

Dear Colleague

Recently, concussion management and return-to-play legislation has been enacted in our region. This important legislation is directly in line with, and responsive to, the most recognized authoritative guidelines on concussion management. The directives of the legislation are also consistent with the emerging accepted standard of care for concussion in youth sports as defined by similar laws already passed, or under consideration, in numerous other states. In order to assist all providers with implementing an appropriate and recognized standard of care for athletes who have incurred a sport-related concussion, we have developed a convenient collection of evaluation and return-to-play guidelines and materials. This new Sanford “Playbook” includes specific guidelines, office-based and sideline evaluation tools, patient home instruction, as well as explanations of the law pertaining to each state that will assist the provider in determining and implementing the best individualized sport concussion management plan, including progressive return to school and play.

What are the key elements of the new concussion-management and return-to-play legislation?

- Informing and educating coaches, youth athletes, and the athletes’ parents or guardians of the nature and risks of concussion, including continuing to play after sustaining a concussion.
- Immediately removing a youth athlete who is suspected of sustaining a concussion in a game, practice or other training activity.
- Allowing a youth athlete who has been removed from any athletic activity for a suspected concussion to return only after the athlete is evaluated by a licensed health care provider trained and experienced in the evaluation and management of concussion.

Please take the time to carefully review all of the enclosed materials, and feel free to make copies for your use as needed. We are anxious to collaborate with you and answer any questions that you might have in the evaluation and care of your sport concussion patients.

Regards,



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Explanation of Legislation

Background

- As many as 40 percent of youth athletes who sustain a concussion return to the field of play sooner than modern guidelines suggest.
- Athletes who are not fully recovered from an initial concussion are significantly more vulnerable to recurrent, cumulative, and potentially catastrophic consequences of a second concussive injury.
- Resting and avoiding physical and cognitive exertion are critical in the acute management of a sport-related concussion. No athlete should return to activity until asymptomatic at rest *and* with exertion.
- Concussions can occur in all athletes of any age and in any sport. Children and teens are more likely to get a concussion and take longer to recover than adults.
- To date, more than half of the states in the U.S. including SD, ND, MN, NE and IA, have enacted concussion legislation since 2009.
- Early anecdotal data suggest that the laws are having an immediate and positive impact, while helping to achieve the critical goal of preventing subsequent risk associated with brain injuries and making sports safer for youth.

The Law

- The primary goal of the law is getting youth athletes off the field of play after sustaining a concussion. It further provides any affected youth athlete proper time to heal from a concussion and significantly minimizes the risk for prolonged concussion symptoms, and the undue risk for further injury, including death.
- A student-athlete must sit out after receiving the concussion (or suspected concussion) and cannot return to athletic activity until s/he:
 1. No longer exhibit signs, symptoms or behaviors consistent with a concussion.
 2. Receives written clearance to return to play from a licensed health care provider trained in the evaluation and management of concussions.
- Other important features of the law include:
 1. The health care provider can be a volunteer.
 2. The law requires coaches to complete a short, concise, online training program, free of charge, to educate them on the nature and risk of concussion associated with athletic activity and how to recognize the signs, symptoms and behaviors consistent with a concussion.
 3. The law is intended to help educate parents and youth athletes about the nature and risk of concussions associated with athletic activity and how to recognize the signs, symptoms, and behaviors consistent with a concussion and how to appropriately respond and seek proper care.
 4. There is no liability attached to the legislation. It does not mandate any civil or criminal penalties, nor does it create greater liability for individuals and/or organizations. The education and awareness efforts, coupled with the requirement of medical clearance before return to play, have decreased the variability of care and overall liability.

Concussions in Youth Sports–Physician Guide

- South Dakota
- North Dakota
- Minnesota
- Nebraska
- Iowa

Resources

- Information regarding clinical services, concussion facts, and available resources can be viewed at sanfordhealth.org, enter keyword: concussion
- The Centers for Disease Control and Prevention (CDC) booklet of Facts for Physicians can be accessed at www.cdc.gov/concussion/HeadsUp/physicians_tool_kit.html
- A free tutorial is available on the CDC website at www.cdc.gov/concussion/HeadsUp/Training/HeadsUpConcussion.html

¹ Center for Injury Research and Policy at Nationwide Children's Hospital, Columbus, Ohio.
² American College of Sports Medicine – Youth Concussion Educational Awareness and Advocacy Packet.
³ 2010 AAP clinical report "Sport-Related Concussion in Children and Adolescents"

South Dakota Concussion Legislation

1. Who Does The Law Apply To?

Every coach, youth athlete, and their parent(s) or guardian(s) who seek to compete in activities sanctioned by the South Dakota High School Activities Association (SDHSAA).

2. Educational and Training Opportunities

Legal Requirements	SDHSAA Sports	Youth Sports
Requires SDHSAA and the SD Department of Education to develop and distribute guidelines and information including protocols and content consistent with current medical knowledge to each member school, coach, athlete, and the athlete's parent(s) or guardian(s) regarding: the nature and risks of concussions; the signs, symptoms, and behaviors consistent with concussions; the need to alert appropriate medical professionals for diagnosis and treatment; and the need to follow proper medical direction and protocols for treatment and return-to-play after an athlete sustains a concussion.	X	
Requires each coach participating in athletic activities, sanctioned by the SDHSAA, to complete a training program each academic year, developed by the SDHSAA and SD Department of Education.	X	
Requires the parent(s) or guardian(s) of a youth athlete to sign a consent form each academic year allowing the youth athlete to participate in an athletic activity. The form must include information about the nature and risks of concussions.	X	

3. Removal Guidelines

An athlete shall be removed from participation in any athletic activity sanctioned by the SDHSAA at the time the athlete (a) exhibits signs, symptoms, or behaviors consistent with a concussion or (b) is suspected of sustaining a concussion.

4. Return-To-Play

Once an athlete has been removed from participation in an athletic activity sanctioned by the SDHSAA, the youth athlete may not return to athletic activities until (a) the athlete no longer exhibits signs, symptoms, or behavior consistent with a concussion and (b) receives an evaluation by a licensed health care provider trained in the evaluation and management of concussions and (c) receives written clearance to return-to-play from such health care provider.

5. Scope of Legal Coverage

Under this provision, "health care provider" means a person who is registered, certified, licensed, or otherwise recognized in law, by the State of South Dakota, to provide medical treatment and is trained and experienced in the evaluation, management, and care of concussions.

For a complete list of SD legislative details, please visit:
<http://www.legis.state.sd.us/sessions/2011/Bills/SB149ENR.pdf>.

North Dakota Concussion Legislation

1. Who Does The Law Apply To?

Each school district and non-public school that sponsors or sanctions any athletic activity in ND and requires a participating student to regularly practice or train, and compete, is subject to the terms of a concussion management program.

2. Educational and Training Opportunities

Legal Requirements	Each School District and Non-public School	Youth Sports
The concussion management program must require that each official, coach, and athletic trainer receive biennial training regarding the nature and risk of concussion.	X	
The required information must be provided by the student's school district or non-public school and must be made available in a printed or verifiable electronic form.	X	
The concussion management program must set forth in clear and readily comprehensible language to signs and symptoms of concussion.	X	
The student and the student's parent shall document that they have viewed information regarding concussions incurred by students participating in athletic activities.	X	

3. Removal Guidelines

An official, coach, or athletic trainer must remove a student from competition, practice, or training if (a) the student shows any signs or symptoms of a concussion; (b) an official, coach, or athletic trainer determines that the student exhibits any signs or symptoms of a concussion; or (c) an official, coach, or athletic trainer is notified that the student has reported or exhibited any signs or symptoms of a concussion by a licensed, registered, or certified health care provider, whose scope of practice includes the diagnosis and treatment of concussion.

4. Return-To-Play

Any student who is removed from play must be examined as soon as practicable by a licensed, registered, or certified health care provider, whose scope of practice includes the diagnosis and treatment of concussion. A student who is removed from play may not be allowed to return to practice, training or competition until the student or the student's parent obtains written authorization from a licensed, registered, or certified health care provider, whose scope of practice includes diagnosis and treatment of concussion and provides that authorization to the student's coach or athletic trainer.

5. Scope of Legal Coverage

"Official" means an umpire, referee, judge, or any other individual formally officiating at an athletic event.

For a complete list of ND legislative details, please visit:
<http://www.legis.nd.gov/assembly/62-2011/documents/11-0620-05000.pdf>

Minnesota Concussion Legislation

1. Who Does The Law Apply To?

Coaches, officials, youth athletes and their parent(s) or guardian(s) involved in a youth athletic activity that are (a) organized by a city, business or nonprofit organization, and for which a fee is charged, or (b) an extracurricular activity sponsored by a public school, including charter schools.

2. Educational and Training Opportunities

Legal Requirements	School Sports	Organized Youth Sports
Make information accessible to all participating coaches, officials, youth athletes and their parent(s) or guardian(s) about the nature and risks of concussions; the signs and symptoms consistent with a concussion; the need to seek urgent medical care upon suspicion of a concussion; and the need for a concussed athlete to follow proper medical direction and treatment before returning to play.	X	X
Require all participating coaches and officials to receive initial online training and online training at least once every three calendar years thereafter, consistent with the Concussion in Youth Sports online training program available on the CDC's website.	X	X
If a parent of a youth athlete must sign a consent form to allow the youth athlete to participate in an athletic activity, the form must include information about the nature and risks of concussions.	X	

3. Removal Guidelines

A coach or official shall remove a youth athlete from participating in any youth athletic activity when the youth athlete (a) exhibits signs, symptoms, or behaviors consistent with a concussion or (b) is suspected of sustaining a concussion.

4. Return-To-Play

When a coach or official removes a youth athlete from participating in a youth athletic activity because of a concussion, the youth athlete may not again participate in the activity until the youth athlete (a) no longer exhibits signs, symptoms, or behaviors consistent with a concussion and (b) is evaluated by a provider trained and experienced in evaluating and managing concussions and (c) the provider gives the youth athlete written permission to again participate in the activity.

5. Scope of Legal Coverage

“Provider” means a health care provider who is registered, licensed, certified, or otherwise statutorily authorized by the state to provide medical treatment; trained and experienced in evaluating and managing pediatric concussions; and practicing within the person’s medical training and scope of practice. “Youth athlete” means a young person, through age 18, who actively participates in an athletic activity, including a sport. “Youth athletic activity” means any sport or other activity related to competition, practice, or training exercises which is intended for youth athletes and at which a coach or official is present in an official capacity as a coach or official. This section is effective September 1, 2011.

For a complete list of MN legislative details, please visit:

<https://www.revisor.mn.gov/data/revisor/law/2011/0/2011-090.pdf>

Iowa Concussion Legislation

1. Who Does The Law Apply To?

Coaches, students, and parent(s) or guardian(s) of students involved in activities organized by the Iowa High School Athletic Association and/or the Iowa Girls High School Athletic Union.

2. Educational and Training Opportunities

Legal Requirements	Each School District and Non-public School	Youth Sports
Annually provide the parent(s) or guardian(s) of each student a concussion and brain injury information sheet as provided by the Iowa High School Athletic Association and the Iowa Girl's High School Athletic Union.	X	
The student and the student's parent(s) or guardian(s) shall sign, and return, the concussion and brain injury information sheet to the student's school prior to the student's participation in any extracurricular interscholastic activity for grades 7 – 12.	X	

3. Removal Guidelines

A student shall be immediately removed if a coach or contest official observes signs, symptoms, or behaviors consistent with a concussion or brain injury in an extracurricular interscholastic activity.

4. Return-To-Play

A student who has been removed from participation shall not recommence such participation until the student has been evaluated by a licensed health care provider, trained in the evaluation and management of concussions and other brain injuries, and the student has received written clearance to return to participation from the health care provider.

5. Scope of Legal Coverage

A "health care provider" means a physician, PA, chiropractor, advanced registered nurse practitioner, nurse, physical therapist, or athletic trainer licensed by a board. An "extracurricular interscholastic activity" means any extracurricular interscholastic activity, contest, or practice, including sports, dance, or cheerleading.

For a complete list of IA legislative details, please visit:

<http://coolice.legis.state.ia.us/Cool-ICE/default.asp?category=billinfo&service=billbook&GA=84&hbill=SF367>.

Nebraska Concussion Legislation

1. Who Does The Law Apply To?

Each approved or accredited public, private, denominational, or parochial schools, as well as any city, village, business, or nonprofit organization that organizes an athletic activity in which the athletes are 19 years of age or younger and are required to pay a fee to participate in the athletic activity or whose cost to participate in the athletic activity is sponsored by a business or nonprofit organization.

2. Educational and Training Opportunities

Legal Requirements	Each approved or accredited public, private, denominational, or parochial school	Youth Sports
Make available training approved by the chief medical officer on how to recognize the symptoms of a concussion or brain injury and how to seek proper medical treatment for a concussion or brain injury to all coaches.	X	X
Require that concussion and brain injury information be provided on an annual basis to students and the student's parent(s) or guardian(s) prior to such students initiating practice or competition.	X	X
Information provided to students and the student's parent(s) or guardian(s) shall include, but need not be limited to: the signs and symptoms of a concussion; the risks posed by sustaining a concussion; and the actions a student should take in response to sustaining a concussion, including the notification of his or her coaches.	X	X
If a student is reasonably suspected, after observation, of having sustained a concussion or brain injury and is removed from an athletic activity, the parent(s) or guardian(s) of the student shall be notified by the school of the date and approximate time of the injury suffered by the student, the signs and symptoms of a concussion or brain injury that were observed, and any actions taken to treat the student.	X	X

3. Removal Guidelines

Students who participate on a school athletic team shall be removed from a practice or game when he or she is reasonably suspected of having sustained a concussion or brain injury in such practice or game after observation by a coach or a licensed health care professional who is professionally affiliated with or contracted by the school.

4. Return-To-Play

Students shall not be permitted to participate in any school supervised team athletic activities involving physical exertion, including, but not limited to practices or games, until the student (a) has been evaluated by a licensed health care professional, (b) has received written and signed clearance to resume participation in athletic activities from the licensed health care professional, and (c) has submitted the written and signed clearance to resume participation in athletic activities to the school accompanied by written permission to resume participation from the student's parent(s) or guardian(s).

5. Scope of Legal Coverage

A "licensed health care professional" means a physician or licensed practitioner under the direct supervision of a physician, a certified athletic trainer, a neuropsychologist, or some other qualified individual who is (a) registered, licensed, certified, or otherwise statutorily recognized by the State of Nebraska to provide health care services and (b) is trained in the evaluation and management of traumatic brain injuries among a pediatric population. The chief medical officer shall be licensed to practice medicine and surgery in the State of Nebraska, shall serve at the pleasure of the Governor, and shall be subject to confirmation by a majority of the members of the Legislature. This act becomes operative on July 1, 2012.

For a complete list of NE legislative details, please visit:
<http://www.legislature.ne.gov/FloorDocs/Current/PDF/Slip/LB260.pdf>.

Sports Concussion Algorithm

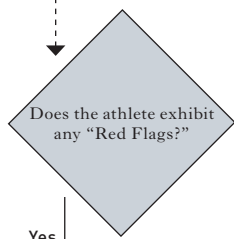
(Health Care Provider Information)

Athlete presents with signs, symptoms or behaviors of a concussion.

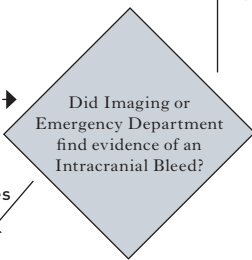
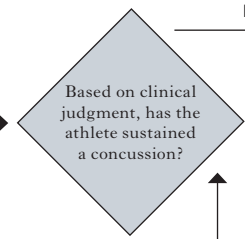
Performance Eval

Evaluation should include assessment for these **RED FLAGS**

- Headache that worsens
- Seizure
- Looks very drowsy or can't be awakened
- Repeated vomiting
- Slurred speech
- Can't recognize people or places
- Increasing confusion or irritability
- Weakness or numbness in arms or legs
- Unusual behavioral change
- Loss of consciousness > 30 seconds



Consideration should be made for EMS, ED or Advanced Imaging.



Neurosurgery Referral

Monitor and/or treat as clinically indicated

1. Recommend modifications in both school and personal activities

- Physical Rest (no running, biking, lifting, etc.)
- Cognitive Rest (no school work, video games, etc.)

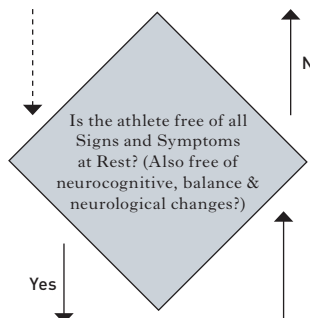
2. Hand out patient information form and continue to monitor signs and symptoms

Follow-up Evaluation

1. Progression back to daily life and school activities as symptoms improve

2. Monitor signs and symptoms as activities increase

Continue to Monitor Failure to resolve after 3-4 weeks should warrant consideration for referral to a Specialty Care Center



Begin Graduated "Return-to-Play" Protocol* (There should be a minimum of 24 hours between stages; however the speed of progression should be based on clinical judgment with consideration of the presence of any of the Concussion Modifiers)

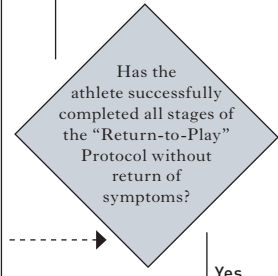
If return of signs or symptoms during the protocol, then re-evaluation is warranted and athlete must wait 24 hours and be free of "Signs and Symptoms at Rest" before returning to Stage 1 of protocol.

Stage 1—Light Aerobic Exercise (Exertion Level: HR range 100-140 / RPE range 3-4)

Stage 2—Sport-Specific Exercise (Exertion Level: HR range 120-160 / RPE range 4-6)

Stage 3—Non-Contact Training Drills (Exertion Level: HR range 140-180 / RPE range 6-8)

Stage 4—Full Contact Practice (Exertion Level: HR range 160-200 / RPE range 8-10)



RETURN TO PLAY

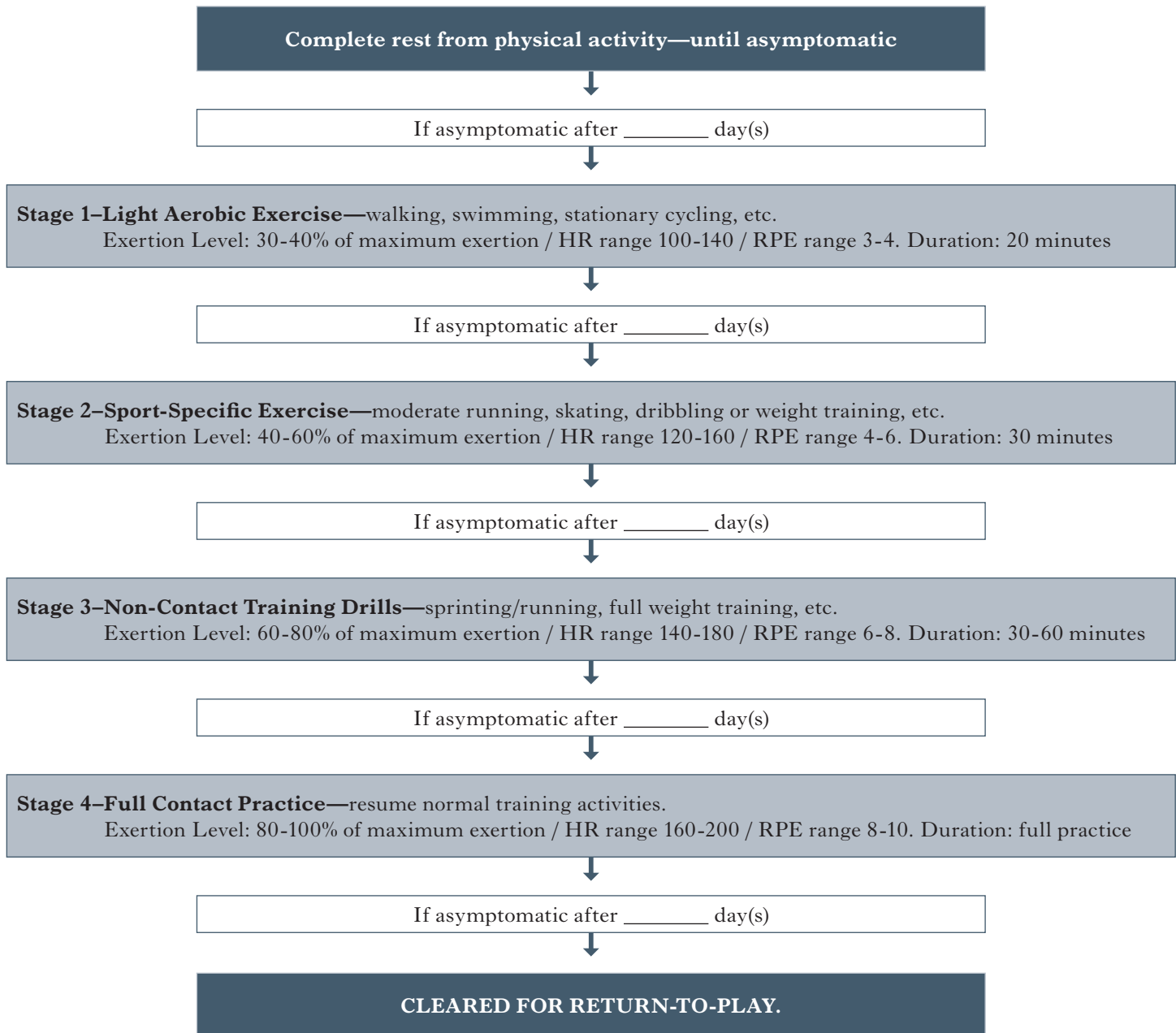
Concussion Modifiers*

- Duration of symptoms
- Number of symptoms
- Severity of symptoms
- Prolonged LOC (>30 seconds)
- Presence of amnesia
- History of convulsive convulsion
- Number of concussions
- Recent concussion
- History of two concussions in a short period of time
- Concussion caused by a lower threshold force
- Age (younger athlete takes longer to recover)
- History of migraine (personal or family)
- History of depression or other mental health disorder
- History of ADD/ADHD
- History of a learning disability
- History of a sleep disorder
- Psychoactive medication
- Dangerous style of play
- High-risk activity

*McCrorry P, et al. *Br J Sports Med* 2009; 43 (suppl 1): 76-90.

Sports Concussion—Graduated “Return-to-Play” Protocol

(Guidelines for exercise progression from your Health Care Provider)



Please note

- Each stage is to take at least 24 hours, but longer in recurrent or severe cases.
- Each stage should be completed without a return of concussive symptoms before proceeding to the next stage.
- If the athlete becomes symptomatic during the course of the protocol, he or she should be reevaluated by a health care provider for clearance before restarting the protocol.
When the athlete restarts the protocol, he or she needs to begin again **at stage 1**.
- RPE is an abbreviation for Rating of Perceived Exertion. It should be measured on a scale from 1 to 10.

Sports Concussion

(Office-based instructions from your Health Care Provider)

You have been diagnosed with a concussion (also known as a mild traumatic brain injury). This personal plan is based on your symptoms and is designed to help speed your recovery. Your careful attention to these instructions can also prevent a worsening condition or further injury.

Rest is the key. It is very important to limit all physical activity. Particularly, you should not participate in any high-risk activities (e.g., sports, physical education (PE), skateboarding, riding a bike, etc.) if you still have any of the signs and symptoms below.

It is also important to limit activities that require a lot of thinking or concentration (e.g., test taking, homework, job-related activities), as this can also make your symptoms worse and your recovery longer. If you no longer have any signs or symptoms and believe that your concentration and thinking are back to normal, you can slowly and carefully return to your daily activities. If you are a child or teenager, get help from your parents, teachers, coaches, and athletic trainers to help monitor your recovery and return to activities.

Common Signs & Symptoms

It is common for a concussed child or young adult to have one or many concussion signs or symptoms. Signs or symptoms present at time of evaluation are circled or checked.

PHYSICAL		THINKING	EMOTIONAL	SLEEP
Headache	Sensitivity to light	Feeling mentally foggy	Irritability	Drowsiness
Nausea	Sensitivity to noise	Problems concentrating	Sadness	Sleeping more than usual
Fatigue	Numbness/Tingling	Problems remembering	Feeling more emotional	Sleeping less than usual
Visual problems	Vomiting	Feeling more slowed down	Nervousness	Trouble falling asleep
Balance problems	Dizziness			Trouble staying asleep

Red Flags

Call your doctor or go to your emergency department if you suddenly experience any of the following:

Headache that worsens	Feel very drowsy or can't be awakened	Can't recognize people or places	Unusual behavior change
Seizure	Repeated vomiting	Increasing confusion	Increasing irritability
Neck pain	Slurred speech	Weakness or numbness in arms or legs	Loss of consciousness

Returning to Daily Activities

- Get lots of rest. Be sure to get enough sleep at night—no late nights. Keep the same bedtime weekdays and weekends.
- Drink lots of fluids and eat carbohydrates and protein to maintain appropriate blood sugar levels and caloric intake.
- During recovery, it is normal to feel frustrated and sad when you do not feel right and you can't be as active as usual.
- Repeated evaluation of your signs and symptoms is recommended to help guide recovery.

Physical Exertion (check all that apply)

- No physical exertion/athletics/gym class
- Begin return-to-play protocol as indicated below
 - ___ Low levels of physical activity (only if symptoms do not come back during or after the activity). This includes walking, light jogging, light stationary biking, and light weight lifting. (lower weight, higher reps, no bench, and no squat)
 - ___ Moderate levels of physical activity with some non-rapid body/head movement. This includes moderate jogging, brief running, moderate-intensity stationary biking, moderate-intensity weightlifting. (reduced time and/or reduced weight from your typical routine)

- ___ Heavy, non-contact physical activity. This includes sprinting/running, high-intensity stationary biking, regular weightlifting routine, non-contact sport-specific drills (in 3 planes of movement)
- ___ Full contact in controlled practice
- ___ Full contact in game play

Brain Exertion (check all that apply)

- No school, homework, or other after school academic activities
- No reading or texting
- No driving
- No computer time or video games
- Limit television time
- Avoid loud noise and bright lights
- Allow listening to low-volume music (i.e., iPod, book on tape, etc.)
- Allow light reading for ___ minutes at a time, for a total of ___ minutes per day
- Allow homework for ___ minutes at a time, for a total of ___ minutes per day
- Allow computer work for ___ minutes at a time, for a total of ___ minutes per day
- Allow texting for ___ minutes at a time, for a total of ___ minutes per day

Accommodations for Students

(Instructions from the Health Care Provider)

Patient Name: _____

Date of Evaluation: _____

Restrictions should be applied from ___ / ___ / ___ until ___ / ___ / ___

This patient had been diagnosed with a concussion and is currently under our care. It is recommended that the below accommodations be implemented to avoid increasing concussion symptoms and delaying recovery.

Physical Exertion (check all that apply)

- No physical exertion/athletics/gym class
- Begin return to play protocol as indicated below
 - _____ Low levels of physical activity (only if symptoms do not come back during or after the activity). This includes walking, light jogging, light stationary biking, and light weight lifting (lower weight, higher reps, no bench, and no squat)
 - _____ Moderate levels of physical activity with some non-rapid body/head movement. This includes moderate jogging, brief running, moderate-intensity stationary biking, moderate-intensity weight lifting (reduced time and/or reduced weight from your typical routine)
 - _____ Heavy, non-contact physical activity. This includes sprinting/running, high-intensity stationary biking, regular weight lifting routine, non-contact sport-specific drills (in 3 planes of movement)
 - _____ Full contact in controlled practice
 - _____ Full contact in game play

Brain Exertion (check all that apply)

- No school, homework, or other after-school academic activities
- No reading or texting
- No computer time or video games
- Limit television time
- Avoid loud noise and bright lights
- Allow listening to low-volume music (i.e. iPod, book on tape)
- Allow light reading for _____ minutes at a time, for a total of _____ minutes per day
- Allow homework for _____ minutes at a time, for a total of _____ minutes per day
- Allow computer work for _____ minutes at a time, for a total of _____ minutes per day
- Allow texting for _____ minutes at a time, for a total of _____ minutes per day

Academic Accommodations (check all that apply)

Attendance

- No school for _____ day(s)
- Part time attendance for _____ day(s), as tolerated
- Full school days, only as tolerated
- Tutoring homebound/in school, as tolerated
- No school until symptom free or significant decrease in symptoms
- Initiate homebound education

Academic Accommodations (continued)

Visual Stimulus

- Allow student to wear sunglasses in school (including in class)
- Permit pre-printed notes for class material or note taker
- Limit smart boards, projectors, computers, TV screens or other bright screens
- Enlarge font when possible
- Allow student to sit near the front of the classroom

Workload/Multi-tasking

- Reduce overall amount of make-up work, class work and homework when possible
- No homework
- Limit homework to _____ minutes a night
- Prorate workload when possible
- Limit backpack weight
- Limit stair use

Breaks

- Allow student to go to the nurse's office, if symptoms increase
- Allow student to go home, if symptoms do not subside

Audible Stimulus

- Allow student to leave class 5 minutes early to avoid noisy hallways
- Provide opportunity to have lunch in a quiet place
- Use audible learning (discussions, reading out loud, or if possible, text-to-speech programs or Kindle)

Testing

- No testing
- Extra time to complete tests
- No more than one test a day
- Oral testing only
- Open book testing
- Testing in a quiet environment

Work Restrictions

- No work at this time
- Limit work to _____ hours per day

Additional Instructions:

Provider Signature: _____

Sports Concussion

(Sideline instructions from your Health Care Provider)

Athlete Name: _____ DOB: _____ Date: _____ Date of Injury: _____

When To Seek Care Urgently			
Seek care quickly if symptoms worsen or if there are any behavioral changes. Also watch for any of the following serious signs/symptoms, which may not appear immediately following the trauma, but can develop hours after the injury itself.			
Headache that worsens	Looks very drowsy or can't be awakened	Can't recognize people or places	Unusual behavior change
Seizure	Repeated vomiting	Increasing confusion	Increasing irritability
Neck pain	Slurred speech	Weakness or numbness in arms or legs	Loss of consciousness

Common Signs & Symptoms				
It is common for a concussed child or young adult to have one or many concussion signs or symptoms. Signs or symptoms present at time of evaluation are circled or checked.				
PHYSICAL		THINKING	EMOTIONAL	SLEEP
Headache	Sensitivity to light	Feeling mentally foggy	Irritability	Drowsiness
Nausea	Sensitivity to noise	Problems concentrating	Sadness	Sleeping more than usual
Fatigue	Numbness/Tingling	Problems remembering	Feeling more emotional	Sleeping less than usual
Visual problems	Vomiting	Feeling more slowed down	Nervousness	Trouble falling asleep
Balance problems	Dizziness			Trouble staying asleep

It is okay to:	There is no need to :	Do not:
Use acetaminophen (Tylenol) for headaches	Check eyes with flashlight	Drink alcohol
Use ice pack on head and neck as needed for comfort	Test reflexes	Take sleeping pills or sleeping aids
Eat a light diet	Stay in bed	Take products that contain ibuprofen (Advil, Motrin)
Go to sleep	Wake up every hour	Take products that contain aspirin or naproxen (Aleve)
Rest		Drive until medically cleared

Returning to Daily Activities

- Limit activities that require thinking or concentration (e.g., homework, job-related activity) as much as possible. These activities can make symptoms worse.
 1. Limit screen time (television and computer) as much as possible. Especially in the early stages of healing, a good rule of thumb is no screen time.
 2. Avoid reading, video games and text messaging as much as possible.
 3. Limit extra-curricular activities.
 4. Avoid loud noise and bright lights.
 5. As symptoms decrease, encourage frequent study breaks to avoid provoking symptoms (for example, studying for 15 minutes, then resting for 10-15 minutes, etc.)
- No physical activities until cleared by a medical professional. Physical activity includes PE, sports practices, weight training, running, exercising, heavy lifting, etc.
- Get lots of rest. Be sure to get enough sleep at night - no late nights. Keep the same bedtime weekdays and weekends.
- Take rest breaks when you feel tired or fatigued.
- Drink lots of fluids and eat carbohydrates and protein to maintain appropriate blood sugar levels and caloric intake.
- Under provider supervision, and as symptoms decrease, you may gradually return to your daily life activities. If symptoms worsen or return, lessen your activities, and follow-up with your health care provider.

- During recovery, it is normal to feel frustrated and sad when you do not feel right and you can't be as active as usual.
- Repeated evaluation of your signs and symptoms is recommended to help guide recovery.

Comments: _____

Do not return to sports/vigorous physical activity until all your symptoms have completely cleared and you have been cleared by a medical professional.

Recommendations provided to: _____

Relationship: _____

Date: _____

Health Care Provider Name & Contact Information: _____

Please feel free to contact me if you have any questions. I may be reached at: _____

Office-Based Concussion Evaluation

(For use in clinic setting)

Name: _____ Referral Source: _____ N/A
 DOB: _____ Age: _____ Level of Education: _____ School: _____
 Date of Evaluation (Today's Date): _____ Date of Injury: _____ Time Since Injury: _____
 Person Reporting: ___ Patient ___ Parent ___ Spouse ___ ATC _____ Other _____

Cause: ___ MVA ___ Ped-MVA ___ Fall ___ Assault ___ Sport (specify) _____
 ___ Practice ___ Game Position: _____ Mouthguard: Y / N Type: bite & boil custom
Mechanism of Injury: ___ Head to Head ___ Head to Ground ___ Head to Body Part _____ Other _____
Location of Contact: ___ Frontal ___ R / L Temporal ___ R / L Parietal ___ Occipital ___ Neck Other _____
Injury Description: _____

Loss of Consciousness: Y / N Duration: _____
Amnesia (Retrograde): Loss of memory of events **before** the injury? Y / N Duration: _____
Amnesia (Anterograde): Loss of memory of events **after** the injury? Y / N Duration: _____
Early Signs: ___ Dazed or stunned ___ Confused or disoriented ___ Answered questions slowly ___ Repeated questions ___ Forgetful
Seizures: Were seizures observed? Y / N **Same Day Return-to-Play** Y / N Describe: _____
 Overall, how severe would you rate your problems with this injury? 0 1 2 3 4 5 6
Previous Provider: _____ Date: _____ CT or MR Imaging ___ Yes ___ No Results: _____

Symptom Check List: Initial (day of injury) and Current (at the time of evaluation) – Rate severity on scale from 0-6

Physical (10)	Initial	Current	Cognitive(4)	Initial	Current	Sleep (4)	Initial	Current	NA
Headache			Feeling mentally foggy			Drowsiness			
Nausea			Feeling slowed down			Sleeping less than usual			
Vomiting			Difficulty concentrating			Sleeping more than usual			
Balance problems			Difficulty remembering			Trouble falling asleep			
Dizziness			COG Total Score			SLEEP Total Score			
Visual problems			COG Total Symptoms			SLEEP Total Symptoms			
Fatigue			Emotional (4)	Initial	Current	Headache			
Sensitivity to light			Irritability			Type: Throbbing/Pressure/Dull			
Sensitivity to noise			Sadness			Location: R or L Top/Frontal/Parietal/ Occipital/Generalized			
Numbness/Tingling			More emotional			Neck Pain? Y / N			
			Nervousness			Worse in AM / PM			
PHYS Total Score			EMO Total Score			Headache worse with cognitive exertion? Y / N			
PHYS Total Symptoms			EMO Total Symptoms			Describe:			
TOTAL SCORE			TOTAL SYMPTOMS			Headache worse with physical exertion? Y / N			
Do these symptoms get worse with physical activity? Y / N / NA						Describe:			
Do these symptoms get worse with cognitive activity? Y / N / NA									

Risk Factors for Protracted Recovery (Check all that Apply)

Concussion history Y / N	Development history	Psychiatric history	Headache history
Previous # 1 2 3 4 5 6+	Learning disabilities	Anxiety/Depression	Prior tx for HA
Longest symptom duration Days_____ Weeks_____ Months_____ Years_____	Attention-Deficit/ Hyperactivity Disorder	Sleep Disorder	History of migranes
If multiple concussions, did less force cause reinjury? Y / N	Other developmental disorder:	Other psychiatric disorder:	Family history of migraines or headache

Medications: _____

Other medical history: _____

Immediate Memory (Circle 'C' if correct, 'I' if incorrect)
I am going to read to you a list of words and, when I am done, repeat as many words as you can remember in any order. (Repeat process for trial 2 and 3).

List	Trial 1	Trial 2	Trial 3	Alternative Word Lists
Elbow	C I	C I	C I	Candle Baby Finger
Apple	C I	C I	C I	Paper Monkey Penny
Carpet	C I	C I	C I	Sugar Perfume Blanket
Saddle	C I	C I	C I	Sandwich Sunset Lemon
Bubble	C I	C I	C I	Wagon Iron Insect

Concentration (Circle 'C' if correct, 'I' if incorrect)
I am going to read to you a string of numbers and, when I am done, you repeat them back to me backwards, in reverse order of how I read them to you. For example, if I say 719 you would say 917.

List	Trial	Alternative Number Lists
4-9-3	C I	6-2-9 5-2-6 4-1-5
3-8-1-4	C I	3-2-7-9 1-7-9-5 4-9-6-8
6-2-9-7-1	C I	1-5-2-8-6 3-8-5-2-7 6-1-8-4-3
7-1-8-4-6-2	C I	5-3-9-1-4-8 8-3-1-9-6-4 7-2-4-8-5-6

	Normal	Abnormal
General appearance		
Describe:		

Pupil / Eye Exam

Pupil appearance	Eyes	Normal	Abnormal
Dilated	Reaction		
Constricted	Horizontal motion		
Nystagmus	Unequal		

Motor and Balance	Normal	Abnormal
Fine movement of hands		
Finger-to-nose task		
Gait		
Tandem walk		
Rhomberg test		
Advanced balance testing*		
*Have athlete stand heel-to-toe with eyes closed, and hands on hips, for 20 seconds while trying to maintain stability (Non-dominant foot in back)		

Delayed Recall (Circle 'C' if correct, 'I' if incorrect)
Do you remember that list of five words I read earlier?
Tell me as many words from the list as you can remember, in any order

List	Trial	Alternative Word Lists
Elbow	C I	Candle Baby Finger
Apple	C I	Paper Monkey Penny
Carpet	C I	Sugar Perfume Blanket
Saddle	C I	Sandwich Sunset Lemon
Bubble	C I	Wagon Iron Insect

Follow-up Plan

- No follow-up needed, unless signs or symptoms return
- Follow-up in clinic: Time until next follow-up _____
- Referral to Sports Concussion Clinic
- Other Referral
 - Neuropsychology
 - Neurology
 - Physical Therapy
 - Other: _____
 - Neurosurgery
 - Physiatry
 - Speech Therapy
- CT / MRI
- Emergency Department

Report Completed by _____

Sanford Sports Concussion Program Pocket Card: Heath Care Provider

Concussion Symptom Inventory

Have the athlete rate each symptom from 0-6

	none	mild		moderate		severity	
Severity	0	1	2	3	4	5	6
Headache							
Nausea							
Balance problems/ dizziness							
Fatigue							
Drowsiness							
Feeling like "in a fog"							
Difficulty concentrating							
Difficulty remembering							
Sensitivity to light							
Sensitivity to noise							
Blurred vision							
Feeling slowed down							
Other symptoms evident since injury?							

Modified Maddocks Questions

Ask the athlete the following:

- Where are we playing today?
- Which half/period is it now?
- Who scored last in this game/match?
- What team did we play last week/game?
- Did we win the last game/match?

Retrograde Memory

Ask the athlete the following:

- What were you doing just prior to getting hit/injured?
- Do you remember what happened or how you got hit/injured?
- Do you recall how you got from the field/court to the sideline?

Immediate Memory

Ask the athlete to repeat 5 words:

- Elbow – Apple – Carpet – Saddle – Bubble
or
- Candle – Paper – Sugar – Sandwich – Wagon

Concentration

Ask the athlete to repeat these numbers backwards:

- 4-9-3 (394 is correct), 3-8-1-4 (4183), 6-2-9-7-1 (17926)

Balance

Have athlete stand heel-to-toe with eyes closed, and hands on hips, for 20 seconds while trying to maintain stability (Non-dominant foot in back).

Delayed Recall

Ask the athlete to repeat the 5 words:

- Elbow – Apple – Carpet – Saddle – Bubble
or
- Candle – Paper – Sugar – Sandwich – Wagon

RED FLAGS – If any of the following signs and/or symptoms are present, immediately activate Emergency Medical Service EMS (Dial 911), so the athlete can be promptly taken to the nearest Emergency Department.

- Headache that worsens
- Seizure
- Looks very drowsy or can't be awakened
- Repeated vomiting
- Slurred speech
- Can't recognize people or places
- Increasing confusion or irritability
- Weakness or numbness in arms or legs
- Unusual behavior change
- Any loss of consciousness greater than 30 seconds

Any athlete with a suspected concussion should not be allowed to return to play on the same day!

Sanford Sports Concussion Program Pocket Card: Coaches

Signs and Symptoms

Athletes who experience one or more of the signs and symptoms listed below after a bump, blow or jolt to the head or body may have a concussion.

Signs observed by coaching staff	Symptoms reported by athlete
Athlete appears dazed or stunned	Headache or “pressure” in head
Is confused about assignment or position	Nausea or vomiting
Forgets an instruction	Balance problems or dizziness
Is unsure of game, score or opponent	Double or blurry vision
Moves clumsily	Sensitivity to light
Answers questions slowly	Sensitivity to noise
Loses consciousness (even briefly)	Feeling sluggish, hazy, foggy or groggy
Shows mood, behavior or personality changes	Concentration and/or memory problems
Can’t recall events prior to hit or fall	Confusion
Can’t recall events after hit or fall	Does not “feel right”

Action Plan

If you suspect that an athlete has a concussion, you should take the following four steps:

1. Remove the athlete from play, practice or training.
2. Ensure that the athlete is evaluated by a health care professional experienced in evaluating for, and managing, concussion. Do not try to judge the seriousness of the injury or readiness to return to play yourself.
3. Inform the athlete's parent(s) or guardian(s) about the possible concussion.
4. Keep the athlete out of play the day of the injury and until they are symptom-free and cleared to return to play by a health care professional who is experienced in the evaluation and management of concussions.

RED FLAGS – If any of the following signs and/or symptoms are present, immediately activate Emergency Medical Service EMS (Dial 911), so the athlete can be promptly taken to the nearest Emergency Department.

- Headache that worsens
- Seizure
- Looks very drowsy or can't be awakened
- Repeated vomiting
- Slurred speech
- Can't recognize people or places
- Increasing confusion or irritability
- Weakness or numbness in arms or legs
- Unusual behavior change
- Any loss of consciousness greater than 30 seconds

Any athlete with a suspected concussion should not be allowed to return to play on the same day!