



# Concussions: The Invisible Injury

## Student and Parent Information Sheet

### CONCUSSION DEFINITION

A concussion is a reaction by the brain to a jolt or force that can be transmitted to the head by an impact or blow occurring anywhere on the body. Essentially a concussion results from the brain moving back and forth or twisting rapidly inside the skull.

### FACTS ABOUT CONCUSSIONS ACCORDING TO THE CENTER FOR DISEASE CONTROL (CDC)

- An estimated 4 million people under age 19 sustain a head injury annually. Of these approximately 52,000 die and 275,000 are hospitalized.
- An estimated 300,000 sports and recreation related concussions occur each year.
- Students who have had at least one concussion are at increased risk for another concussion.

In New York State in 2009, approximately 50,500 children under the age of 19 visited the emergency room for a traumatic brain injury and of those approximately 3,000 were hospitalized.

### REQUIREMENTS OF SCHOOL DISTRICTS

#### **Education:**

- Each school coach, physical education teacher, nurse, and athletic trainer will have to complete an approved course on concussion management on a biennial basis, starting with the 2012-2013 school year.
  - \* School coaches and physical education teachers must complete the CDC course.  
([www.cdc.gov/concussion/HeadsUp/online\\_training.html](http://www.cdc.gov/concussion/HeadsUp/online_training.html))
  - \* School nurses and certified athletic trainers must complete the concussion course. (<http://preventingconcussions.org>)

#### **Information:**

- Provide concussion management information and sign off with any parental permission form. **The NYSPHSAA will provide a pamphlet to member schools on the concussion management information for parents.**
- The concussion management and awareness information on the State Education Department's web site must be made available on the school web site, if one exists.

#### **Removal from athletics:**

- Require the immediate removal from athletic activities of any pupil that has or is believed to have sustained a mild traumatic brain injury.
- No pupils will be allowed to resume athletic activity until they have been symptom free for 24 hours and have been evaluated by and received written and signed authorization from a licensed physician. For interscholastic athletics, clearance must come from the school medical director.
  - \* Such authorization must be kept in the pupil's permanent health record.
  - \* Schools shall follow directives issued by the pupil's treating physician.

### SYMPTOMS

**Symptoms of a concussion are the result of a temporary change in the brain's function.** In most cases, the symptoms of a concussion generally resolve over a short period of time; however, in some cases, symptoms will last for weeks or longer. Children and adolescents are more susceptible to concussions and take longer than adults to recover.

It is imperative that any student who is suspected of having a concussion is removed from athletic activity (e.g. recess, PE class, sports) and remains out of such activities until evaluated and cleared to return to activity by a physician.

Symptoms include, but are not limited to:

- Decreased or absent memory of events prior to or immediately after the injury, or difficulty retaining new information
- Confusion or appears dazed
- Headache or head pressure
- Loss of consciousness
- Balance difficulties, dizziness, or clumsy movements
- Double or blurry vision
- Sensitivity to light and/or sound
- Nausea, vomiting and/or loss of appetite
- Irritability, sadness or other changes in personality
- Feeling sluggish, foggy or light-headed
- Concentration or focusing problems
- Drowsiness
- Fatigue and/or sleep issues – sleeping more or less than usual

Students who develop any of the following signs, or if signs and symptoms worsen, should be seen and evaluated immediately at the nearest hospital emergency room.

- Headaches that worsen
- Seizures
- Looks drowsy and/or cannot be awakened
- Repeated vomiting
- Slurred speech
- Unable to recognize people or places
- Weakness or numbing in arms or legs, facial drooping
- Unsteady gait
- Change in pupil size in one eye
- Significant irritability
- Any loss of consciousness
- Suspicion for skull fracture: blood draining from ear or clear fluid from the nose

## STATE EDUCATION DEPARTMENT'S GUIDANCE FOR CONCUSSION MANAGEMENT

Schools are advised to develop a written concussion management policy. A sample policy is available on the NYSPHSAA web site at [www.nysphsaa.org](http://www.nysphsaa.org). The policy should include:

- A commitment to reduce the risk of head injuries.
- A procedure and treatment plan developed by the district medical director.
- A procedure to ensure proper education for school nurses, certified athletic trainers, physical education teachers, and coaches.
- A procedure for a coordinated communication plan among appropriate staff.
- A procedure for periodic review of the concussion management program.

## RETURN TO LEARN and RETURN TO PLAY PROTOCOLS

**Cognitive Rest:** Activities students should avoid include, but are not limited to, the following:

- Computers and video games
- Television viewing
- Texting
- Reading or writing
- Studying or homework
- Taking a test or completing significant projects
- Loud music
- Bright lights

Students may only be able to attend school for short periods of time. Accommodations may have to be made for missed tests and assignments.

**Physical Rest:** Activities students should avoid include, but are not limited to, the following:

- Contact and collision
- High speed, intense exercise and/or sports
- High risk for re-injury or impacts
- Any activity that results in an increased heart rate or increased head pressure

**Return to Play Protocol** once symptom free for 24 hours and cleared by School Medical Director:

**Day 1:** Low impact, non strenuous, light aerobic activity.

**Day 2:** Higher impact, higher exertion, moderate aerobic activity. No resistance training.

**Day 3:** Sport specific non-contact activity. Low resistance weight training with a spotter.

**Day 4:** Sport specific activity, non-contact drills. Higher resistance weight training with a spotter.

**Day 5:** Full contact training drills and intense aerobic activity.

**Day 6:** Return to full activities with clearance from School Medical Director.

Any return of symptoms during the return to play protocol, the student will return to previous day's activities until symptom free.

## CONCUSSION MANAGEMENT TEAM

Schools may, at their discretion, form a concussion management team to implement and monitor the concussion management policy and program. The team could include, but is not limited to, the following:

- Students
- Parents/Guardians
- School Administrators
- Medical Director
- Private Medical Provider
- School Nurse
- Director of Physical Education and/or Athletic Director
- Certified Athletic Trainer
- Physical Education Teacher and/or Coaches
- Classroom Teachers

## OTHER RESOURCES

- New York State Education Department
- New York State Department of Health  
[http://www.health.ny.gov/prevention/injury\\_prevention/concussion/htm](http://www.health.ny.gov/prevention/injury_prevention/concussion/htm)
- New York State Public High School Athletic Association  
[www.nysphsaa.org/safety/](http://www.nysphsaa.org/safety/)
- Center for Disease Control and Prevention  
<http://cdc.gov/concussions>
- National Federation of High Schools  
[www.nfhslearn.com](http://www.nfhslearn.com) – The FREE Concussion Management course does not meet education requirement.
- Child Health Plus  
[http://www.health.ny.gov/health\\_care/managed\\_care/consumer\\_guide/about\\_child\\_health\\_plus.htm](http://www.health.ny.gov/health_care/managed_care/consumer_guide/about_child_health_plus.htm)
- Local Department of Social Services – New York State Department of Health  
[http://www.health.ny.gov/health\\_care/medicaid/ldss/htm](http://www.health.ny.gov/health_care/medicaid/ldss/htm)
- Brain Injury Association of New York State  
<http://www.bianys.org>
- Nationwide Children's Hospital – Concussions in the Classroom  
<http://www.nationwidechildrens.org/concussions-in-the-classroom>
- Upstate University Hospital – Concussions in the Classroom  
<http://www.upstate.edu/pmr/healthcare/programs/concussion/classroom.php>
- ESPN Video – Life Changed by Concussion  
<http://espn.go.com/video/clip?id=7525526&categoryid=5595394>
- SportsConcussions.org  
<http://www.sportsconcussions.org/ibaseline/>
- American Association of Neurological Surgeons  
<http://www.aans.org/Patient%20Information/Conditions%20and%20Treatment/Concussion.aspx>
- Consensus Statement on Concussion in Sport – Zurich  
<http://sportconcussions.com/html/Zurich%20Statement.pdf>



## Conmoción cerebral: La lesión Invisible

### Información para los Padres y Estudiantes

#### DEFINICIÓN DE CONMOCIÓN

Una conmoción es una reacción del cerebro debido a una sacudida o fuerza que puede ser transmitida a la cabeza por un impacto o golpe que ocurre en cualquier parte del cuerpo. Esencialmente una conmoción cerebral es consecuencia de que el cerebro se mueve hacia atrás y adelante o gira rápidamente en el interior del cráneo.

#### DATOS SOBRE LAS CONMOCIONES CEREBRALES SEGÚN EL CENTRO DE CONTROL DE ENFERMEDADES (CDC)

- Se estima que anualmente 4 millones de personas menores de 19 años sufren una lesión en la cabeza. De ellas aproximadamente 52,000 mueren y 275,000 son hospitalizadas.
- Se estima que anualmente ocurren 300,000 conmociones cerebrales relacionadas con los deportes y la recreación. Los estudiantes que han sufrido al menos una conmoción cerebral tienen un mayor riesgo de sufrir otra conmoción cerebral.

En el estado de Nueva York en el 2009, aproximadamente 50,500 niños menores de 19 años visitaron la sala de emergencias por una lesión traumática del cerebro y de éstos aproximadamente 3,000 fueron hospitalizados.

#### REQUERIMIENTOS DE LOS DISTRITOS ESCOLARES

##### Educación:

- Cada entrenador, maestro de educación física, enfermera y entrenador de atletismo tendrán que completar un curso aprobado para el manejo de la conmoción cerebral cada dos años, a partir del año escolar 2012-2013.
  - Los entrenadores y los maestros de educación física deben completar el curso CDC ([www.cdc.gov/concussion/HeadsUp/online\\_training.html](http://www.cdc.gov/concussion/HeadsUp/online_training.html))
  - Las enfermeras escolares y entrenadores certificados de atletismo deben completar el curso de conmoción cerebral (<http://preventingconcussions.org>)

##### Información:

- Proporcionar a los padres o encargados información acerca del manejo de la conmoción cerebral, incluyendo una forma de permiso parental.
- La información sobre el manejo y concientización acerca de la conmoción cerebral o el sitio Web del Departamento de Educación del Estado, deben estar disponibles en el sitio web de la escuela, si es que existe uno.

##### Suspensión de actividades:

- Es necesaria la suspensión inmediata de las actividades deportivas de cualquier estudiante que tiene o se cree que ha sufrido una lesión cerebral traumática leve.
- A ningún estudiante le será permitido reanudar ninguna actividad deportiva hasta que no presente síntomas durante 24 horas y haya sido evaluado y recibido por escrito una autorización firmada por un doctor autorizado. Para los

deportes interescolares, la autorización debe provenir del Director Médico Escolar.

- Dicha autorización debe mantenerse en el expediente médico del estudiante.
- La escuela debe seguir las directrices emitidas por el doctor a cargo del estudiante.

#### SÍNTOMAS

Los síntomas de una conmoción cerebral son el resultado de un cambio temporal en la función del cerebro. En la mayoría de los casos, los síntomas de una conmoción cerebral se resuelven generalmente en un corto periodo de tiempo; sin embargo, en algunos casos los síntomas duran por varias semanas o más. Los niños o adolescentes son los más susceptibles a las conmociones cerebrales y tardan más tiempo que los adultos en recuperarse.

Es urgente que cuando se sospeche que un estudiante ha sufrido una conmoción cerebral, sea suspendido de cualquier actividad física (por ejemplo, el recreo, las clases de educación física, deportes) y que permanezca fuera de estas actividades hasta que sea evaluado y autorizado por su doctor para que reanude sus actividades.

Los síntomas incluyen, pero no se limitan a:

- Disminución o pérdida de la memoria de los acontecimientos antes o inmediatamente después de la lesión o dificultad para retener nueva información.
- Confusión o aturdimiento
- Dolor o presión en la cabeza
- Pérdida de la conciencia
- Dificultades para mantener el equilibrio, mareos o movimientos torpes
- Visión doble o borrosa
- Sensibilidad a la luz y/o al sonido
- Náuseas, vómitos y/o pérdida del apetito
- Irritabilidad, tristeza u otros cambios en la personalidad
- Debilidad, confusión o mareo
- Problemas de concentración o enfoque
- Somnolencia
- Fatiga y/o problemas del sueño – dormir más o menos de lo habitual

Los estudiantes que desarrollen cualquiera de los siguientes signos o si los signos y síntomas empeoran, deben ser vistos y evaluados de inmediato en la sala de emergencia más cercana.

- Dolor de cabeza que empeora
- Convulsiones
- Parecer somnoliento y/o no poder permanecer despierto

- Vómitos repetidos
- Dificultad para hablar
- No reconocer personas o lugares
- Debilidad o adormecimiento en los brazos o las piernas, parálisis facial
- Marcha inestable
- Cambio en el tamaño de la pupila de un ojo
- Irritabilidad significativa
- Cualquier pérdida de conciencia
- Sospecha de fractura de cráneo: sangre que drena de la oreja o un líquido claro saliendo por la nariz

#### GUÍA PARA EL MANEJO DE LA CONMOCIÓN CEREBRAL DEL DEPARTAMENTO DE EDUCACIÓN DEL ESTADO

Se aconseja a las escuelas desarrollar una política por escrito para el manejo de las conmociones. Una política de ejemplo está disponible en el sitio web [www.nyshsas.org](http://www.nyshsas.org). La política debe incluir:

- Un compromiso para reducir el riesgo de lesiones en la cabeza.
- Un procedimiento y plan de tratamiento desarrollado por el Director Médico del Distrito.
- Un procedimiento para asegurar una educación adecuada para las enfermeras escolares, entrenadores atléticos certificados, maestros de educación física y entrenadores.
- Un procedimiento para un plan de comunicación coordinado entre el personal apropiado.
- Un procedimiento para la revisión periódica del programa del manejo de la conmoción cerebral.

#### PROTOCOLOS PARA EL REGRESO A LA ESCUELA Y A LAS ACTIVIDADES FÍSICAS

**Descanso cognitivo:** Las actividades que los estudiantes deben evitar, incluyen pero no se limitan a lo siguiente:

- Computadoras y videojuegos
- Ver televisión
- Enviar mensajes de texto
- Leer o escribir
- Estudiar o hacer tareas
- Tomar un examen o trabajar en proyectos importantes
- Escuchar música con alto volumen
- Luces brillantes

Los estudiantes solo podrán asistir a la escuela por cortos períodos de tiempo. Podría ser necesario hacer arreglos para las tareas y los exámenes pendientes.

**Descanso físico:** Las actividades que los estudiantes deben evitar, incluyen pero no se limitan a los siguientes:

- Contacto y colisión
- Deportes y/o ejercicios de alta velocidad, o intensos
- Alto riesgo de volver a lesionarse o sufrir otro impacto
- Cualquier actividad que pueda resultar en un aumento del ritmo cardíaco o aumento en la presión de la cabeza

**Protocolo para retornar a la actividad física,** una vez el estudiante no presente síntomas durante 24 horas y sea autorizado por el Director Médico Escolar:

- Día 1:** Actividad aeróbica ligera, de bajo impacto, no extenuante.
- Día 2:** Actividad aeróbica moderada, de mayor impacto, con mayor esfuerzo. Sin entrenamiento de resistencia.
- Día 3:** Actividades deportivas específicas sin contacto físico. Entrenamiento con pesas de baja resistencia y con ayuda.
- Día 4:** Actividades deportivas específicas sin contacto físico. Entrenamiento con pesas con mayor resistencia y con ayuda.
- Día 5:** Entrenamientos en deportes de contacto completos y actividad aeróbica intensa.
- Día 6:** Retorno a las actividades físicas completas con la autorización del Director Médico Escolar.

Si se presenta cualquier síntoma durante el protocolo para reanudar la actividad física, el estudiante regresará a las actividades del día anterior hasta que esté libre de síntomas.

#### EQUIPO DE MANEJO DE LAS CONMOCIONES

Las escuelas pueden, a su discreción, formar un equipo de manejo de las conmociones para aplicar y supervisar la política y el programa de manejo de la conmoción cerebral. El equipo podría incluir pero no estar limitado a lo siguiente:

- Estudiantes
- Padres/Encargados
- Administradores de la Escuela
- Director Médico
- Doctor Privado
- Enfermera Escolar
- Director de Educación Física y/o Director de Atletismo
- Entrenador Certificado de Atletismo
- Maestro de Educación Física y/o Entrenadores de Educación Física
- Maestros





## CONCUSSION IN YOUTH SPORTS

### SIGNS AND SYMPTOMS

#### SIGNS OBSERVED BY PARENTS OR GUARDIANS

*If your child has experienced a bump or blow to the head during a game or practice, look for any of the following signs and symptoms of a concussion:*

- Appears dazed or stunned
- Is confused about assignment or position
- Forgets sports plays
- Is unsure of game, score, or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even briefly)
- Shows behavior or personality changes
- Can't recall events prior to hit or fall
- Can't recall events after hit or fall

#### SYMPTOMS REPORTED BY ATHLETE

- Headache or "pressure" in the head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish, hazy, foggy, or groggy
- Concentration or memory problems
- Confusion
- Does not "feel right"

### WHAT SHOULD YOU DO IF YOU THINK YOUR CHILD HAS A CONCUSSION?

1. **Seek medical attention right away.** A health care professional will be able to decide how serious the concussion is and when it is safe for your child to return to sports.
2. **Keep your child out of play.** Concussions take time to heal. Don't let your child return to play until a health care professional says it's OK. Children who return to play too soon—while the brain is still healing—risk a greater chance of having a second concussion. Second or later concussions can be very serious. They can cause permanent brain damage, affecting your child for a lifetime.
3. **Tell your child's coach about any recent concussion.** Coaches should know if your child had a recent concussion. Your child's coach may not know about a concussion your child received in another sport or activity unless you tell the coach.

### IMPORTANT PHONE NUMBERS

FILL IN THE NAME AND NUMBER OF YOUR LOCAL HOSPITAL(S) BELOW:

Hospital Name: \_\_\_\_\_

Hospital Phone: \_\_\_\_\_

Hospital Name: \_\_\_\_\_

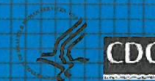
Hospital Phone: \_\_\_\_\_

**For immediate attention, CALL 911**

*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/ConcussionInYouthSports](http://www.cdc.gov/ConcussionInYouthSports)

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



## Return To Play RTP CHECKLIST

Student: \_\_\_\_\_ Grade \_\_\_\_\_

Sport: \_\_\_\_\_

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

Date of RTP (Day 1) \_\_\_\_\_

	DAY 1		DAY 2		DAY 3		DAY 4		DAY 5	
	Light Aerobic Activity* (Circle one)		Sport Specific Activities* (Circle one)		Non contact Training* (Circle one)		Full Contact Practice* (Circle one)		Return to Play (Circle one)	
Headache	Y	N	Y	N	Y	N	Y	N	Y	N
Dizziness	Y	N	Y	N	Y	N	Y	N	Y	N
Light sensitivity	Y	N	Y	N	Y	N	Y	N	Y	N
Nausea/vomiting	Y	N	Y	N	Y	N	Y	N	Y	N
Vision problems	Y	N	Y	N	Y	N	Y	N	Y	N
DISPOSITION	DAY 1	DAY 2	DAY 1	DAY 3	DAY 1	DAY 4	DAY 1	DAY 5	DAY 1	RELEASED

\*See reverse for specifics

EVALUATOR: \_\_\_\_\_

## RETURN TO PLAY PROGRESSION

### DAY 1: Light Aerobic Exercise

The Goal: only to increase an athlete's heart rate.

The Time: 5 to 10 minutes.

The Activities: exercise bike, walking, or light jogging.

Absolutely no weight lifting, jumping or hard running.

### DAY 2: Moderate Exercise

The Goal: limited body and head movement.

The Time: Reduced from typical routine

The Activities: moderate jogging, brief running, moderate-intensity stationary biking, and moderate-intensity weightlifting

### DAY 3: Non-contact Exercise

The Goal: more intense but non-contact

The Time: Close to Typical Routine

The Activities: running, high-intensity stationary biking, the player's regular weightlifting routine, and non-contact sport-specific drills.

This stage may add some cognitive component to practice in addition to the aerobic and movement components introduced in Steps 1 and 2.

### DAY 4: Practice

The Goal: Reintegrate in full contact practice.

### DAY 5: Play

The Goal: Return to competition