

Concussion Management Procedures

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Procedure Purpose:

There are multiple purposes for this procedure. First, it is to aid in the following for all reported student concussions:

- Concussion recognition
- Appropriate referral and treatment
- Student, parent/guardian and school staff concussion education
- Facilitation of return to learn protocols
- Facilitation of return to play protocols for student athletes
- Facilitation of concussion recovery
- Reduction or mitigation of educational impact

Secondly, the purpose is to specify actions needed to comply with the following.

- [Board Policy 3331](#)
- Montana HB 487
- [MCA 20-7-1301 Youth athletes-definitions](#)
- [MCA 20-7-1303 Youth athletes- concussion education requirements](#)
- [MCA 20-7-1304 Youth athletes- removal from participation following concussions-medical clearance required before return to participation.](#)

Given the progression of evidence-based practices based on continual research, it is challenging to keep procedures up to date. The District will endeavor to review and update if needed, these (2018) procedures at a minimum of every five years.

Concussion Basics

What is a concussion?

According to the Centers for Disease Control (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, creating chemical changes in the brain and sometimes stretching and damaging brain cells.”* (CDC, 2017, WHAT IS A CONCUSSION).

- Most concussions do not involve loss of consciousness. (MCAVOY, 2013; MCCRORY, MEEUWISSE, DVOŘÁK ET AL. 2017).
- The presence of concussion signs and symptoms that (typically) occur moments to hours after an injury indicates the student may have a concussion.
 - However, according to SUE KIRLIK M.D., its possible symptoms of a concussion may not occur for a few days. An example is an unreported head impact on a Friday, and then the child has a quiet weekend. When the child returns to school on Monday and the cognitive demands increase, symptoms may then appear and be first identified. (MCAVOY, 2013, PAGE 8).
- X-rays or tests such as a computed tomography (CT) scan or a magnetic resonance imaging (MRI) scan do not show a concussion because concussions occur at the cellular level. In other words, a concussion changes the way the brain works rather than causing a structural change to the brain. (COLORADO DEPARTMENT OF EDUCATION 2014; MCCRORY ET AL, 2017). An example of a structural change is compression due to bleeding within the brain, which does not occur in a concussion alone.
- A student with a suspected concussion should not return to physical activity for the remainder of the day of injury. This includes not only athletics but also physical education and play at recess.
 - Dues to changes in the brain when a concussion occurs, there is more risk for another concussion and/or a rare but potentially fatal condition called second impact syndrome should the child experience another head injury in quick succession to the initial injury. (MCCRORY ET AL. 2017; THOMAS, APPS, HOFFMANN, MCCREA, & HAMMEKE, 2015).
- A universal recommendation is that a child with *danger signs* of a head injury go to a hospital immediately for emergency care.
- However, exact recommendations varies of how quickly a child with signs and symptoms of a concussion but no *danger signs*, be seen by a medical provider.
 - MAYO CLINIC (2018) recommends “a medical provider visit within 1-2 days.”
 - The AMERICAN ACADEMY OF PEDIATRICS (2015) recommends, “For anything more than a light bump on the head, you should call your child's doctor.”
 - The CDC (2017) recommends either “refer right away” (FACT SHEET_ SCHOOL NURSES) or more generally “refer” a child with any signs or symptoms of a concussion to a health care provider (CONCUSSION SIGNS AND SYMPTOMS CHECKLIST).
 - All recommend that a health care provider evaluate the student athlete before returning to athletic sports.

- MCA 20-7-1303 refers to “urgent” recognition and treatment by a health care professional for student athletes suspected of a concussion while the MCA 20-7-1302 definition of a “Licensed health care professional” could include licensed athletic trainers and school nurses.
- Rest with limited cognitive activities during the initial recovery stage aids in concussion recovery. (BRAIN INJURY IN YOUTH, 2017; McAVOY, 2013; McCrory et al. 2017; Thomas, 2015).
 - However, there is increasing research showing that excessive rest may delay resolution of symptoms. (BRAIN INJURY IN YOUTH, 2017; Grool, 2016; McCrory et al. 2017).
- Increased cognitive and physical activity should be gradually progressed and limited if symptoms reoccur or increase. (McAVOY, 2013).
- Children generally have longer recovery times than adults from concussion. (McAVOY, 2013; Thomas, 2015).
- While there is no exact timetable for recovery, the majority of children have recovered by three to four weeks with many taking far less time to recover. It is important to note that in a small percentage of cases, post-concussive symptoms may be prolonged. (McAVOY, 2013; McCrory, et al, 2017).

According to McAVOY, 2013, co-existing conditions such as “attention deficits, learning disabilities, and history of migraine headaches, sleep disorders, depression or other mental health disorders may have more difficulty recovering from a concussion.” In addition, students with previous concussions or recent concussion may be at risk for long-term complications. (p.13).
- Students will progress through the “Return to Learn” steps at varying rates, pace and intervals. While some students may not have any symptoms the next day and return fully to school, others may progress more slowly and may need to go back to a preceding step due to an increase in symptoms. (BRAIN INJURY IN YOUTH, 2017; Iverson & Gioia, 2016).
- Computerized neurocognitive tests (CNT) may be beneficial to establish a student’s baseline performance before any future concussion. This may aid in future concussion recovery evaluation. However, there are reliability concerns in the accuracy of these tests and clinical decisions should not be made solely from results of a CNT. (Grool et al, 2016). Post concussion CNT results may be useful to compare to established population norms as part of the overall evaluation of post-concussion status.
- Student athletes may under report symptoms of concussion. (Meier et al, 2015).

Recognition: Signs and symptoms of a concussion:

CDC, 2017

Signs Observed by Others

- Appears dazed or stunned
- Is confused about events
- Answers question slowly
- Repeats questions
- Can’t remember events *BEFORE* the hit, bump or fall

- Can't remember events **AFTER** the hit, bump or fall
- Shows behavior or personality changes
- Forgets things they normally know like class schedule, game plays, etc.

(e) Symptoms Reported By the Student

(i) Thinking/Remembering

- Difficulty thinking clearly
- Difficulty concentrating or remembering
- Feeling more slowed down
- Feeling sluggish, hazy, foggy

(ii) Emotional

- Irritable
- Sad
- More emotional than usual
- Nervous

(iii) Sleep

- Drowsy

- Sleeps less than usual
- Sleeps more than usual
- Has trouble falling asleep

(iv) Physical

- Headache or pressure in head (more than pain just where bump occurred)
- Nausea or vomiting
- Balance problems or dizziness
- Fatigue or feeling tired
- Blurry or double vision
- Sensitivity to light or noise
- Numbness or tingling
- Does not feel "right"

Danger Signs:

Students must go to emergency room right away if child has:

- One pupil (black part of eye) larger than other
- Very drowsy or can't be awakened
- A severe and/or worsening headache
- Weakness, numbness, or decreased coordination
- Repeated vomiting or severe nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness or unusual behavior
- Loss of consciousness (even if brief)

DANGER SIGNS ADAPTED FROM CDC, 2017

Return to Learn Guidelines

Recommended practices for concussion in children has evolved and will likely continue to evolve due to ongoing research. Concussion symptoms can interfere with school attendance and learning. "Return to Learn (RTL) Protocols" are becoming increasingly uniform and recommended to have in place. The purpose of a RTL protocol is to provide guidance of how to increase cognitive /academic and physical activity in a safe way that best promotes concussion recovery.

Instructions for applying the Return to Learn Guidelines:

- Keep brain and physical activity below the level that causes symptoms to get worse.
- Stop activity and rest if symptoms get worse with increased activity. Re-try activity as tolerated.
- Parents are encouraged to go back to health care provider if:

- Symptoms are bad enough that the child is unable to return to school for partial days within 7 days of concussion,
- Any symptoms continue past 4 weeks,
- Symptoms are generally worsening rather than improving or
- Health care provider directs.
- Parents and students are encouraged to tell the school what the current symptoms are so that teachers and other school staff can apply appropriate and safe adjustments for the child.
- For non-school athletes where there is no health care provider communication provided, recess and PE are resumed without restrictions if there are no signs of concussion observed by staff, no symptoms of concussion are reported by student or parent and student presents back to school without further instruction by parent.

Return to Learn Guidelines

Stage	Home Activity	Academic Activity	Physical Activity
#1 Brain Rest	<ul style="list-style-type: none"> Rest quietly, nap and sleep as much as needed Avoid bright light and noise if bothersome Drink plenty of fluids and eat healthy foods every 3-4 hours Avoid “screen” time (text, computer, cell phone, TV, video games) 	<ul style="list-style-type: none"> No school No homework or take home tests Avoid reading and studying 	<ul style="list-style-type: none"> Walking short distances to get around is Okay No strenuous exercise. sport play or practice No driving

Progress to the next stage when your child starts to improve, but may still have some symptoms

Stage	Home Activity	Academic Activity	Physical Activity
#2 Restful Home Activity	<ul style="list-style-type: none"> Set a regular bedtime/wake up schedule Allow at least 8-10 hours of sleep and short naps if needed (less than one hour) Drink plenty of fluids and eat healthy foods every 3-4 hours Limit “screen” time to less than 30 minutes a day; use large font 	<ul style="list-style-type: none"> No school May begin easy tasks at home (drawing, cooking) Soft music or books on tape Okay Once your child can complete 60-90 minutes of light mental activity without a worsening of symptoms they may go to next step 	<ul style="list-style-type: none"> Progress physical activity, like untimed walking No strenuous exercise, sport play or practice No driving

Progress to the next stage when your child starts to improve and has fewer symptoms

Stage	Home Activity	Academic Activity	Physical Activity
#3 Return to school- PARTIAL DAYS	<ul style="list-style-type: none"> Allow 8-10 hours of sleep per night Limit napping to allow for full sleep at night Drink plenty of fluids and eat healthy foods every 3-4 hours 	<ul style="list-style-type: none"> Gradually return to school by starting with a few hours or a half day Take breaks in a quiet area every 2 hours or as needed See “Symptom Wheel” for classroom adjustments. 	<ul style="list-style-type: none"> No strenuous exercise, contact sport play or practice. Progress physical activity with light aerobic activity such as walking or stationary bike (step 4 of Return to Play Protocol). Return to PE and recess with light aerobic activity only. No contact games, no running at recess, generally only

Stage	Home Activity	Academic Activity	Physical Activity
	<ul style="list-style-type: none"> • “Screen time” less than 1 hour a day • Limit social time outside of school 	<ul style="list-style-type: none"> • Stop work if symptoms increase 	<ul style="list-style-type: none"> activities with both feet on ground and/or minimal risk of falling and out of reach of airborne objects. • Instruction by health care provider may provide alternative advisement. • No driving

Progress to next stage when your child can complete the above activities without symptoms

Stage	Home Activity	Academic Activity	Physical Activity
#4 Return to school-FULL DAYS	<ul style="list-style-type: none"> • Allow 8-10 hours of sleep per night • Avoid napping • Drink plenty of fluids and eat healthy foods every 3-4 hours • “Screen time” and social activities outside of school as symptoms tolerate 	<ul style="list-style-type: none"> • Progress to attending school full day; consider adding core classes first then electives or “specials” • See “Symptom Wheel” for classroom adjustments. Taper off adjustments as able. • Stop work if symptoms increase • PE and recess with progressing aerobic activity but no contact activities, no running at recess and out of reach of airborne objects. 	<ul style="list-style-type: none"> • No strenuous exercise, contact sport play or practice. • Progress physical activity (step 5 of Return to Play) or as instructed by health care provider. • Return to PE* and recess with light aerobic activity only. No contact games, no running at recess, generally only activities with both feet on ground and/or minimal risk of falling and out of reach of airborne objects. *Note: Athletic Trainer, where available, must first authorize PE return and allowed activity level for applicable student athletes. • Okay to drive unless otherwise directed by healthcare provider

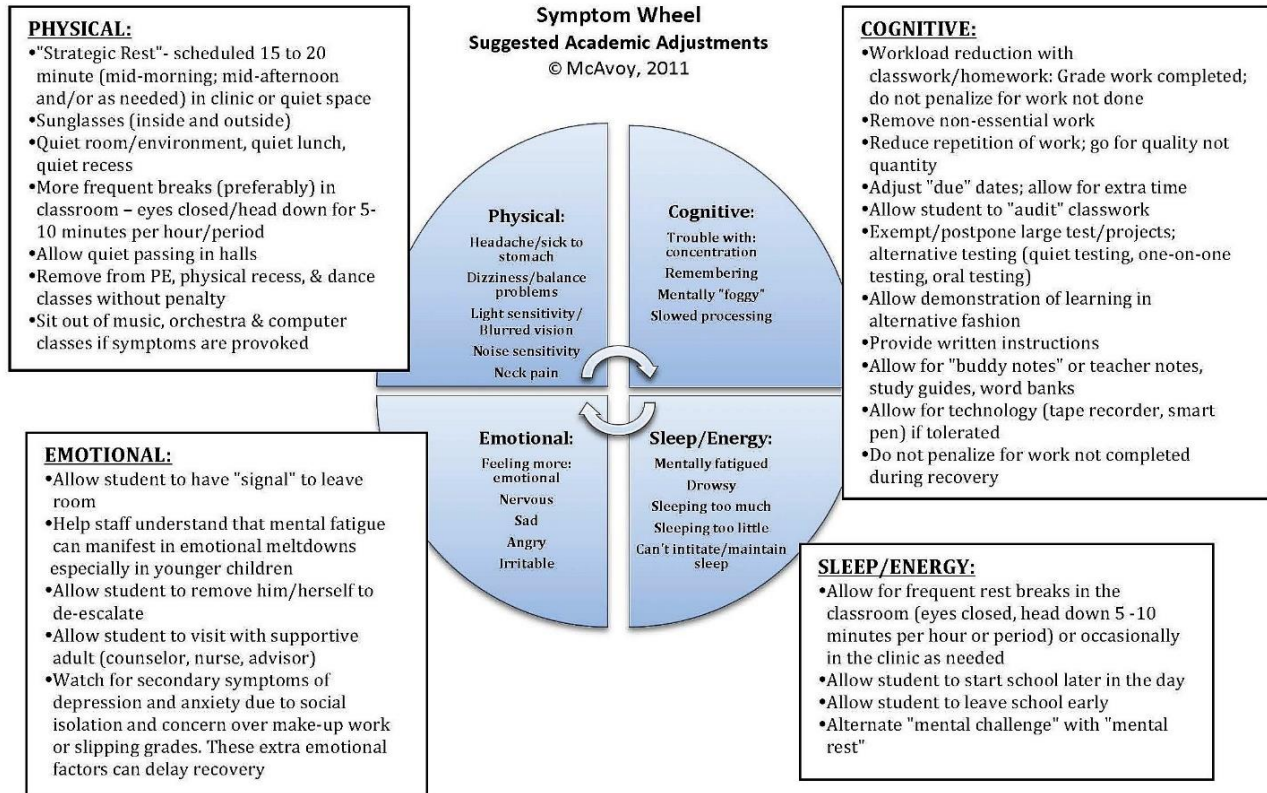
Progress to the next stage when your child has returned to full school day and is able to complete all assignments/tests without symptoms

Stage	Home Activity	Academic Activity	Physical Activity
#5 Full Recovery	<ul style="list-style-type: none"> • Return to normal home and social activities 	<ul style="list-style-type: none"> • Return to normal school schedule and course load 	<ul style="list-style-type: none"> • Advance Return to Play Protocol to Step 6 and progress through for student athletes. • Allow full PE/recess without restrictions

ADAPTED FROM CALIFORNIA INTERSCHOLASTIC FEDERATION 2017 AND SAVE THE BRAIN 2015 RETURN TO LEARN PROTOCOLS.

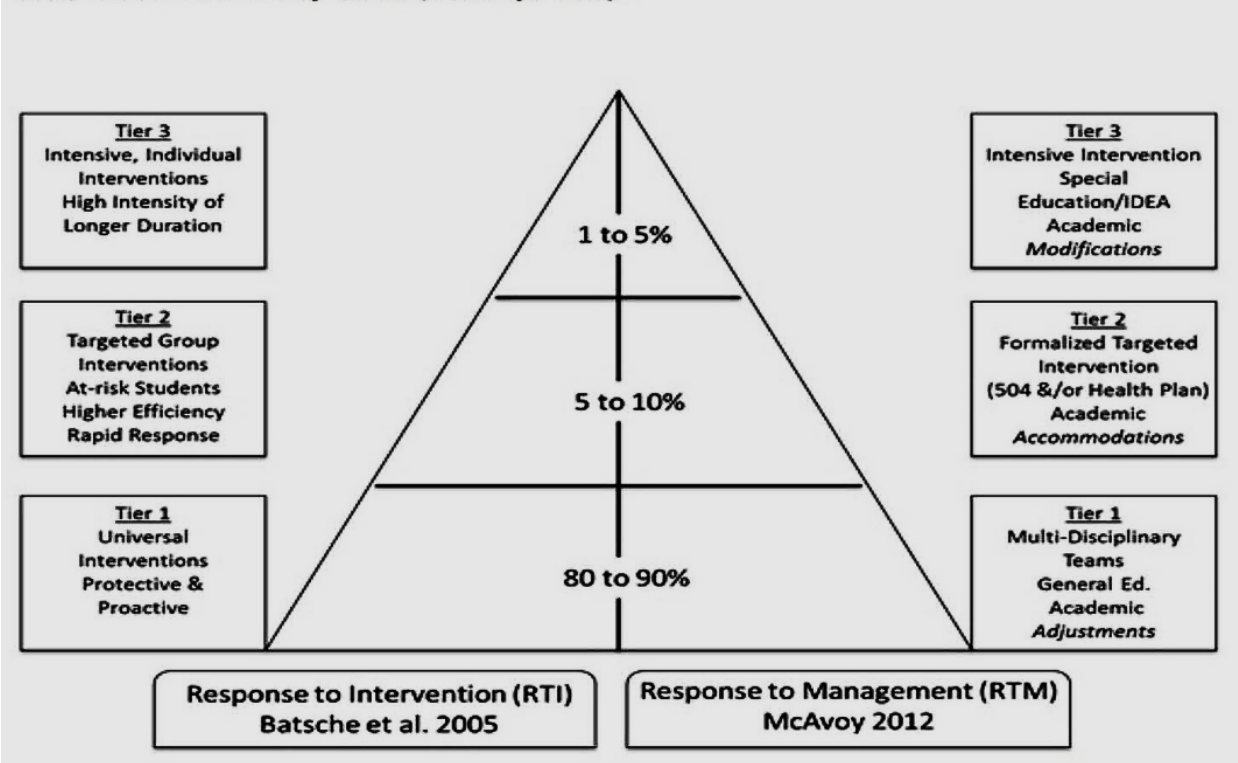
Academic Adjustments

There are common recommended academic adjustments based on what symptoms the student is experiencing. The classroom teacher should allow and facilitate adjustments for students with a recent concussion. (McAvoy and Brown, 2015). See the diagram below for examples of common academic adjustments.



BROWN, B.E. & MCAVOY, K. (2015) SYMPTOM WHEEL

Academic cognitive adjustments do *not* require a specific health care provider (HCP) recommendation to employ. The District encourages educators to facilitate adjustments freely while symptoms are present during the initial 3-4 weeks after a concussion onset. The diagram below is helpful to understand the application of the Response to Intervention model to concussions for academic adjustments, accommodations or modifications.

RTI/RTM Concussion Pyramid, (McAvoy, 2012)

BROWN, B.E. & MCAVOY, K. (2015) RESPONSE TO INTERVENTION

Physical Activity

Student Athlete: When a student *athlete* experiences a concussion, the District will use the Return to Play Protocol where there is a Licensed Athletic Trainer (LAT). If there is no LAT available at that school, a licensed health care professional must provide written clearance stating that the health care professional has evaluated the athlete, that there are no signs, symptoms or behaviors consistent with concussion and that in the health care professional's opinion, the athlete is able to safely return to organized activities. (MCA 20-7-1304). See the Return to Play Protocol and Checklists for Staff sections of this procedure.

Non-school athlete student: However, concussions can and do occur in students of all ages in a variety of circumstances and they may not be a current student athlete. For those situations, it is helpful when a health care provider gives written authorization for partial or full physical activity when considering physical education class and recess. The District will ask parents to obtain this authorization when staff are aware of a recent concussion. For non-school athletes where there is no health care provider authorization provided to the school by the parent, recess and PE may be resumed without restrictions if there are no signs of concussion observed by staff, no symptoms of concussion are reported by student or parent and student presents back to school without further instruction or communication by parent. If signs or symptoms are later noted, the school should notify the parent.

Return to Play Protocol

Coaches, LAT's and Athletic Directors ***will not allow any return of participation to either practice or competition on the same day of injury. This includes athletes who exhibit signs or symptoms of concussion, or has abnormal cognitive testing, or an athlete who denies symptoms but has abnormal sideline cognitive testing.***

When in doubt, sit them out!

A concussed athlete should return to athletics gradually and in a stepwise fashion. This process takes a minimum of one week from the onset of a concussion to full clearance and sports participation.

(McCRORY ET AL, 2017). The *Return to Play Protocol* outlines this process.

Progression is individualized and is determined on a case-by-case basis. Factors that may affect the rate of progression include previous history of concussion, duration and type of symptoms, age of the athlete, and sport/activity in which the athlete participates. An athlete with a prior history of concussion, one who has had an extended duration of symptoms, or one who is participating in a collision or contact sport should be progressed more slowly.

A.) SCHOOLS WITHOUT A LICENSED ATHLETIC TRAINER (LAT):

- A Healthcare professional (HCP) written authorization must be provided to the athletic director prior to the athlete returning to practices and/ or to full play. Coaches may not allow the athletes to return to practice or to full play without specific HCP authorization.
- If HCP authorizes progression of activity using the Return to Learn Guidelines or Return to Play Protocol only and not return to full play, coaches may only allow non-contact drills or exercise and only if the student is able to attend school for full days without worsening of concussion symptoms. (Correlates with Step 5 & 6 of return to Play Protocol)
- If there is a return of concussive symptoms, the student should stop the activity and the parent and/or HCP should be consulted.
 - For the above partial return authorization, a second HCP authorization is required for release to full play. (Competition and contact practice)

B.) SCHOOLS WITH A LICENSED ATHLETIC TRAINER (LAT):

- The District Licensed Athletic Trainers (LAT) will use the following Return to Play Protocol.
- Stepwise progression means each step takes a minimum of 24 hours. The athlete must meet both of the following criteria in order to begin the stepwise progression of actual activity as described in Step. #4.
 1. Asymptomatic at rest, without medication, and with performance of everyday activities (including mental exertion in school) AND
 2. Have written clearance for progression to activity by a healthcare provider other than an emergency room physician or other HCP who evaluated the student on the initial day of the concussion.
 - The LAT is a licensed HCP that may authorize progression of the Return to Play protocol. MCA 20-7-1302

- The athlete may progress through steps 4-6 once the above criteria have been met.
- A HCP authorization for return to full play in organized activities (contact and competition/games) must be obtained prior to progressing the athlete through the last step of the Return to Play Protocol.
 - The LAT is a licensed HCP that may authorize progression of the Return to Play protocol including the Full return to play. MCA 20-7-1302
 - The LAT retains the authority to require a secondary licensed HCP authorization as they request.

Step	Day	Activity
1.	First Day	Injury Day; Remove and referral to HCP trained in concussion management
2.	Second or more	Physical and mental rest
3.	Third or more	School (if student's symptoms have improved) May initiate light aerobic activity as below under LAT direction.
4.	Fourth or more	Light aerobic exercise – (walking, stationary bike) 30 minutes of greater than 70% max heart rate. <u>No weight training.</u>
5.	Fifth or more	Sport specific training – (shooting, running, playing catch) No contact and one-hour max time.
6.	Sixth or more	Non-contact training drills with team practice setting. Weight training permissible.
7.	Seventh or more	Exam by HCP trained in the management of concussions to be cleared for return to full contact practice not game play. If athlete has two or more concussions within 12 months, athlete must see a neurologist for clearance of this step.
8.	Eighth or more	Return to full competition, including games

Note: If the athlete experiences post-concussion symptoms during any phase described above, the athlete should immediately stop the activity. If, within 24 hours the athlete returns to an symptomatic state, they will drop back to the previous asymptomatic step and resume the progression.

- The HCP, LAT, athlete and athlete's parents will discuss appropriate activities for each day.
- The LAT, the athlete, and if necessary, the parents will review and sign the return-to-play procedure.
- The LAT will keep one copy of this written agreement and provide a copy to the parents.
- The LAT will supervise all steps.
- The athlete should see the LAT each school day for re-assessment and instructions until he/she has:
 - Progressed to unrestricted activity
 - Obtains written clearance to return to full activity by their HCP.

Checklist of Procedures for School Personnel

The following pages are to help staff understand how to apply the concussion procedures for their specific role.

General for all staff:

- ☐ Learn and periodically review signs of a concussion as well as head injury *danger signs* requiring emergency care.
 - Concussion information is maintained on district webpage: under staff links ⇒ Health Information⇒ Concussions
- ☐ Facilitate parental notification of possible concussion by notifying parent directly, notifying office staff and/or notifying school nurse.
 - Provide parent the *Head Injury Concussion Notification/ Information for Parents* for significant hits to head and/or suspected concussions.
 - Hard copies are in each school office/health office.
 - Generally, the school secretary or the school nurse will provide this to the parents.
- ☐ Notify school nurse of all possible concussions in students to facilitate follow up and accurate student history.
 - Notify assigned school nurse via email of scanned and completed front page of *Head Injury Concussion Notification/ Information for Parents*.

Principals/Administrators:

- ☐ Reinforce need and school ability for short-term classroom adjustments per *Return to Learn Guidelines* for recently concussed students.
- ☐ Refer students for Section 504 eligibility determination when individual student concussion recovery is protracted (>= 6 months) or expected to be protracted.
- ☐ Involve the whole school 504 team to include educators, school psychologist and counselor and school nurse. Include the licensed athletic trainer when student athletes are involved.

School Counselors:

- ☐ Advocate for short term classroom adjustments for the recently concussed student.
- ☐ Coordinate the Return to Learn protocol with the school nurse and teachers.
- ☐ Track general school attendance and performance for recently concussed students.
- ☐ Participate in Section 504 eligibility and planning meetings for students with a protracted or expected protracted course of recovery.

Teachers:

- ☐ Facilitate short-term adjustments for recently concussed students as per guidelines and health care provider recommendations when available.
- ☐ Communicate student symptoms and progress as needed to parent and school team.
- ☐ Withhold recess or physical education as directed by office, administrator or health services on day of suspected concussion.
 - While students usually go home if a concussion may have occurred while at school that day, there may be rare instances where the student remains at school. Students with a suspected concussion should not participate in physical education or playground recess the same day as the potential concussion.

- Modify or hold student out of recess and PE as directed by Health Care Provider communication and/or per Return to Learn Guidelines.

Activity Directors/ Principals: (Applicable for any organized youth athletic activity**)

- Ensure annual coach, officials, student and parent/guardian concussion education prior to first season of the school year.
- Education must include the following components:
 - The nature and risk of brain injuries associated with athletic activity;
 - The signs, symptoms, and behaviors consistent with a brain injury;
 - The need to alert a licensed health care professional for urgent recognition and treatment when a youth athlete exhibits signs, symptoms, or behaviors consistent with a concussion; and
 - The need to follow proper medical direction and protocols for treatment and returning to play after a youth athlete sustains a concussion.
- Utilize one of the following for coach and officials annual concussion training to meet the above requirements. (Found on the district webpage⇒ staff links ⇒ Health Information⇒ [Concussions](#))
 - [CDC Coach Training](#) Video
 - [MHSA Coach Concussion Training](#) Video (Must use this one for high school coaches)
 - [CDC Coach Concussion Facts](#) Handout
- Ensure each coach knows his or her responsibilities under this procedure.
- Utilize the [MHSA Concussion Information for Student Athletes and Parent](#) by providing it to each student athlete and parent/guardian annually prior to their sport season. (No less than every 12 months).
- Require each student and parent/guardian to sign [MHSA Student-Athlete and Parent/Legal Guardian Concussion Statement](#) when you provide the above information and before student is allowed to play.
 - Print the information and the statement separately so that you can retain the signed statement and the student and parent/guardian can retain the information.
 - Maintain the signed statements for a period of not less than one year.
 - Do not allow concussed student athlete to return to play/practice or participate in PE until you have received written clearance from a health care provider.
 - Licensed Athletic Trainer (LAT), when available, will coordinate HCP clearance and return to play including return to PE for student athletes.

*** (This section applies for all school organized youth athletic activity. : MCA 20-7-1302 (3) (a) "Organized youth athletic activity" means an athletic activity organized or sponsored by a school district, nonpublic school, or youth athletic organization in which the participants are engaged in an athletic game or competition against another team, club or entity, in practice, tryouts, training exercises, or sport camps, or in preparation for an athletic game or completions against another team, club or entity. MCA 20-7-1302 (3) (b) The term does not include recess or physical education classes conducted by a school district or nonpublic school.*

Licensed Athletic Trainers (LAT):

- Maintain training in the evaluation and management of concussions consistent with current medical knowledge.

- Educate student athletes and their parent/guardians about concussions and MCPS procedures.
 - Participate in the Code of Conduct meeting as able.
 - Review and confirm that each student and parent/guardian have annually signed the [MHSA Student-Athlete and Parent/Legal Guardian Concussion Statement](#) prior to student participation.
- Assess student injuries and/or provide guidance to coaches if LAT personally unable to attend to and assess student.
 - Refer student immediately to a Healthcare Provider (HCP) or hospital if deemed medically appropriate.
 - Use accepted and current tools for sideline assessment such as the SCAT5, cranial nerve and motor-control evaluations.
 - At the discretion of the LAT or at the request of a HCP, the LAT may utilize the ImPACT Neurocognitive testing or similar software tool in individual students.
- Refer concussed students to HCP when necessary by LAT determination.
- Notify the activity director, school nurse and school counselor of the concussion prior to the next school day.
- Provide and coordinate care with the HCP, student, parent/guardian and school nurse for the duration of the injury.
- *Return to Play Agreement*: Review with the student athlete. Require the student and parent to sign if needed. Provide one copy to the parent/guardian. Maintain signed copy.
 - Monitor the student athlete during the *Return to Play Protocol*.
 - Document daily student athlete progress, activities completed and presence and/or exacerbation of symptoms.
 - Refer the student athlete back to HCP upon completion of *Return to Play Protocol*. Provide the student with the documentation to take to the HCP.
- Do not allow the student athlete to return to full play until written clearance by the HCP has been reviewed by the LAT.
- Notify the coach when the student can return to full participation.
- Notify the school nurse for all student concussions and notify again when the student can return to full participation.
- Notify school nurse of any known past history of concussions in student athletes.

Coaches: Recognize, Remove and Refer

- **Recognize** concussions by completing the [MHSA Coach Concussion Training](#) Video annually.
- **Remove** student athlete from play immediately for all suspected concussions until the student has a medical evaluation and clearance to play.
 - ***Do NOT allow any student athlete who exhibited signs or symptoms of a concussion to return to practice or play that same day.***
- **Refer** the student athlete for a medical evaluation.
 - ***Call 911 for the presence of any danger signs.***

Sentinel, Big Sky and Hellgate High School Student

- ☐ Report all head injuries to the LAT as soon as possible for medical assessment, management, and coordination of home instructions and follow up care.
- ☐ Call the LAT at the phone number listed in the front of the Directors and Coaches handbook. The LAT will notify the student athlete's parent/guardian and provide follow up instructions.
- ☐ Seek assistance from the host site LAT or HCP if available at away events.
- ☐ Notify the student athlete's parent/guardian if the LAT is unavailable or the injury occurred in an away event.
- ☐ Inform parent of injury and instruct them to pick up student at school.
- ☐ Notify LAT of injury at above number and provide (message) injury information including student name and contact phone numbers.
- ☐ When parent/guardian is unable to be contacted, allow an injured student athlete to go home only when you have ensured that the athlete will be with a responsible person who is capable of monitoring student and understands the home care instructions, student status appears stable, and no *danger signs* exist.
- ☐ Continue to attempt to contact parent/guardian unless relieved of this by LAT.

For Middle School Students and Seeley Swan (no LAT available):

- ☐ Report all head injuries (with or without signs and symptoms of concussion) to the Activity Director/Principal as soon as possible for coordination of follow up as indicated.
- ☐ Notify the student athlete's parent/guardian.
- ☐ Inform them of injury and instruct them to pick up student at school.
- ☐ When you are unable to contact the parent/guardian, allow an injured student athlete to go home only when you have ensured that the athlete will be with a responsible person who is capable of monitoring student and understands the home care instructions and need for health care provider referral, student status appears stable, and no *danger signs* exist.
- ☐ Continue to attempt to contact parent/guardian unless relieved of this by Activity Director/Principal.

For all students:

- ☐ Refer student to hospital emergency department if any *danger signs* are present or appropriate monitoring is not available.
- ☐ ***Call 911 for the presence of any danger signs including any loss of consciousness.***
- ☐ Accompany the athlete to the hospital and remain with them until the parent/guardian arrives or relieved by LAT/ Activity Director/Principal.
- ☐ Notify parent/guardian of all significant hits to the head even when no signs or symptoms of a concussion are noted.
- ☐ Do not permit student athletes with suspected head injuries to be alone or to drive.

School Nurses/ Health Services:

- ☐ Maintain current concussion resources on district staff and parent websites.

- ☐ Ensure individual ability to assess for signs and symptoms of concussion, knowledge of current medical management and need for possible school adjustments by completing ongoing education as needed.
- ☐ Assess injured students for signs and symptoms of concussion, if available.
- ☐ Communicate directly with parents as able when identifying possible concussions to inform them of home treatment, follow up need to HCP, *Return to Learn Guidelines* and general coordination of care.
- ☐ Instruct school staff to utilize written *Head Injury Concussion Notification/ Information for Parents* for significant hits to head and/or suspected concussions when nurse is not available.
- ☐ Instruct school staff to notify nurse of all confirmed or probable concussions.
- ☐ Verify if each concussed/probable concussed 6-12th grade students is currently in a school sport activity. If they are, notify activity director (6-8th) or LAT (9-12th).
- ☐ Provide timely written notification to student's teachers, counselor and school administrator of confirmed or probable concussions.
 - Include information on concussion symptoms and common academic adjustments.
- ☐ Facilitate *Healthcare Provider Communication Concussion Form* use.
- ☐ Provide specific student information as known and as educationally needed to school team.
- ☐ Refer student for Section 504 eligibility determination and plan for students whose recovery is protracted (>/+ 6 months), or expected to be protracted and participate in meetings as applicable. Note when students have reported history of concussions for statistical purposes and updated student health information.

For Sentinel, Big Sky and Hellgate High School athletes:

- ☐ Receive notice from LAT that a concussion occurred in current student athlete.
- ☐ Inform PE teacher that student may not participate in PE until further notice from LAT.
- ☐ Communicate with LAT if nurse/health assistant sees student for further concussion symptoms or has updated information from staff, parent or HCP.
- ☐ Notify LAT that a student athlete experienced a concussion when notified by source other than LAT. (parent, HCP, student, nurse assessment, etc.)

References

1. American Academy of Pediatrics. (2015). *Head injury*. Retrieved February 15, 2018, from [Healthy Children's Website](#)
2. Brain Injury in Youth. (2017). *Concussion*. Retrieved November 29, 2017 from [Youth Brain Injury Website](#) 11/09/17
3. Brown, B.E. & McAvoy, K. (2015) *Response to management/response to intervention*. Retrieved December 1, 2017 from [Get Schooled in Concussions Website and response to intervention](#)
4. Brown, B.E. & McAvoy, K. (2015) *Symptom wheel*. Retrieved December 1, 2017 from [Get schooled on concussions website and symptom wheel](#)

5. California Interscholastic Federation. (2017). *Concussion Return to Learn (RTL) Protocol*. Retrieved December 8, 2017 from [California Interscholastic Federation website and Concussion return to learn protocol](#)
6. Centers for Disease Control. (2017) *Heads up to school nurses*. Retrieved February 15, 2018, from [Centers for Disease Control Website and handout "Heads up to school nurses"](#)
7. Centers for Disease Control. (2017). *What is a concussion*. Retrieved November 28, 2017 from [Centers for Disease Control Concussion Basic Handout](#)
8. Colorado Department of Education. (2014). *Concussion management guidelines*. Retrieved November 29, 2017 from [Colorado Department of Education Concussion Management Procedures](#)
9. Farnsworth, J.L., Dargo, L., Ragan, B.G., & Kang, M. Reliability of computerized neurocognitive tests for concussion assessment: a meta-analysis. *Journal of Athletic Training*, 2017; 52(9):826–833.
10. Grool, A.M., Aglipay, M., Momoli, F., Meehan, W.P., Freedman, S.B., Elbin, R.J., et al. (2016). Removal from play after concussion and recovery time. *Pediatrics*; Volume 138. Number 3.
11. Iverson, G.L. & Gioia, G.A. (2016). Returning to School Following Sport-Related Concussion. *Physical Medicine and Rehabilitation Clinics of North America*, Volume 27, Issue 2, Pages 429-436.
12. Mayo Clinic. (2018). *Concussion overview*. Retrieved February 15, 2018, from [Mayo Clinic Concussion overview](#)
13. McAvoy, K. (2013). REAP The benefits of good concussion management. Rocky Mountain Hospital for Children. Retrieved January 11, 2018 from [Rocky Mountain Hospital for children and Reap the benefits of good concussion management](#)
14. McCrory P, Meeuwisse W, Dvořák J, et al. (2017). *Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016*. *British Journal of Sports Medicine* 2017; 51:838-847.
15. Meier, T.B., Brummel, B.J., Singh, R., Nerio, C.L., Polanski, D.L., & Bellgowan, P. S. (2015). The underreporting of self-reported symptoms following sports-related concussion. *Journal of Science and Medicine in Sport*. Volume 18, Issue 5, Pages 507-511
16. Montana Annotated Code. (2017) MCA 20-7-1302. *Definitions*. Retrieved January 11, 2018 from [Montana Annotated Code 20-7-1302 definitions](#)
17. Montana Annotated Code. (2017). MCA 20-7-1303 *Youth athletes- concussion education requirements*. Retrieved December 12, 2017 from [Montana annotated code 20-7-1303 youth athlete concussion education requirements](#)
18. Montana Annotated Code. (2017). MCA 20-7-1304 *Youth athletes- removal from participation following concussions-medical clearance required before return to participation*. Retrieved December 12, 2017 from [Montana Annotated Code 20-7-1304 Youth athletes and removal from participation](#)
19. Save the Brain. (2015). *Return to learn plan*. Retrieved November 28, 2017 from [Kalispell regional Website and Save the Brain return to learn plan](#)
20. Thomas, D.A., Apps, J. N., Hoffmann, R.G., McCrea, M. & Hammeke, T. (2015). Benefits of strict rest after acute concussion: a randomized controlled trial. *Pediatrics*. Volume 135, Number 2.

21. Yeates, K.O., Gravel, J., Gagnon, I., Boutis, K., Meeuwisse, W., Barrowman, N., et al. Association between early participation in physical activity following acute concussion and persistent postconcussive symptoms in children and adolescents. *Journal of American Medical Association*. 2016; 316 (23): 2504-2514.

Addendums

There are multiple forms, handouts and other related information or tools associated with these concussion procedures. The district will house current information on the district website under the staff links/health information for general staff and under student links/health information for parents.