, days, or weeks)—can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions

can result in edema (brain swelling), permanent brain damage, and even death. Keep students with a known or suspected concussion out of physical activity, sports, or playground activity on the day of the injury and until a health care professional with experience in evaluating for concussion says they are symptom-free and it is OK for the student to return to play.

### **Create safe school environments.**

The best way to protect students from concussions is to prevent concussions from happening. Make sure your school has policies and procedures to ensure that the environment is a safe, healthy place for students. Talk to all school staff and administrators and encourage them to keep the physical space safe, keep stairs and hallways clear of clutter, secure rugs to the floor, and check the surfaces of all areas where students are physically active, such as playing fields and playgrounds. Playground surfaces should be made of shock-absorbing material, such as hardwood mulch or sand, and maintained to an appropriate depth. Proper supervision of students is also important.



For more detailed information about concussion diagnosis and management, please download *Heads Up: Facts for Physicians about Mild Traumatic Brain Injury* from CDC at: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION



### **Monitor the health of your student athletes.**

Make sure to ask whether an athlete has ever had a concussion and insist that your athletes are medically

evaluated and are in good condition to participate in sports. Keep track of athletes who sustain concussions during the school year. This will help in monitoring injured athletes who participate in multiple sports throughout the school year.

Some schools conduct preseason baseline testing (also known as neurocognitive tests) to assess brain function—learning and memory skills, ability to pay attention or concentrate, and how quickly someone can think and solve problems. If an athlete has a concussion, these tests can be used again during the season to help identify the effects of the injury. Before the first practice, determine whether your school would consider baseline testing.

*Again, remember your  
concussion ABCs:*

- A—Assess the situation
- B—Be alert for signs and symptoms
- C—Contact a health care professional

\* For more information on concussion and to order additional materials for school professionals **FREE-OF-CHARGE**, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).



# PRE-PARTICIPATION PHYSICAL EVALUATION PHYSICAL EXAMINATION FORM

|       |                |
|-------|----------------|
| Name: | Date of Birth: |
|-------|----------------|

**Physician Reminders:**

1. Consider additional questions on more sensitive issues.
  - Do you feel stressed out or under a lot of pressure?
  - Do you ever feel sad, hopeless, depressed, or anxious?
  - Do you feel safe at your home or residence?
  - Have you ever tried cigarettes, chewing tobacco, snuff, or dip?
  - During the past 30 days, did you use chewing tobacco, snuff or dip?
  - Do you drink alcohol or use any other drugs?
  - Have you ever taken anabolic steroids or used any other performance supplements?
  - Have you ever taken any supplements to help you gain or lose weight or improve your performance?
  - Do you wear a seat belt, use a helmet, and use condoms?
2. Consider reviewing questions on cardiovascular symptoms (Questions 5-14).

**EXAMINATION**

|         |         |                               |                                 |
|---------|---------|-------------------------------|---------------------------------|
| Height: | Weight: | <input type="checkbox"/> Male | <input type="checkbox"/> Female |
|---------|---------|-------------------------------|---------------------------------|

|             |        |                     |   |
|-------------|--------|---------------------|---|
| BP: / ( / ) | Pulse: | Vision: R 20/ L 20/ | Corrected: <input type="checkbox"/> Yes <input type="checkbox"/> No |
|-------------|--------|---------------------|---|

|                |               |                          |
|----------------|---------------|--------------------------|
| <b>MEDICAL</b> | <b>NORMAL</b> | <b>ABNORMAL FINDINGS</b> |
|----------------|---------------|--------------------------|

|   |  |  |
|---|--|--|
| Appearance<br>• Marfan stigmata (kyphoscoliosis, high-arched palate, pectus excavatum, arachnodactyly, arm span>height, hyperlaxity, myopia, MVP, aortic insufficiency) |  |  |
|---|--|--|

|  |  |  |
|--|--|--|
| Eyes/Ears/Nose/Throat<br>• Pupils equal<br>• Hearing |  |  |
|--|--|--|

|             |  |  |
|-------------|--|--|
| Lymph Nodes |  |  |
|-------------|--|--|

|   |  |  |
|---|--|--|
| Heart*<br>• Murmurs (auscultation standing, supine, +/- Valsalva)<br>• Location of point of maximal pulse (PMI) |  |  |
|---|--|--|

|  |  |  |
|--|--|--|
| Pulses<br>• Simultaneous femoral and radial pulses |  |  |
|--|--|--|

|       |  |  |
|-------|--|--|
| Lungs |  |  |
|-------|--|--|

|         |  |  |
|---------|--|--|
| Abdomen |  |  |
|---------|--|--|

|                              |  |  |
|------------------------------|--|--|
| Genitourinary (males only)** |  |  |
|------------------------------|--|--|

|   |  |  |
|---|--|--|
| Skin<br>• HSV, lesions suggestive of MRSA, tinea corporis |  |  |
|---|--|--|

|               |  |  |
|---------------|--|--|
| Neurologic*** |  |  |
|---------------|--|--|

|                        |               |                          |
|------------------------|---------------|--------------------------|
| <b>MUSCULOSKELETAL</b> | <b>NORMAL</b> | <b>ABNORMAL FINDINGS</b> |
|------------------------|---------------|--------------------------|

|      |  |  |
|------|--|--|
| Neck |  |  |
|------|--|--|

|      |  |  |
|------|--|--|
| Back |  |  |
|------|--|--|

|              |  |  |
|--------------|--|--|
| Shoulder/arm |  |  |
|--------------|--|--|

|               |  |  |
|---------------|--|--|
| Elbow/forearm |  |  |
|---------------|--|--|

|           |  |  |
|-----------|--|--|
| Hip/thigh |  |  |
|-----------|--|--|

|      |  |  |
|------|--|--|
| Knee |  |  |
|------|--|--|

|           |  |  |
|-----------|--|--|
| Leg/ankle |  |  |
|-----------|--|--|

|           |  |  |
|-----------|--|--|
| Foot/toes |  |  |
|-----------|--|--|

|   |  |  |
|---|--|--|
| Functional<br>• Duck-walk, single leg hop |  |  |
|---|--|--|

\* Consider ECG, echocardiogram, and referral to cardiology for abnormal cardiac history or exam; \*\*Consider GU exam if in private setting. Having third party present is recommended.  
 \*\*\*Consider cognitive evaluation or baseline neuropsychiatric testing if a history of significant concussion.

|  |
|--|
| <input type="checkbox"/> Cleared for all sports without restriction. |
|--|

|  |
|--|
| <input type="checkbox"/> Cleared for all sports without restriction <b>with recommendations for further evaluation or treatment for:</b> |
|--|

|                                      |
|--------------------------------------|
| <input type="checkbox"/> Not Cleared |
|--------------------------------------|

|   |
|---|
| <input type="checkbox"/> Pending further evaluation |
|---|

|   |
|---|
| <input type="checkbox"/> For any sports |
|---|

|  |
|--|
| <input type="checkbox"/> For certain sports (please list): |
|--|

|         |
|---------|
| Reason: |
|---------|

|                  |
|------------------|
| Recommendations: |
|------------------|

**I have examined the above-named student and completed the pre-participation physical evaluation. The athlete does not present apparent clinical contraindications to practice and participate in the sport(s) as outlined above. A copy of the physical exam is on record in my office and can be made available to the school at the request of the parents. If conditions arise after the athlete has been cleared for participation, the physician may rescind the clearance until the problem is resolved and the potential consequences are completely explained to the athlete (and parents/guardians).**

|                                 |       |
|---------------------------------|-------|
| Name of Physician (type/print): | Date: |
|---------------------------------|-------|

|          |        |
|----------|--------|
| Address: | Phone: |
|----------|--------|

|  |
|--|
| Signature of Physician (MD/DO/ARNP/PA/Chiropractor): |
|--|

## PRE-PARTICIPATION PHYSICAL EVALUATION

# Missouri State High School Activity Association (MSHSAA) Eligibility and Authorization Statement

### STUDENT AGREEMENT (Regarding Conditions for Participation)

This application to represent my school in interscholastic athletics is entirely voluntary on my part and is made with the understanding that I have studied and understand the eligibility standards that I must meet to represent my school and that I have not violated any of them.

I have read, understand, and acknowledge receipt of the MSHSAA brochure entitled "How to Maintain and Protect Your High School Eligibility," which contains a summary of the eligibility rules of the MSHSAA. (I understand that a copy of the *MSHSAA Handbook* is on file with the principal and athletic administrator and that I may review it in its entirety, if I so choose. All MSHSAA by-laws and regulations from the *Handbook* are also posted on the MSHSAA website at [www.mshsaa.org](http://www.mshsaa.org)).

I understand that a MSHSAA member school must adhere to all rules and regulations that pertain to school-sponsored, interscholastic athletics programs, and I acknowledge that local rules may be more stringent than MSHSAA rules.

I also understand that if I do not meet the citizenship standards set by the school or if I am ejected from an interscholastic contest because of an unsportsmanlike act, it could result in me not being allowed to participate in the next contest or suspension from the team either temporarily or permanently.

I understand that if I drop a class, take course work through Post -Secondary Enrollment Option, Credit Flexibility, or other educational options, this action could affect compliance with MSHSAA economic standards and my eligibility.

I understand that participation in interscholastic athletics is a privilege and not a right. As a student athlete, I understand and accept the following responsibilities:

- I will respect the rights and beliefs of others and will treat others with courtesy and consideration.
- I will be fully responsible for my own actions and the consequences of my actions.
- I will respect the property of others.
- I will respect and obey the rules of my school and laws of my community, state, and country.
- I will show respect to those who are responsible for enforcing the rules of my school and the laws of my community, state, and country.

I have completed and/or verified that part of this certificate which requires me to list all previous injuries or additional conditions that are known to me which may affect my performance in so representing my school, and I verify that it is correct and complete.

Signature of Athlete:

Date:

### PARENT PERMISSION (Authorization for Treatment, Release of Medical Information, and Insurance Information)

**Informed Consent:** By its nature, participation in interscholastic athletics includes risk of serious bodily injury and transmission of infectious disease such as HIV and Hepatitis B. Although serious injuries are not common and the risk of HIV transmission is almost nonexistent in supervised school athletic programs, it is impossible to eliminate all risk. Participants must obey all safety rules, report all physical and hygiene problems to their coaches, follow a proper conditioning program, and inspect their own equipment daily. **PARENTS, GUARDIANS, OR STUDENTS WHO MAY NOT WISH TO ACCEPT RISK DESCRIBED IN THIS WARNING SHOULD NOT SIGN THIS FORM. STUDENTS MAY NOT PARTICIPATE IN MSHSAA- SPONSORED SPORT WITHOUT THE STUDENT'S AND PARENT'S/GUARDIAN/S SIGNATURE.**

I understand that in the case of injury or illness requiring transportation to a health care facility, a reasonable attempt will be made to contact the parent or guardian in the case of the student-athlete being a minor, but that, if necessary, the student-athlete will be transported via ambulance to the nearest hospital.

We hereby give our consent for the above student to represent his/her school in interscholastic athletics. We also give our consent for him/her to accompany the team on trips and will not hold the school responsible in case of accident or injury whether it be en route to or from another school or during practice or an interscholastic contest; and we hereby agree to hold the school district of which this school is a part and the MSHSAA, their employees, agents, representatives, coaches, and volunteers harmless from any and all liability, actions, causes of action, debts, claims, or demands of every kind and nature whatsoever which may arise by or in connection with participation by my child/ward in any activities related to the interscholastic program of his/her school.

If we cannot be reached and in the event of an emergency, we also give our consent for the school to obtain through a physician or hospital of its choice, such medical care as is reasonably necessary for the welfare of the student, if he/she is injured in the course of school athletic activities. We authorize the release of necessary medical information to the physician, athletic trainer, and/or school personnel related to such treatment/care. We understand that the school may not provide transportation to all events, and permit / do not permit (CIRCLE ONE) my child to drive his/her vehicle in such a case.

To enable the MSHSAA to determine whether the herein named student is eligible to participate in interscholastic athletics in the MSHSAA member school, I consent to the release of the MSHSAA any and all portions of school record files, beginning with seventh grade, of the herein named student, specifically including, without limiting the generality of the foregoing, birth and age records, name and residence address of parent(s) or guardian(s), residence address of the student, academic work completed, grades received, and attendance data.

We confirm that this application for the above student to represent his/her school in interscholastic athletics is made with the understanding that we have studied and understand the eligibility standards that our son/daughter must meet to represent his/her school and that he/she has not violated any of them. We also understand that if our son/daughter does not meet the citizenship standards set by the school or if he/she is ejected from an interscholastic contest because of an unsportsmanlike act, it could result in him/her not being allowed to participate in the next contest or suspension from the team either temporarily or permanently.

I consent to the MSHSAA's use of the herein named student's name, likeness, and athletic-related information in reports of contests, promotional literature of the Association and other materials and releases related to interscholastic athletics.

We further state that we have completed that part of this certificate which requires us to list all previous injuries or additional conditions that are known to us which may affect this athlete's performance or treatment and we certify that it is correct and complete.

The MSHSAA By-Laws provide that a student shall not be permitted to practice or compete for a school until it has verification that he/she has basic health/accident insurance coverage, which includes athletics. Our son/daughter is covered by basic health/accident insurance for the current school year as indicated below:

|                                     |                |
|-------------------------------------|----------------|
| Name of Insurance Company:          | Policy Number: |
| Signature of Parent(s) or Guardian: | Date:          |

#### PARENT AND STUDENT SIGNATURE (Concussion Materials)

We have received and read the MSHSAA materials on Concussion, which includes information on the definition of a concussion, symptoms of a concussion, what to do if you have a concussion, and how to prevent a concussion.

|                                     |       |
|-------------------------------------|-------|
| Signature of Athlete:               | Date: |
| Signature of Parent(s) or Guardian: | Date: |

#### EMERGENCY CONTACT INFORMATION

|                       |                         |              |
|-----------------------|-------------------------|--------------|
| Parent(s) or Guardian | Address                 | Phone Number |
| Name of Contact       | Relationship to Athlete | Phone Number |
| Name of Contact       | Relationship to Athlete | Phone Number |

# APPENDIX C



# Missouri State High School Activities Association

1 N. Keene Street, Columbia, MO 65201-6645 ♦ P.O. Box 1328, Columbia, MO 65205-1328  
Phone (573) 875-4880 ♦ Fax (573) 875-1450 ♦ [www.mshsaa.org](http://www.mshsaa.org) ♦ [email@mshsaa.org](mailto:email@mshsaa.org)

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**Dr. Kerwin Urhahn, Executive Director**

**Harvey Richards, Associate Executive Director**    **Stacy Schroeder, Associate Executive Director**

Davine Davis, Assistant Executive Director    Kevin Garner, Assistant Executive Director    Craig Long, Chief Financial Officer  
Don Maurer, Assistant Executive Director    Greg Stahl, Assistant Executive Director    Jason West, Communications Director

**TO:            Athletic Directors and District Athletic Directors**  
**MSHSAA Member High Schools and Junior High Schools**

**FROM:        Harvey Richards, Associate Executive Director**  
**Missouri State High School Activities Association**

**SUBJECT:    Head Injury Survey**

**DATE:        May 16, 2016**

It is once again time for us to collect information on head injuries that occurred in your school district during the 2015-16 school year for the fulfillment of House Bill 300 (Brain Injury Prevention Act). This information is used to produce a report that is made available to all schools, parents, and the public. We are collecting this information now while it is still available with the current administration.

<http://intranet.mshsaa.org/Home/HeadInjurySurvey.aspx>

When you click the link above, you will see the **Head Injury Survey** that needs to be completed by you, the Athletic Director. Please seek input from your school nurse and/or athletic trainer so that we may have the most accurate information possible to include in this report.

This survey must be completed by **June 10, 2016**.

Thanking you in advance,

**Harvey Richards**  
Associate Executive Director  
MSHSAA

HR/dcs

**“The MSHSAA promotes the value of participation, sportsmanship, team play and personal excellence to develop citizens who make positive contributions to their community and support the democratic principles of our state and nation.”**



## MSHSAA - Head Injury Survey

Your incomplete survey responses have been removed and you may continue to complete the survey.

✔ Step 1 (School)   ✔ Step 2 (Questions)   ❌ Step 3 (Sport related injury)   ❌ Step 4 (Non-sport related injury)   ❌ Step 5 (Documentation)   ❌ Step 6 (Submit)

- 1 Does your school district have an emergency action plan in place at all home contest sites?
  - Yes
  - No

---

- 2 Does your school district use the services of an athletic trainer or other medical support throughout the year? (Practices - Contests)
  - No
  - Yes Full time at the school for both practices and contests. (All levels)
  - Yes Part-time, check-up on injuries and covering the contests. (All levels)
  - Yes Part-time covering contests only. (All levels)
  - Yes Part-time covering most of the varsity contests but not all.

---

- 3 Does your school district have an ambulance at all athletic contests?
  - Yes
  - No

---

- 4 If your school plays football, do you have an ambulance at the contests?
  - Yes at the varsity games only.
  - Yes, at all of the contests, Freshman, JV, and Varsity
  - No, we do not have an ambulance at the contests.
  - N/A, we do not play football.

---

- 5 Did your school district use the NFHS video "Concussion in Sports-What you Need to Know," to educate your coaching staff for the 2013-2014 school year?
  - Yes
  - No

✔ Continue to Step 3



## MSHSAA - Head Injury Survey

✔ Step 1 (School)   ✔ Step 2 (Questions)   ✔ Step 3 (Sport related injury)   ❌ Step 4 (Non-sport related injury)   ❌ Step 5 (Documentation)   ❌ Step 6 (Submit)

### Head Injuries Occurring Durring a Sport or Activity

For each sport or activity, please indicate the number of student athletes who were removed from a sport or an activity and could not participate without a medical return to play form while participating in the sport or activity. Also, list the total number of days that were missed by those students in that particular sport or activity and the total number of days of classroom attendance that were missed as well. If there were no head injuries in a particular sport, there is no need to list it with zeros.

This school had no head injuries occur durring a sport or activity that required a Medical Return to Play Form.

Level:  High School    Jr. High

Activity/Sport:

Number of Students with Head Injuries:

Total number of days missed for this sport or activity:

Total number of classroom days missed:

✔ Add Record



## MSHSAA - Head Injury Survey

✔ Step 1 (School) ✔ Step 2 (Questions) ✔ Step 3 (Sport related injury) ✔ Step 4 (Non-sport related injury) 🟡 Step 5 (Documentation) ❌ Step 6 (Submit)

If you have documentation that can be sent to our office without names attached, please use the file upload tool below to attach it to this survey. If electronic files cannot be uploaded, please email documentation to [headinjury@mshsaa.org](mailto:headinjury@mshsaa.org) or fax it to (573) 875-1450.

No file chosen

**Upload**

🟡 **I do not have any documentation, Continue to Step 6**



## MSHSAA - Head Injury Survey

✔ Step 1 (School) ✔ Step 2 (Questions) ✔ Step 3 (Sport related injury) 🟡 Step 4 (Non-sport related injury) ❌ Step 5 (Documentation) ❌ Step 6 (Submit)

### Head Injuries Occurring Outside of a Sport or Activity

Please indicate the number of students that were not allowed to participate in a sport without a Medical Return to Play Form from a head injury that occurred outside of the sport or activity (car accident, incident at home, etc.).

This school had no head injuries occur outside a sport or activity that required a Medical Return to Play Form.

Level:  High School  Jr. High

Activity/Sport:

Number of Students with Head Injuries:

Total number of days missed for this sport or activity:

Total number of classroom days missed:

**Add Record**

# APPENDIX D

**Brain Injury Association of Missouri  
Sports Concussions: Facts, Fallacies and New Frontiers 2017  
Topics and Potential Timeline**

**(Dates are yet to be determined in January/February 2017)**

|                     |  |
|---------------------|--|
| 8:00 am – 8:30 am   | Concussion Facts and Fallacies   |
| 8:30 am – 8:40 am   | Welcome  |
| 8:40 am – 9:00 am   | Research Update  |
| 9:00 am – 9:45 am   | Baseline Testing   |
| 9:45 am – 10:00 am  | Break  |
| 10:00 am – 11:00 am | Sideline Assessment Actions by Non-Medical Team or School Personnel<br>(Keynote Session) |
| 11:00 am – 11:30 am | Lunch (provided with registration)   |
| 11:30 am – 12:00 pm | Return to Learn  |
| 12:00 pm – 12:45 pm | Encouraging Youth to Report Possible Concussion Symptoms                                 |
| 12:45 pm – 1:30 pm  | Developing Concussion Management Protocols   |







