Current Concepts in Return to Play for Concussions

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3rd Annual Collaborative Solutions for Safety in Sport National Meeting
Hot Topics

• New Mexico High School football player

• Star Running Back
• Diagnosed concussion < 1 wk before championship game
• State law prohibits RTP no sooner than 1 wk following injury
• Case brought to court
Hot Topics

- New Mexico High School football player
- Connecticut High School football player
- Proposed Bill in North Carolina

- Athlete sustained concussion during Semi-Final game
- Diagnosed following day
- Athlete saw pediatrician who confirmed diagnosis and gave clearance for RTP protocol
- Parents ultimately went to School Board
Student-athlete safety bill would let parents approve return to game

Flanagan said while more education about student-athlete safety is imperative, the bill changes a key component of the Gfeller Waller Act, which is already in place.

“It gives the parents a determination that their child is fine and can return to play with a concussion,” said Flanagan.

Currently, a student athlete suspected of having a concussion cannot return to play until the student is evaluated and cleared by a healthcare provider.

House Bill 116 would allow a student-athlete to return after receiving clearance from a parent or healthcare provider, which is raising some concerns.
Concussion Legislation

- Sports concussion law in effect in all 50 states plus DC
- Varies state to state
- Common components of law:
  - Removal from play
  - Return to play (RTP) procedures
  - Who can give RTP clearance?
  - Concussion education (coaches, athletes, parents)
  - Baseline testing
  - Return to learn (RTL) procedures
State Associations can impose more stringent guidelines for concussion RTP procedures that meet ‘best practices’
What’s ‘Best Practice’?

National Athletic Trainers’ Association Position Statement:

Consensus Statement on Concussion in Sport—the 4th International Conference on Concussion in Sport
Held in Zurich, November 2012

Paul McCrory, MBBS, PhD, Willem Meeuwisse, MD, PhD, Mark Aubry, MD, Bob Cantu, MD, Jiri Dvorak, MD, Ruben J. Echemendia, PhD, Lars Engenbreth, MD, PhD, Karen Johnston, MD, PhD, Jeffrey S. Kutcher, MD, Martin Raftery, MBBS, Allen Sills, MD, and

2017 Collaborative Solutions for Safety in Sport
Zurich Guidelines

On-Field Evaluation
- Immediate Removal
- Evaluation by physician or healthcare provider (AT)
- SCAT 3

Return to Play
- No athlete should RTP on same day
- Gradual return to school and social activities
- Gradual return to play
  - Stepwise progression (1 step per day)

TABLE 1. Graduated Return to Play Protocol

<table>
<thead>
<tr>
<th>Rehabilitation Stage</th>
<th>Functional Exercise at Each Stage of Rehabilitation</th>
<th>Objective of Each Stage</th>
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<tbody>
<tr>
<td>1. No activity</td>
<td>Symptom limited physical and cognitive rest.</td>
<td>Recovery</td>
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<tr>
<td>2. Light aerobic exercise</td>
<td>Walking, swimming, or stationary cycling keeping intensity &lt; 70% maximum permitted heart rate.</td>
<td>Increase HR</td>
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<tr>
<td>3. Sport-specific exercise</td>
<td>Skating drills in ice hockey, running drills in soccer. No head impact activities.</td>
<td>Add movement</td>
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<tr>
<td>4. Noncontact training drills</td>
<td>Progression to more complex training drills, eg, passing drills in football and ice hockey. May start progressive resistance training.</td>
<td>Exercise, coordination, and cognitive load</td>
</tr>
<tr>
<td>5. Full contact practice</td>
<td>Following medical clearance participate in normal training activities.</td>
<td>Restore confidence and assess functional skills by coaching staff</td>
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<tr>
<td>6. Return to play</td>
<td>Normal game play.</td>
<td></td>
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Two Models

Athletic Trainer Employed

• Immediate Recognition/Removal
• AT communication/education
• Referral to ‘team physician’ or appropriate healthcare provider
• AT works with school personnel and physician on RTL modifications
• Physician clearance for RTP
• AT supervises athlete through RTP

No Athletic Trainer Employed

• Coach recognition of injury
• Refer (emergency room or primary care physician)
• RTL modifications not guaranteed
• Physician clearance
• RTP progression not guaranteed
Strategies

• Create a network of healthcare providers
• Identify 2-3 physicians with concussion education/knowledge for referral purposes
• Ensure collaborative relationships between key players (Medical team, athletic team, academic team)

* Multidisciplinary Team Approach to Medical Care
CLINICAL REPORT

Returning to Learning Following a Concussion

abstract

Following a concussion, it is common for children and adolescents to experience difficulties in the school setting. Cognitive difficulties, such as

Guidelines for Post-Concussion Academic Accommodations
<table>
<thead>
<tr>
<th>Stage</th>
<th>Goals/Key Ideas</th>
<th>Teacher’s Actions</th>
<th>Student’s Actions</th>
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<tbody>
<tr>
<td>I</td>
<td>Complete rest</td>
<td>• Contacted by school nurse&lt;br&gt;• Explanation of injury &amp; current plan of care</td>
<td>• Out of school&lt;br&gt;• Strict limits for use of computer, cell phone, texting, video games&lt;br&gt;<strong>No Physical/Sports Activity</strong></td>
</tr>
<tr>
<td>II</td>
<td>Significant deficits in processing and concentration. Cognitive activity as tolerated</td>
<td>Develop lists of 3 categories for all assignments:&lt;br&gt;1. Excused: Not made up.&lt;br&gt;2. Accountable: Responsible for content, not process&lt;br&gt;3. Responsible: Must be completed and will be graded</td>
<td>• In school as tolerated&lt;br&gt;• Observing, not participating&lt;br&gt;• Communicate with teachers about progress&lt;br&gt;• Be patient with slow recovery&lt;br&gt;<strong>No Physical/Sports Activity</strong></td>
</tr>
<tr>
<td>III</td>
<td>Gradual increase of time and energy, slowly resuming full workload</td>
<td>• Prioritize assignments with student&lt;br&gt;• Continue to use list above&lt;br&gt;• Set timeline for completion</td>
<td>• Communicate with teachers on assignment progress&lt;br&gt;<strong>No Physical/Sports Activity</strong></td>
</tr>
<tr>
<td>IV</td>
<td>Complete resumption of normal activities</td>
<td>• Monitor completion of assignments&lt;br&gt;• Communicate w/ parents/staff when student is caught up&lt;br&gt;• Communicate w/ Guidance as grades are updated</td>
<td>• Resume all normal activities&lt;br&gt;• Progress with athletic trainer – supervision resumption of participation in athletics.</td>
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Resources

• NATA Position Statement on Concussion Management
• Concussion Statement on Concussion in Sport (Zurich)
• American Academy of Pediatrics – Returning to Learning Following a Concussion
• NFHS Materials
• CDC – Heads Up
Questions to Ponder

• What barriers is your state currently experiencing regarding Concussion RTP and/or RTL?

• What are some of you state’s successes in this area? How did you get there?

• What does your state need in order to implement best practices for concussion RTP procedures (including RTL)?

• Who should be allowed to make RTP decisions (Chiropractor, PT, Physician, AT, etc.)?
Thank You!

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