General Information:

A student’s best chance of full recovery from a concussion involves two critical components: cognitive and physical rest. Continued research has shown cognitive rest to be essential in the quick resolution of concussion symptoms. Cognitive stimulation includes: driving, playing video games, computer use, text messaging, cell phone use, loud and/or bright environments, watching television, reading, and studying. These stimuli must be limited, and in most cases, completely avoided for a period of time during recovery. Physical activity such as physical education, athletics, and strength or cardiovascular conditioning must be completely avoided or regulated while recovering from a concussion.

It is recommended that this protocol is shared with the student’s primary care physician (licensed to practice medicine in all its branches, i.e. pediatrician) during the initial visit.

Stages of Concussion Recovery and Academic/Athletic Participation:
1. Complete Rest
2. Return to School
3. Full Day of School Attendance
4. Full Academic and Athletic Participation

Points of Emphasis:

- It is important to note that the recovery from a concussion is a very individualized process. Caution must be taken not to compare students with concussions as they progress through the recovery process.
- For the concussion care protocol to be initiated the student must be initially evaluated by a primary care physician (licensed to practice medicine in all of its branches) and documentation must be provided to the school nurse or athletic trainer. An emergency room/acute care note is only temporary until seen by the student’s primary care physician within one week.
- The student’s missed academic work will be reviewed and granted extra time to complete, in conjunction with the physician recommendations, LST, and school nurse guidance.
- As the student’s recovery progresses through Stages 1-3, teachers should identify essential academic work in each subject and collaborate with department supervisors, as needed, to determine potential reduction in course workload. This will promote healing, and help reduce the student’s anxiety level related to the perceived volume of work that will be required once the student is medically cleared to resume a full academic load.
- The teacher has the option of assigning the student a grade of incomplete for the progress mark, final exam, and/or semester grade.
- For the student athlete: It is important upon return to school the student report to the athletic trainer and school nurse daily to monitor symptoms and determine progression to the next stage within the concussion care protocol.
- For the non-athlete student: report only to the school nurse daily.
Four Stage Progression to Full Return to Academic and Athletic Activity

**Stage 1: Complete Rest** *(Usually lasts 2-4 days, could last more than 1 week per individual case)*

- **Characteristics**
  - Severe symptoms at rest
  - Symptoms may include but are not limited to:
    - Headache or pressure in head, dizziness, nausea, photosensitivity, auditory sensitivity, inability to focus/concentrate, memory/lack of recall, feeling mentally foggy, unusual changes in mood, fatigue
    - Students may complain of intense and continuous/frequent headaches
    - Students may not be able to read for more than 10 minutes without an increase in symptoms
- **Initial evaluation by primary care physician (not ER)**
- **No PE or athletic participation (includes practices and attending events)**
- **Interventions:**
  - No school attendance for at least one full day - emphasize cognitive and physical rest
  - Sports: does not attend practice/games
  - No tests, quizzes or homework (LST may begin to collect homework/assignments)
  - Parent and student receive copy of LHS Concussion Care Protocol
  - School nurse will notify student’s teachers and appropriate staff

*Progress to stage 2 when:*

- Decreased sensitivity to light or noise
- Decreased intensity and frequency of headaches and dizziness
- Ability to do light reading for 10 minutes without increased symptoms
- Decreased feeling of fogginess or confusion

*If the student remains in Stage 1 longer than 2 weeks, the LST will present the student’s case to Special Services for review and possible need for further assistance. The school nurse will consult with the primary care physician.*

**Stage 2: Return to School** *(Options for altered daily class schedule)*

- **Characteristics**
  - Mild symptoms at rest, but increasing with physical and mental activity
- **Modified class schedule**
  - Limited attendance for 1-2 weeks. Example: alternate afternoon classes and morning classes, repeat as symptoms warrant
- **No PE or athletic participation (may attend practices or PE class but no participation)**
For the student athlete: report daily to the athletic trainer and school nurse.

For the non-student athlete: report daily to the school nurse for the assessment checklist.

Interventions:
- Avoid choir, band, PE areas, cafeteria
- Rest in nurse’s office to offer breaks between academic classes
- Reduce weight of backpack or provide second set of textbooks (teachers)
- Obtain a “five minute pass” from the school nurse to avoid noisy, crowded hallways between class periods
- Limit computer work, videos/movies in class
- Reduce weight of backpack or provide second set of textbooks (teachers)
- Divide up work into smaller portions (15-20 mins at a time)
- Wear sunglasses when viewing Smart Boards, PowerPoint presentations as needed
- No tests, quizzes or homework
- Math and science computations may be more difficult during recovery
- Provide student with copies of class notes (teacher or student generated)
- Audio books are helpful for students struggling with visual processing

*Progress to stage 3 when:
- School activity does not increase symptoms
- Overall symptoms continue to decrease

Stage 3: Full Day of School Attendance

Characteristics
- Symptom free at rest
- Mild to moderate symptoms with cognitive and school day activity

- No PE or athletic participation (may attend practices/events or PE class, but no participation)
- For the student athlete: report daily to athletic trainer and school nurse.
- For the non-athlete student: report daily to the school nurse for assessment checklist.
- Interventions:
  - Continue with interventions listed in Stage 2 as needed
  - Progress to limited homework, tests, quizzes (may split tests into halves, limit to 1 test per day)

- If unable to progress to Stage 4 after 3 weeks, and it is unlikely the student will be able to make up required work, the LST, Special Services, and parents will consider possible course level changes, or class withdrawal.
- Consider a 504 Plan after 8-10 weeks of residual symptoms with educational impact

*Progress to stage 4 when:
- Symptom free with cognitive and physical activity
  - Student should report any return of symptoms with cognitive or school day activity
- Written clearance by primary care physician (primary physician or neurologist) for return to physical and full academic activities.
**Stage 4: Full Academic and Athletic Participation**

- **Characteristics:**
  - Asymptomatic with academic/cognitive and physical activities
- **For the student-athlete:** report daily to the athletic trainer and school nurse. Student will begin the Illinois High School Association’s (IHSA) required Return to Play Protocol with the athletic trainer.
- **For the non-athlete student:** report daily to the school nurse for assessment checklist.
- **Interventions:**
  - Resumption of full academic responsibilities once symptoms have resolved completely as determined by primary care physician. School nurse will notify teachers.
  - Create plan for possible modification and gradual completion of required make-up work (school counselor, teacher, department supervisor)
  - Consider tutoring services if student has more than 3 weeks of required academic work to make up (see addendum: Tutoring Services Requirements)
  - Teachers have the discretion to identify essential academic work for their course.
  - Students are not required to makeup missed PE classes due to a concussion.
  - **For the non-athlete student:** written clearance to full participation from primary care physician will be required for return to PE participation. Upon receipt of clearance, school nurse will consult with PE teacher regarding appropriate return to full participation within current activity *(no formal gradual return to physical activity)*.
  - **For the student athlete:** required to follow the IHSA Return to Play Protocol under the direction of the athletic trainer.
- **IHSA Return to Play Protocol (required)**
  - Written clearance from the primary care physician is required to begin physical activity
  - The IHSA Return to Play Protocol includes 5 phases of activity with increasing intensity. Each phase will take place 24 hours following the previous step. If symptoms return during any phase, a 24 hour period of rest is required before repeating that phase.
  - **For the student athlete:** This protocol will be performed under the supervision of the athletic trainer.
    - Stage 1: Light aerobic activity
    - Stage 2: Increased aerobic activity
    - Stage 3: Non-contact activity related to specific sport/skill
    - Stage 4: Full contact activity
    - Stage 5: Return to competition

**Follow Up**

- The athletic trainer and/or school nurse will conduct a follow-up assessment with the student one week after he/she returns to full academic and athletic activity.
- The student is encouraged to meet with school counselor regularly to discuss progress, grades, and status of make-up work.
- The student is encouraged to meet with the athletic trainer or school nurse to assess any recurring symptoms.
For additional questions please contact the student’s school counselor, the school nurse, or the athletic trainer.
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Resources:
- Centers for Disease Control
- Illinois High School Association
- Head Smart: A Healthy Transition after Concussion – South Shore Hospital, Weymouth, MA
- Consensus statement on concussion in sport – The 3rd International Conference on concussion in sport - Zurich, November 2008
- Glenbrook South High School Concussion Care Guidelines – 2012, Glenview, IL

LHS Concussion Task Force:
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- Briant Kelly, Athletic Director
- Patti Mascia, Department Chair - Physical Education
- Margaret Norton, School Psychologist
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