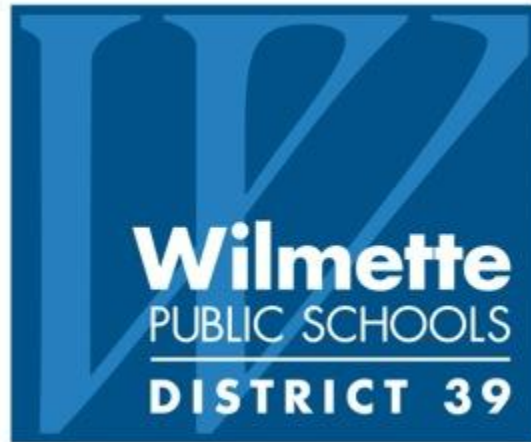


District 39



Concussion Resource Guide

Developed by Concussion Oversight Committee
August, 2016

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General Information

According to the CDC a concussion is a type of traumatic brain injury—or TBI—caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, stretching and damaging the brain cells and creating chemical changes in the brain.

Concussions Are Serious

Medical providers may describe a concussion as a “mild” brain injury because concussions are usually not life-threatening. Even so, the effects of a concussion can be serious.

Following a concussion, students may experience physical and cognitive symptoms that are difficult to recognize. Any student with a possible concussion must be evaluated by a healthcare provider to determine if accommodations are required. The severity of a concussion is measured by how long the symptoms last and therefore it is difficult to predict how long it will take a student to fully recover.

Concussion Symptoms

Reported Symptoms:

- Headache or “pressure” in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish, hazy, foggy, or groggy
- Concentration or memory problems
- Confusion
- Just not “feeling right” or is “feeling down”
- * Numbness or tingling
- * Neck pain
- * Difficulty concentrating
- * Difficulty remembering
- * Nervousness or anxiety

Observed Signs:

- * Appears dazed or stunned
- * Is confused about events
- * Repeats questions
- * Can’t recall events *prior* to the hit, bump, or fall
- * Can’t recall events *after* the hit, bump, or fall
- Forgets an instruction
- Is unsure of game, score, or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even briefly)
- Shows mood, behavior, or personality changes
- * Sadness
- * Irritability

Danger Signs:

If the following signs are observed, call 911 immediately as the student should be seen in an emergency department right away.

- *One pupil (the black part in the middle of the eye) larger than the other
- *Drowsiness or cannot be awakened
- * A headache that gets worse and does not go away
- * Weakness, numbness, or decreased coordination

- *Repeated vomiting or nausea
- *Slurred speech
- *Convulsions or seizures
- *Difficulty recognizing people or places
- *Increasing confusion, restlessness, or agitation
- *Unusual behavior
- *Loss of consciousness (even a brief loss of consciousness should be taken seriously)

Guidelines for Students

The affected student should be “in the loop,” and encouraged to share his/ her thoughts about how things are going, and symptoms he or she is experiencing. The student should receive feedback from the rest of the team that is appropriate to his/her age, level of understanding, and emotional status.

The student should be honest in reporting impaired thinking/remembering, physical symptoms, emotional symptoms, and challenges with sleep.

Guidelines for Parents/Guardians

When a student is diagnosed with a concussion, parents are asked to assist the school in the care and management of concussion symptoms during their child’s recovery.

- Notify the school nurse and submit the Concussion Diagnosis form.
- Talk with your child’s teachers and school nurse about his/her concussion symptoms and necessary accommodations.
- Submit the Doctor’s Clearance Form after your child has moved through all of the Return To Learn Phases and the first 3 Return To Play Stages.

Guidelines for School Administrators

The school principal or administrator should appoint the internal members of the team as well as a “case manager” to ensure adequate communication and coordination within the team. The administrator will also be responsible for approving any adjustments to the student’s schedule and communicating policies on responding to students who have had a concussion (e.g., return to play and return to learn practices) to parents and school personnel.

Guidelines for Building Nurse

The nurses should assist parents and teachers in developing an appropriate plan when a student returns to school after being diagnosed with a concussion.

The school nurse is responsible for

- Ensuring that the Concussion Diagnosis form has been submitted and that the appropriate accommodations have been put in place.

- As the student moves through the Return To Learn and Return To Play stages, the nurse should notify parents if the student reports worsening or new symptoms.
- After the student has completed all of the Return To Learn and the first 3 Return To Play stages the nurse will ensure that the Doctor's Clearance form has been submitted before the student may return to full participation in PE.

Guidelines for Classroom Teachers

Teachers can often help observe changes in a student, including symptoms that may be worsening. Teachers are also in a position to interact regularly with the student's parents, thereby providing a channel to obtain and share information with them about the student's progress and challenges. It is normal for students to feel frustrated, sad, embarrassed, and even angry... talk with the student about these issues and offer support and encouragement.

Teacher should

- Share observations and any new information obtained from the family or health care professional.
- Work with the family and student
- Continually consider the student's symptoms and progress in healing. This information can help the teacher to make adjustments to the accommodations and expectations.

Students may try to report milder symptoms to decrease the recovery and accommodation time. Teachers should be careful observers of students and question the student when behavior is not aligned to reporting. Teachers should also report any changes or inconsistency noted to the school nurse, administrator, and parents.

Guidelines for Coaches and Supervisors of School Sponsored Sport Activities

- Shall be educated about the nature and risk of concussions and head injuries, including continuing to play after a concussion or head injury, and successfully complete an approved program.
- Coaches and supervisors should observe all player who suffer a head injury during all sport activities.
- If a student is showing any visual, neurologic, or complaining of any signs or symptoms of a concussion they should not return to play and parents should be notified. **When in doubt sit them out!**

- Coaches and supervisors will not allow students who have been removed from participation or competition because of a suspected concussion to return to play until a Doctor's Clearance form has been submitted.
- Participate in yearly Concussion trainings.

Return to Learn

The effects of a concussion on school performance

- Slower processing speed
- Lapses in short term memory
- Reduced/impaired concentration
- Slower to learn new concepts
- Shorter attention span
- More difficulty planning, organizing and completing assignment
- Slower reading
- Difficulty with reading comprehension

Stages of Return to Learn

Stage 1: No School/Complete Cognitive and Physical Rest

Symptom Severity: In this phase, the student may experience high levels of symptoms that prohibit the student benefiting from school attendance and may cause symptoms to increase in intensity. During this stage, physical symptoms tend to be the most prominent and may interfere with even basic daily tasks. Many students are unable to tolerate being in the school environment due to severe headache, dizziness or sensitivity to light or noise.

Treatment: Emphasis on cognitive and physical rest to allow the brain and body to rest as much as possible.

Intervention Examples:

- No School
- Avoid activities that exacerbate symptoms. Activities that commonly trigger symptoms include reading, video games, computer use, texting, television, and/or loud music.
- Other symptom “triggers” that worsen symptoms should be noted and avoided in the effort to promote healing No physical activity- this includes anything that increases the heart rate as this may worsen or trigger additional symptoms.
- No tests, quizzes or homework
- Provide students with copies of class notes (teacher or student generated)

Stage 2: Part-Time School Attendance with Accommodations:

Symptom Severity: In this phase, the student’s symptoms have decreased to manageable levels. Symptoms may be exacerbated by certain cognitive activities that are complex or of long duration. Often students can do cognitive activities but only for very short periods of time (5-15 minutes) so need frequent breaks to rest and “recharge their batteries”.

Treatment: Re-introduction to school. Avoid environments and tasks that trigger or worsen symptoms. In the first few days of returning to school the goal is not to immediately start

catching up on the missed work or learn new material. Rather the initial goal is simply to make sure the student can tolerate the school environment without worsening symptoms. This means the first few days often include just sitting in class and listening (no note-taking or reading). Once the student can tolerate this, he/she can try short intervals (5-15 minutes) of cognitive work per class. Again, determining how much is too much is a trial and error process.

Intervention Examples:

- Part-time school attendance, with focus on the core/essential subjects and/or those which do not trigger symptoms; prioritize what classes should be attended and how often. Examples: (1) half-days, alternating morning and afternoon classes every other day; or (2) attending every other class with rest in the nurse's office, library or quiet location in between

- Symptoms reported by the student should be addressed with specific accommodations
- Eliminate busy work or non-essential assignments or classes.
- Limit or eliminate "screen time" (computers, phones, tablets, smart boards), reading and other visual stimuli, based on the student's symptoms.
- Provide student with copies of class notes (teacher or student generated)
- No tests or quizzes.
- Homework load based on symptoms. There should be no due dates on homework assignments. This allows students to work at a pace that does not exacerbate symptoms and reduces their anxiety about completing missed assignments. Many students have heightened anxiety during concussion recovery and due dates exacerbate this.
- Allow the student to leave class a few minutes early to avoid noisy, crowded hallways between class changes.
- No physical activity including gym, PE or recess or participation in athletics
- If this phase becomes prolonged and/or the student is unable to tolerate the school environment or do any work for even short periods of time, a tutor can be helpful (either in school or at home) to implement oral learning at a pace that does not worsen symptoms. A tutor can also help students organize their work and plan how they will spend their limited time studying (i.e. which assignment should I do first, second, third, etc.), as many students are unable to do this basic "executive function" task during concussion recovery.

Stage 3: Full-Day Attendance with Accommodations:

Symptom Severity: In this phase, the student's symptoms are decreased in both number and severity. They may have intervals during the day when they are symptom-free. Symptoms may still be exacerbated by certain activities.

- Treatment: As the student improves, gradually increase demands on the brain by increasing the amount, length of time, and difficulty of academic requirements, as long as this does not worsen symptoms.

Intervention Examples:

- Continue to prioritize assignments, tests and projects; limit students to one test per day or every other day with extra time to complete tests to allow for breaks as needed based on symptom severity
- Continue to prioritize in-class learning; minimize overall workload
- Gradually increase amount of homework
- Reported symptoms should be addressed by specific accommodations; Accommodations can be reduced or eliminated as symptoms resolve
- No physical activity unless specifically prescribed by the student's medical team. If the student has not resolved their symptoms after 4-6 weeks, health care providers will often prescribe light aerobic activity at a pace and duration below that which triggers symptoms. This "sub-symptom threshold exercise training" has been shown to facilitate concussion recovery (14). The student can do this at school in place of their regular PE class, by walking, riding a stationary bike, swimming, or jogging. No contact sports are allowed until the student is completely symptom-free completing full days at school and requires no academic accommodations, and has received written clearance from a licensed health care professional.

Stage 4: Full-Day Attendance without Accommodations:

Symptom Severity: In this phase, the student may report no symptoms or may experience mild symptoms that are intermittent.

Treatment: Accommodations are removed when student can participate fully in academic work at school and at home without triggering symptoms.

Intervention Examples:

- Construct a reasonable step-wise plan to complete missed academic work; an extended period of time is recommended in order to minimize stress
- Physical activities as specified by student's physician (same as phase 3)

Stage 5: Full School and Extracurricular Involvement:

Symptom Severity: No symptoms are present. The student is consistently tolerating full school days and their typical academic load without triggering any concussion related symptoms.

Treatment: No accommodations are needed

Interventions:

- Before returning to physical education and/or sports, the student should receive written clearance and complete a step-wise return-to-play progression as indicated by the licensed healthcare professional.

Return to Learn Protocol Adapted from Ann & Robert H. Lurie Children's Hospital of Chicago Institute of Sports Medicine

Decision to move through the Stages

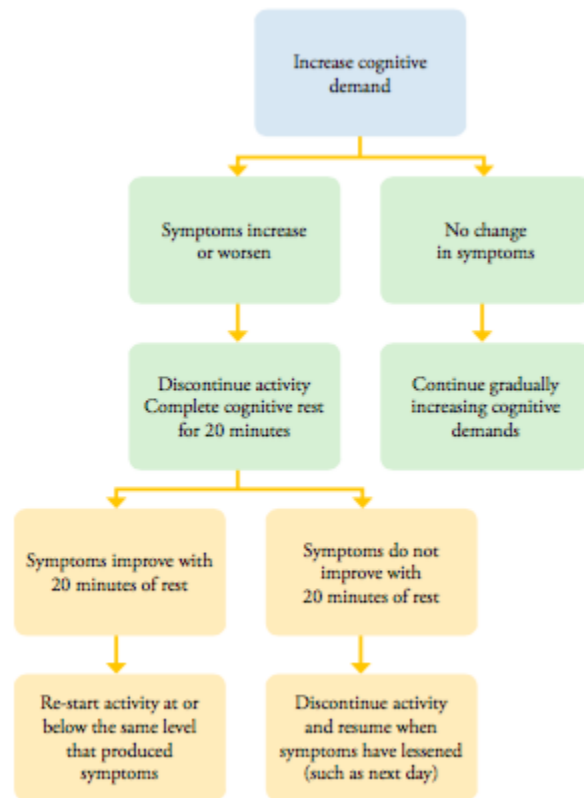
The emphasis on the return-to-learn framework is allowing the student to participate and learn without worsening symptoms (which may delay healing). Finding out "how much is too much" may be trial and error process to start.

1. As the student improves and moves through the phases, gradually increasing demands on the brain by increasing either:
 - a. the amount of work
 - b. the length of time spent on work
 - c. the type of difficulty of work

**** IMPORTANT NOTE: Change only ONE of these things at a time.

2. If symptoms do not worsen, demands may continue to gradually increase.
3. If symptoms do worsen, the activity should be discontinued for at least 20 minutes and the student allowed to rest.
 1. If the symptoms are relieved with rest, the student may re-attempt the activity at or below the level that produced symptoms.
 2. If the symptoms are not relieved with rest, the student discontinue for the day and re-attempt when symptoms have lessened (such as the next day).

Flow Chart of Decisions to Move through Return To Learn Stages



Return to Play

No athlete will be able to compete in any practice or game until they are back in school for a full day with limited to no accommodations. Athletes must have moved through the Return to Learn Phases and at least be at Phase 4 before returning to sport activities.

All athletes will spend a minimum of two (2) days at each stage before advancing to the next stage and a doctor's clearance is required to move into Stage 4 AND Stage 5.

Return to Play Stages

Stage 1: *Light Aerobic Exercise*

The Goal: only to increase an athlete's heart rate.

The Time: 5 to 10 minutes.

The Activities: exercise bike, walking, or light jogging.

Absolutely no weight lifting, jumping or hard running.

Stage 2: *Moderate Exercise*

The Goal: limited body and head movement.

The Time: Reduced from typical routine

The Activities: moderate jogging, brief running, moderate-intensity stationary biking, and moderate-intensity weightlifting

Stage 3: *Non-contact Exercise*

The Goal: more intense but non-contact

The Time: Close to Typical Routine

The Activities: running, high-intensity stationary biking, the player's regular weightlifting routine, and non-contact sport-specific drills. This stage may add some cognitive component to practice in addition to the aerobic and movement components introduced in Steps 1 and 2.

Stage 4: *Practice*

The Goal: Reintegrate in full contact practice

Stage 5: *Play*

The Goal: Return to competition

It is important to monitor symptoms and cognitive function carefully during each increase of exertion. Athletes should only progress to the next level of exertion if they are not experiencing symptoms at the current level. If symptoms return at any step, an athlete should stop these activities as this may be a sign the athlete is pushing too hard. Only after additional rest, when the athlete is once again not experiencing symptoms for a minimum

of 24 hours, should he start again at the previous step during which symptoms were experienced.

Classroom Accommodations

Please refer to the Stages to Learn section of this guidebook for general information about introducing learning and expectations for school as a student recovers from a concussion. Listed below are additional classroom accommodations.

Attention/Concentration

- Reduce distractions in the student's work area (i.e. remove extra pencils, books)
- Divide work into smaller sections (i.e. have the student complete one section at a time; suggest times and expectations for completion)
- Ask the student to summarize information orally that has been presented
- Use cue words to alert the student to pay attention (e.g. "listen," "look," "name")
- Establish a nonverbal cuing system (e.g. eye contact, touch) to remind the student to pay attention
- Predictable and consistent routine
- Allow extra time for test/in-class assignment completion
- Allow student to rest
- Reduce class assignment and homework to key tasks only and base grade on adjusted work

Memory

- Frequently repeat information and summarize it
- Have the student carry an assignment sheet to each class and check that it is correctly filled out
- Teach the student to use devices such as post-it notes, calendars, and assignment books as self-reminders
- Teach the student to categorize or chunk information to aid retention
- Demonstrate techniques such as mental rehearsal and use of special words or examples as reminders
- Link new information to the student's relevant prior knowledge
- Provide experimental presentations of instructional materials
- Allow the student to record classes

Organization

- Additional time for review
- Written checklists of steps for complex tasks with instructions for checking off each completed step in an assignment or task
- Written schedule of daily routines and reinforcements for referring to schedule
- Assign a person to preview the schedule at the start of the school day and organize materials for each class
- Written cues for organizing the activity (i.e. first you do this, next you do this)
- Practice sequencing materials

- Outline based on class lectures
- Color-coded materials for each class

Following Directions

- Provide oral and written instructions
- Asking the student to repeat instructions back to the teacher or a peer
- Underlining or highlighting significant parts of directions or written assignments
- Giving directions, asking student to perform the tasks, checking for accuracy and then providing immediate feedback
- Slow down the pace of instruction

Continued Support

Because a concussion involves a progressive recovery process, a student's physical and mental endurances may be limited during their initial return to school and steadily improve over time. Therefore, consideration of different schooling options may be necessary, including homebound instruction, gradual increase in school attendance, or change in class schedules to a less demanding course load. Academic programming and scheduling must be flexible and customized to fit children's changing needs. Class enrollment and expectations should be based on students' current, rather than previous, academic performances. Rather than push students quickly through classes and require them to make up missed assignments, students should be allowed additional time to relearn concepts and regain skills.

If the recoupment time is significant students may need long term protection and support of a 504 plan or even an IEP.

Appendix A
Concussion Diagnosis Form

Concussion Diagnosis Form

Patient _____

DOB _____

Date of exam _____

I have examined this patient today for possible concussion and have determined that he/she:

does not have a concussion and may participate in normal activities

does have a concussion and, at this time, may participate in:

Indicate stage of academic participation

No School/Complete Cognitive and Physical Rest

Part-Time School Attendance with Accommodations

Full-Day Attendance with Accommodations

Full-Day Attendance without Accommodations

Full School and Extracurricular Involvement

I have examined this patient and have determined that he/she is recovering from a concussion and may participate in physical activities as follows:

No physical activity

Light aerobic activity

Moderate exercise

Non-contact exercise

Practice with full contact

Game with full contact

Signature of physician _____

Date _____

Name of physician _____

Address _____

Phone _____

Return this form to Wilmette District 39 Building Nurse

Appendix B
Medical Clearance after Concussion Form

Medical Clearance after a Concussion

Date: _____

Student's Name _____

DOB _____

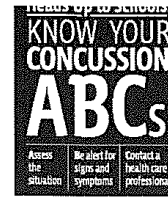
_____ has been evaluated and cleared to return to play and may fully participate in PE and other school athletic activities.

Physician signature

Date

Appendix C
Concussion Signs and Symptoms Checklist
For Coaches and Physical Activity Sponsors

Concussion Signs and Symptoms Checklist



Student's Name: _____ Student's Grade: _____ Date/Time of Injury: _____

Where and How Injury Occurred: *(Be sure to include cause and force of the hit or blow to the head.)* _____

Description of Injury: *(Be sure to include information about any loss of consciousness and for how long, memory loss, or seizures following the injury, or previous concussions, if any. See the section on Danger Signs on the back of this form.)* _____

DIRECTIONS:

Use this checklist to monitor students who come to your office with a head injury. Students should be monitored for a minimum of 30 minutes. Check for signs or symptoms when the student first arrives at your office, fifteen minutes later, and at the end of 30 minutes.

Students who experience *one or more* of the signs or symptoms of concussion after a bump, blow, or jolt to the head should be referred to a health care professional with experience in evaluating for concussion. For those instances when a parent is coming to take the student to a health care professional, observe the student for any new or worsening symptoms right before the student leaves. Send a copy of this checklist with the student for the health care professional to review.

To download this checklist in Spanish, please visit: www.cdc.gov/Concussion.
Para obtener una copia electrónica de esta lista de síntomas en español, por favor visite: www.cdc.gov/Concussion.

OBSERVED SIGNS	0 MINUTES	15 MINUTES	30 MINUTES	<input type="checkbox"/> MINUTES Just prior to leaving
Appears dazed or stunned				
Is confused about events				
Repeats questions				
Answers questions slowly				
Can't recall events <i>prior</i> to the hit, bump, or fall				
Can't recall events <i>after</i> the hit, bump, or fall				
Loses consciousness (even briefly)				
Shows behavior or personality changes				
Forgets class schedule or assignments				
PHYSICAL SYMPTOMS				
Headache or "pressure" in head				
Nausea or vomiting				
Balance problems or dizziness				
Fatigue or feeling tired				
Blurry or double vision				
Sensitivity to light				
Sensitivity to noise				
Numbness or tingling				
Does not "feel right"				
COGNITIVE SYMPTOMS				
Difficulty thinking clearly				
Difficulty concentrating				
Difficulty remembering				
Feeling more slowed down				
Feeling sluggish, hazy, foggy, or groggy				
EMOTIONAL SYMPTOMS				
Irritable				
Sad				
More emotional than usual				
Nervous				

Danger Signs:

Be alert for symptoms that worsen over time. The student should be seen in an emergency department right away if s/he has:

- One pupil (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

Additional Information About This Checklist:

This checklist is also useful if a student appears to have sustained a head injury outside of school or on a previous school day. In such cases, be sure to ask the student about possible sleep symptoms. Drowsiness, sleeping more or less than usual, or difficulty falling asleep may indicate a concussion.

To maintain confidentiality and ensure privacy, this checklist is intended only for use by appropriate school professionals, health care professionals, and the student's parent(s) or guardian(s).

For a free tear-off pad with additional copies of this form, or for more information on concussion, visit: www.cdc.gov/Concussion.

Resolution of Injury:

- Student returned to class
- Student sent home
- Student referred to health care professional with experience in evaluating for concussion

SIGNATURE OF SCHOOL PROFESSIONAL COMPLETING THIS FORM: _____

TITLE: _____

COMMENTS:

For more information on concussion and to order additional materials for school professionals FREE-OF-CHARGE, visit: www.cdc.gov/Concussion.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



Appendix D
B.R.A.I.N.-G Graduated Return to Play
Protocol

Below is the B.R.A.I.N.-G. Graduated Return to Play (RTP) protocol that you must successfully accomplish before returning from a concussion. You must successfully complete this program before returning to any competitions. The first stage (B) will not start until you have been asymptomatic for 24 hours continuously, and not taking any pain medications. Each step should be separated by a minimum of 24 hours. Return to game play must be consistent and in line with school/organization protocol, respective state law, and physician's order.

		Functional Exercise at each stage of RTP	Success goal of each stage
No Activity		Relative physical and cognitive rest	Recovery (Symptom free at rest for 24 continuous hours)
B	Light Aerobic Exercise	Stationary cycling keeping heart rate <70% maximum predicted heart rate. No resistance training	Increase heart rate without the onset of symptoms.
R	Heavier Aerobic exercise	Running >70% maximum predicted heart rate. Still no resistance training	Increase heart rate without the onset of symptoms.
A	Sport specific exercise	Resistance training may commence. Agility drills. Sports specific drills. (No heading) Drills with a rotation component	Add more advanced movements without the onset of symptoms
I	Non-contact training drills	Progression to more complex training drills in a non-contact environment. Plyometrics, aggressive strengthening	Exercise, coordination, and cognitive load without symptoms
N	Full contact practice	Following medical clearance, participate in normal training and practice activities	Restore confidence and assess functional skills by coaching staff. Complete without symptoms
G	Return to game play	Normal Game Play	

Resources consulted and materials adapted or adopted from:

Center of Disease Control

Ann & Robert H. Lurie Children's Hospital of Chicago Institute of Sports Medicine

Illinois High School Association

Athletico

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