Teacher Training
Ohio Return to Learn
Concussion Team Model

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Ohio Department of Health
Objectives of the Training

TO PROVIDE...

1. Information on how concussions can affect students’ learning, health, and social–emotional functioning
2. Information about “return to learn” and why it is so important to student recovery
3. Strategies for helping students recover from concussion, including classroom tips
A concussion is caused by a direct blow or jolt to the head, face, or neck, or a blow to the body that causes the head and brain to shift rapidly back and forth. It results in a short-term impairment of neurological function and a constellation of symptoms.

Accurate prevalence estimates are difficult because many do not seek medical attention.

Concussions are not visible on standard CT scans or MRIs.

Nearly 33% of concussions in athletes still go unreported (Meehan, Mannix, O’Brien, & Collins, 2013).

Concussions are not only experienced by athletes. Youth ages 5-18 are at increased risk of experiencing a TBI and prolonged recovery (Gilchrist, Thomas, Xu, McGuire, & Corondo).
When one sustains a concussion, neurochemical changes take place in the brain.

Potassium flows out of the brain cells. Calcium flows into the brain cells.

This results in inefficiency of brain cells to properly deliver much-needed nutrients (especially glucose) to the brain.

These molecular changes hinder a person’s ability to engage in many physical or mental activities.

(Giza & Hovda, 2001)
Effects of a Concussion: Signs

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

## Effects of a Concussion: Symptoms

<table>
<thead>
<tr>
<th>Cognitive (thinking)</th>
<th>Physical</th>
<th>Emotional/Mood</th>
<th>Sleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling slowed down</td>
<td>Headache</td>
<td>Irritability</td>
<td>Sleeping more than usual</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>Fuzzy or blurry vision</td>
<td>Sadness</td>
<td>Sleeping less than usual</td>
</tr>
<tr>
<td>Difficulty remembering new information</td>
<td>Nausea or vomiting (early on)</td>
<td>More emotional</td>
<td>Trouble falling asleep</td>
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<tr>
<td></td>
<td>Sensitivity to noise or light</td>
<td>Nervousness or anxiety</td>
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<td></td>
<td>Balance problems</td>
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<tr>
<td></td>
<td>Feeling tired/having no energy</td>
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Centers for Disease Control and Prevention. “Concussion.”
Effects of a Concussion

Symptoms flare when the brain is asked to do more than it can tolerate (trying to “tough it out” can make symptoms worse)

“Treatment” is physical and cognitive rest

Most students should receive academic adjustments as they slowly recover and return to school — which will be discussed in the next section
School-based Concussion Team

A concussion team ensures every student who sustains a concussion is monitored for return to activity.

When a health issue affects a student’s learning, school teams must communicate effectively with one another, with medical personnel, and with the family.

Listen, validate parents’ feelings, avoid defensiveness, recognize fear and frustration, focus on solutions, work together toward common goals.
Teacher Role & Responsibilities

**TEAM MEMBER**
Teacher

**RESPONSIBILITIES**
- Help the student get the best education possible given the circumstances
- Follow recommended academic adjustments
- Monitor student progress
- Monitor student symptoms
Because every concussion and every student is different, symptom clusters and recovery rates will vary.

Students receiving academic adjustments do so because symptoms are present. Students who are symptomatic should not be resuming physical activity.
Initially, it is important to rest the brain & get good sleep

Limit physical, emotional, or cognitive activities to a level that is tolerable and does not exacerbate or cause re-emergence of symptoms

Exertion (and rest) falls along a continuum

- No activity/full rest
- Full activity/no rest
# Return to Academics Progression
*(SEE HANDOUT FOR DESCRIPTIONS)*

<table>
<thead>
<tr>
<th>Steps</th>
<th>Progression</th>
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<tbody>
<tr>
<td>1</td>
<td><strong>No School—Cognitive and Physical Rest</strong>&lt;br&gt;Family should receive guidance from health care professional regarding student’s readiness to return to school (based on number, type, and severity of symptoms)</td>
</tr>
<tr>
<td>2</td>
<td><strong>Partial Day Attendance with Accommodations</strong>&lt;br&gt;Maximum accommodations&lt;br&gt;Shortened day/schedule; breaks</td>
</tr>
<tr>
<td>3</td>
<td><strong>School—Full day with accommodations</strong></td>
</tr>
<tr>
<td>4</td>
<td><strong>School—Full day without accommodations</strong>&lt;br&gt;No physical activity until released by a healthcare professional</td>
</tr>
<tr>
<td>5</td>
<td><strong>School—Full day with extracurricular involvement</strong></td>
</tr>
</tbody>
</table>
Allow participation to an extent that does not worsen symptoms

- Increase cognitive demand
  - Symptoms increase or worsen
    - Discontinue activity, complete cognitive rest for 20 minutes
      - Symptoms improve with 20 minutes of rest
        - Re-start activity at or below the same level that produced symptoms.
      - Symptoms do not improve with 20 minutes of rest
        - Discontinue activity and resume when symptoms have lessened (such as next day)
  - No change in symptoms
    - Continue gradually increasing cognitive demands

Decision-Making Chart
Front-load academic adjustments
Note: Students may be reluctant to accept adjustments and instead push through symptoms to complete work because of the anxiety associated with work piling up (Halstead et al., 2013; Sady, Vaughan, & Gioia, 2011)

Map adjustments onto symptoms
see following slides for details...
General
Cognitive/Thinking
Fatigue/Physical
Emotional

Determine how to modify work load
(Heintz, 2012)

Excused assignments
-not to be made up-
Accountable assignments
-responsible for content, not process-
Responsible assignments
-must be completed by student and will be graded-
Academic Adjustments: General

- Adjust class schedule (alternate days, shortened day, abbreviated class, late start day).
- No PE classes until cleared by a healthcare professional. No physical play at recess.
- Allow students to audit class (i.e., participate without producing or grades).
- Avoid noisy and over-stimulating environments (i.e., band) if symptoms increase.
- Allow students to drop high level or elective classes without penalty if adjustments go on for a long period of time.
- Remove or limit testing and/or high-stakes projects.
- Alternate periods of mental exertion with periods of mental rest.
## Academic Adjustments: Cognitive/Thinking

<table>
<thead>
<tr>
<th>Reducing Assignments</th>
<th>Providing Extended Time</th>
<th>Once Key Objective Presented</th>
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</thead>
<tbody>
<tr>
<td>Reduce class assignments and homework to critical tasks only. Exempt non-essential written class work or homework. Base grades on adjusted homework.</td>
<td>Allow student to demonstrate understanding orally instead of writing.</td>
<td>Once key learning objective has been presented, reduce repetition to maximize cognitive stamina (e.g., assign 5 of 30 math problems).</td>
</tr>
<tr>
<td>Provide extended time to complete assignments/tests. Adjust due dates.</td>
<td>Provide written instructions for work that is deemed essential.</td>
<td>Provide class notes by teacher or peer. Allow use of computer, smart phone, tape recorder.</td>
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<tr>
<td>Allow use of notes for test taking.</td>
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Academic Adjustments: Fatigue/Physical

- Allow time to visit school nurse/counselor for headaches and other symptoms.
- Allow strategic rest breaks (e.g., 5-10 minutes every 30-45 minutes) during the day.
- Allow hall passing time before or after crowds have cleared.
- Allow student to wear sunglasses indoors. Control for light sensitivity (e.g., draw blinds, sit away from window, hat with brim).
- Allow student to study or work in a quiet space away from visual and noise stimulation.
- Allow student to spend lunch/recess in a quiet space for rest and control for noise sensitivity.
- Provide a quiet environment to take tests.
Academic Adjustments: Emotional

- Develop a plan so student can discreetly leave class as needed for rest.
- Keep student engaged in extra-curricular activities. Allow student to attend but not fully participate in sports practice.
- Provide quiet place to allow for de-stimulation.

Encourage student to explore alternative activities of non-physical nature.

Develop an emotional support plan for the student (e.g., identify adult to talk with if feeling overwhelmed).


