

Building a Best-Practices and Litigation-Resistant Concussion Protocol

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Objectives

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Objective 1
Describe the necessary components and related research-based recommendations for a best practice concussion protocol

Objective 2
Examine common causes of concussion litigation

Objective 3
Analyze your practice setting's concussion protocol (formal or informal) for consistency with best practices and compose potential improvements

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Describe the necessary components and related research-based recommendations for a best practice concussion protocol

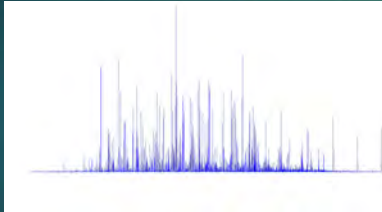
OBJECTIVE 1

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Good baseline history



- ▶ Differentiate premorbid factors from injury factors
- ▶ Can help with prognosis: Premorbid mental health and prior concussions⁹
- ▶ Determine return to baseline, "not symptom-free"
- ▶ Can identify points for pre-injury intervention
- ▶ Although, this doesn't tell us WHO will get concussion⁸

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Baseline components

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History

- Concussion history
 - Spent the night in the hospital
- Seen by a brain doctor (neurologist, neuropsychologist, ect)
- History of depression, anxiety, panic attacks
 - Both symptoms and diagnosis
- History of ADHD/LD
 - Both symptoms and diagnosis
- Sleep problems
- Headaches/migraines (self and family)

Symptoms

"What normal looks like"

- Rate severity for a symptom experienced at least 1x/week

Objective testing

- Neurocognitive
 - Is it worth it? ^{2,10, 11, 12}
- Balance
 - Moving beyond the BESS ^{2,13}
- VOMS
 - Great post-injury, worth the time at baseline? ^{14, 15}

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NCAA Concussion Settlement

Welcome to the NCAA Concussion Settlement Medical Monitoring Program Website

If you played one or more sports sanctioned by the National Collegiate Athletic Association (NCAA) at an NCAA member school, you may be entitled to free medical screening and, if qualified, free medical evaluations (known as "Medical Monitoring") up to two times until November 18, 2029.

On August 13, 2020, a U.S. District Court Judge granted final approval of a Settlement that ended the class action lawsuit named in re National Collegiate Athletic Association Student-Athlete Concussion Litigation.¹ The suit had been brought on behalf of then-current and former NCAA student-athletes. The suit claimed that the NCAA had been negligent and had breached its duty to (a) protect current and former student-athletes by failing to adopt appropriate rules regarding concussions and/or (2) manage the risks from concussions. The named plaintiffs sought medical monitoring for all qualifying current and former student-athletes, among other benefits.

The NCAA denied and continues to deny all allegations of liability and wrongdoing. Nonetheless, the Parties to the Litigation have reached a Settlement, which is now final.



The Settlement went into effect on November 18, 2019, and the Medical Monitoring Program commenced on February 18, 2020.

This website describes the Medical Monitoring Program and explains how current and former student-athletes may receive free screenings and Medical Evaluations through the program.

You are a member of the Settlement Class (meaning you are a "Settlement Class Member") if you played an NCAA-sanctioned sport at an NCAA member institution at any time on or prior to July 15, 2026 and have not excluded yourself ("opted out") from the Settlement Class. You do not need to have been diagnosed with a concussion to be a member of the Settlement Class.

Participation in the Medical Monitoring Program is completely voluntary. If you are an eligible Settlement Class Member and want to participate, you may register [here](#).

Registered Settlement Class Members may complete the screening questionnaire, which will be used to determine eligibility for an in-person Medical Evaluation, [here](#).

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Objective and multimodal diagnostic process^{2,3}

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- ▶ SCAT is only sensitive for 72 hrs
- ▶ All B level SORT criteria, except VOMS
- ▶ Make sure the tool you use is appropriate for your population
- ▶ Symptoms- consistently sensitive, but highly non-specific
 - ▶ Collateral report might help with specificity
- ▶ Cognitive testing
 - ▶ SCAT 6 is beefed up to help with ceiling effects
 - ▶ 10 word list
 - ▶ Months backwards is timed
 - ▶ Word List seems to do a better job than Concentration
- ▶ Balance
 - ▶ SOT is the gold standard
 - ▶ Gait and dual task seems to have better sensitivity and can get away from inter-rater reliability issues
 - ▶ SCAT6 includes tandem gait and dual task
- ▶ Oculomotor/Vestibular
 - ▶ KD is a mixed bag
 - ▶ VOMS= SORT A
- ▶ Cervical
 - ▶ Limited research, but good utility
- ▶ Neurological exam
 - ▶ Important for rule-out
- ▶ TEST COMBO= SORT A

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Documentation of Care

- ▶ SCOAT 6¹⁸
- ▶ Make sure to record all dates
- ▶ What happened when, and how the person felt
 - ▶ "the specific testing and maneuvers performed (eg, jumping jacks, knee bends); dates, times, and specific locations of testing; and the questions asked of the athlete during testing and the athlete's responses"⁶

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Sport Concussion Office Assessment Tool 6 - SCOAT6™

SCOAT6™ Sport Concussion Office Assessment Tool

For Adults & Adolescents (13 years +)

Current Injury

Removal From Play: Immediate Continued to play for _____ mins

Walked off Assisted off Stretchered off

Date of injury: _____

Description - include mechanism of injury, presentation, management since the time of injury and trajectory of care since injury:

Date Symptoms First Appeared: _____ Date Symptoms First Reported: _____

History of Head Injuries

Date/Year	Description - include mechanism of injury, presentation, management since the time of injury and trajectory of care since injury	Management - including time off work, school or sport

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Table 1 Return-to-learn (RTL) strategy

Step	Mental activity	Activity at each step	Goal
1	Daily activities that do not result in more than a mild exacerbation* of symptoms related to the current concussion	Typical activities during the day (eg, reading) while minimizing screen time. Start with 5–15 min at a time and increase gradually.	Gradual return to typical activities
2	School activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	Return to school part time	Gradual introduction of schoolwork. May need to start with a partial school day or with greater access to rest breaks during the day.	Increase academic activities
4	Return to school full time	Gradually progress in school activities until a full day can be tolerated without more than mild* symptom exacerbation.	Return to full academic activities and catch up on missed work

Following an initial period of relative rest (24–48 hours following an injury at Step 1), athletes can begin a gradual and incremental increase in their cognitive load. Progression through the strategy for students should be slowed when there is more than a mild and brief symptom exacerbation.

*Mild and brief exacerbation of symptoms is defined as an increase of no more than 2 points on a 0–10 point scale (with 0 representing no symptoms and 10 the worst symptoms imaginable) for less than an hour when compared with the baseline value reported prior to cognitive activity.

Table 2 Return-to-sport (RTS) strategy—each step typically takes a minimum of 24 hours

Step	Exercise strategy	Activity at each step	Goal
1	Symptom-limited activity	Daily activities that do not exacerbate symptoms (eg, walking).	Gradual reintroduction of work/school
2	Aerobic exercise 2A—Light (up to approximately 55% maxHR) then 2B—Moderate (up to approximately 70% maxHR)	Stationary cycling or walking at slow to medium pace. May start light resistance training that does not result in more than mild and brief exacerbation* of concussion symptoms.	Increase heart rate
3	Individual sport-specific exercise Note: If sport-specific training involves any risk of inadvertent head impact, medical clearance should occur prior to Step 3	Sport-specific training away from the team environment (eg, running, change of direction and/or individual training drills away from the team environment). No activities at risk of head impact.	Add movement, change of direction

Steps 4–6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.

4	Non-contact training drills	Exercise to high intensity including more challenging training drills (eg, passing drills, multiplayer training) can integrate into a team environment.	Resume usual intensity of exercise, coordination and increased thinking
5	Full contact practice	Participate in normal training activities.	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play.	

*Mild and brief exacerbation of symptoms (ie, an increase of no more than 2 points on a 0–10 point scale for less than an hour when compared with the baseline value reported prior to physical activity). Athletes may begin Step 1 (ie, symptom-limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0–10 scale) occurs during Steps 1–3, the athlete should stop and attempt to exercise the next day. Athletes experiencing concussion-related symptoms during Steps 4–6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of readiness to RTS should be provided by an HCP before unrestricted RTS as directed by local laws and/or sporting regulations.

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Amsterdam RTS & RTL guidelines

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Rigorous clearance process

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- ▶ This will vary widely, based on your patient population
 - ▶ Be able to defend your choices based on the literature and your field's best-practices
- ▶ Baseline data HAS to be evaluated for validity prior to its utilization
- ▶ Normative data MUST be chosen carefully
- ▶ Make sure to clear and document all domains
- ▶ Consider corroborating sources
- ▶ Consider repeating tasks over time
- ▶ Consider a more stringent physical task if returning to sport- such as the GTT
- ▶ Watch Stage 4 & 5 carefully

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Retirement^{4, 5}

Or.... The conversation no one wants to have

- ▶ We still don't have any "absolute indications"
 - ▶ Great place to get a second opinion or consult (and document)

Box 1 Factors suggested as possible indications for not returning to contact sport

Persisting or prolonged

1. Symptoms after concussion.
2. Neurological abnormalities on physical examination.
3. Deficits on neuropsychological testing, despite time away from contact or collision sports, and compliance with prescribed treatments or interventions.

Increasing symptom severity and/or duration with repeat concussions.

Concussions precipitated by lower threshold impacts.
Structural abnormalities identified on conventional neuroimaging that may be associated with an increased risk of poor outcomes with future head impact and require neurosurgical assessment and management.

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Ongoing updates⁷

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- ▶ Stay on top of the literature
- ▶ Document sound clinical decision making
- ▶ Make sure protocols are up-to-date
 - ▶ No more cocoon therapy¹⁷
 - ▶ Update RTP(A) and RTL

"To minimise academic and social disruptions during the RTL strategy, HCPs should avoid recommending complete rest and isolation, even for the initial 24–48 hours, and instead recommend a period of relative rest."¹³

- ▶ Programmatic level changes can make a difference, but there also a lot of snake oil
 - ▶ I.e., mouthguards decrease concussion rates, but only in hockey and the "off the shelf" mouth guards do just as well as dentist-fit or specialized⁷

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Questions?

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- ▶ Recap
 - ▶ If you didn't document it, it didn't happen
 - ▶ The discovery rule is often applied in concussion litigation²²
 - ▶ This field is changing quickly



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Examine common causes of concussion litigation

OBJECTIVE 2

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Negligence⁶

There are 4 pieces to qualify for negligence

1. Duty owed to the patient
 2. Did not use reasonable care to provide that duty
 3. Causal nature of lack of duty provided
 4. Resulting damages
- ▶ Gross= "reckless or purposeful indifference"

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Reasonable care Standard of care

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- ▶ “the care that someone of ordinary prudence would have exercised under the circumstances”⁶
- ▶ “When professionals who owe a duty to certain persons are involved (eg, the relationship between an AT and an athlete), the required conduct is labeled the standard of care”⁶
 - ▶ Know your state's laws, your profession's position/standards, your organization/entities requirements/recommendations and the responsibility they will claim
 - ▶ This may require looking at multiple standards and clarifying which to follow

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Some sticky areas...

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- ▶ Scope of practice¹⁹
- ▶ Differences in state laws and increased license reciprocity
- ▶ Who is responsible for maintaining current protocols, especially RTL protocols?²¹
- ▶ What happens when medical authority is challenged or not completely autonomous?
- ▶ What about where there is limited follow up or follow up is left to parents or patients?

“With respect to concussion risk in youth sports, our times have yielded just that strategy: provide information but do not prohibit risks”²⁰

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Some sticky areas...

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- ▶ Who is the patient?
- ▶ Are we serving the patient in front of us or who they might be 40 years down the road?
- ▶ Are we mitigating our risk or improving their care?
- ▶ Where about athlete responsibility?

"So while in the Chiefs locker room, Smith withheld information about how he was feeling because he considered his concussion symptoms to be mild and he wanted to play again.

The doctor determined Smith had passed that test and he returned to the Chiefs sideline. Smith pressed coach Andy Reid to allow him to return to the game."

Read more at: <https://www.kansascity.com/sports/spt-columns-blogs/for-petes-sake/article266828041.html#storylink=cpy>

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Let's think about your protocol....

TAKE 5 MINUTES TO DISCUSS...

- HOW IS THE PROTOCOL YOU WORK UNDER CONSISTENT WITH BEST PRACTICES?
- WHERE COULD IT IMPROVE?

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