

SAVE THE BRAIN



LOGAN
HEALTH

Concussion Care Recovery Information and Activity Log

For more information and a listing of concussion-trained clinicians, go to logan.org/savethebrain or call the Save the Brain Concussion Clinic at (406) 758-7035.

What is a concussion?

A concussion is a traumatic brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolts to the head or body that causes the head and brain to move rapidly back and forth. Even a mild bump to the head can be serious. The damage to the brain occurs at a chemical level and normal brain cell function is disrupted. Diagnostic imaging studies (CT and MRI) are typically normal after a concussion. **The concussed person should see a medical provider within 72 hours of the injury.**

What are the signs and symptoms of a concussion?

Signs and symptoms of a concussion can show up right after injury or may not appear or be noticed for up to 3 days after the injury. Most concussions occur without loss of consciousness.

Symptoms of concussion include:

THINKING

- Disorientation and feeling confused — feeling slowed down or in a fog
- Memory loss
- Difficulty concentrating or thinking clearly
- Difficulty retaining new information

PHYSICAL

- Prolonged headache
- Sensitivity to light or noise
- Vision disturbances
- Dizziness
- Nausea or vomiting
- Impaired balance (this is often the first symptom to recover)

EMOTIONAL

- Irritability
- Sadness
- Anxiety
- Personality changes
- Behavioral changes
- Depression
- Lack of motivation

SLEEP/ENERGY

- Fatigue
- Excess sleep
- Trouble falling asleep
- Drowsiness
- Sleeping less than usual
- Altered sleep patterns

CONCUSSION RED FLAGS

*For the **FIRST 24 TO 72 HOURS** the concussed person should **NOT** be left alone and should be watched for Red Flag signs or symptoms. In rare cases, a dangerous blood clot may form on the brain in a person with a concussion and crowd the brain against the skull.*

Go to the emergency room if any of these RED FLAGS are noticed:

- Increasing confusion or irritability.
- Vomiting or nausea.
- Seizures or convulsions.
- Weakness or tingling/burning in arms or legs, or decreased coordination.
- Deteriorating consciousness (is drowsy or cannot be awakened).
- Severe or increasing headache.
- Unusual behavior changes.
- Double vision.
- One pupil larger than the other.
- Slurred speech.
- Cannot recognize people or places.
- Loses consciousness (even a brief loss should be taken seriously).

IN CASE OF CONCUSSION,

- Take Tylenol for headaches
- Ice the head/neck
- Eat a light diet
- Rest and sleep for the first 48-72 hours
- Do not drive for at least 24 hours
- Allow for sleep (physical and mental rest)
- Keep environment quiet and low light
- Avoid
 - Alcohol
 - Being alone
 - Physical exertion
 - Loud music, machinery, activities

By Montana Law a concussed athlete may NOT Return to Play until cleared by a qualified health care provider.

What should you do if you think your athlete has a concussion?

If you suspect that an athlete has a concussion, remove the athlete from play and seek medical attention. Do NOT try to judge the severity of the injury yourself. Keep the athlete out of play the day of the injury and until a qualified and concussion trained health care professional says it is okay to return to play. It is better to miss one game than the whole season.

Why should someone report their symptoms?

If a person has a concussion, his/her brain needs time to heal. While the brain is still healing, he/she is much more likely to have another concussion. Repeat concussions can increase the time it takes to recover. In rare cases, repeat concussions in young people who have not recovered from a prior concussion can result in brain swelling or permanent damage to their brain. They can even be fatal.

Recovery

Each concussion is unique. The key to recovery is 48 hours of rest followed by a gradual increase in brain and body activity but only if the increased activity does not make the symptoms come back.

Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms to reappear or get worse. Light activity, such as a short walk, is okay. After a concussion, returning to athletic activity and work/school is a gradual process that should be carefully managed and monitored by a healthcare professional.

Remember

- Concussions affect people differently. While most athletes with a concussion recover quickly and fully, some will have symptoms that last for days, or even weeks. A more serious concussion can last for months or longer.
- People with one or more previous concussions are at increased risk for more concussions.
- Young children, teens, and the elderly may take longer to recover.

Adapted from Centers for Disease Control at cdd.gov/headsup

Symptom Limited Activity

After the first 48 hours of rest it is good to start adding in some of your normal, daily activities. These should be done for short periods of time with plenty of rest breaks in between. Screen time should be avoided in most cases and should be one of the last activities added back to your routine. The goal is to do what you can during the day without making your symptoms worse. As your brain heals, you will be able to tolerate more activities for longer periods of time. Going for a 20 minute walk daily has been shown to help concussions heal faster as long as the walk does not make you feel worse. All activities that could cause another concussion should be avoided until the brain has healed completely. Feel free to use the following Concussion Activity Log to track some of your activities and symptoms.

Ideas to improve your sleep quality:

- ✓ Keep your bedroom dark, cool, quiet, and free from school/work reminders that may increase stress.
- ✓ Avoid looking at phones, TV, tablets and bright lights within an hour of bedtime.
- ✓ Avoid caffeine use after noon each day.
- ✓ Avoid alcohol and nicotine use.
- ✓ Partake in gentle physical activity each day (as advised by your concussion specialist).
- ✓ Avoid long naps during the daytime (as advised by your concussion specialist).
- ✓ Develop a bedtime routine before getting in bed. (ie. listen to quiet music for 15 minutes, brush your teeth, take a bath, and get in bed)
- ✓ If you have not fallen asleep within 30 minutes, get up and do a quiet activity for 30 minutes before repeating your bedtime routine.

Adapted from UptoDate Patient Education: Sleep Insufficiency (The Basics). Updated 2020.

Concussion Advocate Program

The Concussion Advocate Program (CAP) is a partnership between Save the Brain and some of the Flathead Valley Schools. It provides a contact person within the schools for students who are returning after concussion. This Concussion Advocate (CA) has been trained in our Return to Learn protocol and should check in with you once per week to see how they can support you with your transition. They can also serve as an advocate for you if there are certain classes that seem to be more difficult than others. If your school participates in our CAP program, we will ask your permission to be able to communicate with your CA, so we can let them know how to best support your healing process.

RETURN TO LEARN PROTOCOL FOLLOWING CONCUSSION

To advance to the next stage of recovery, the concussed person must be able to tolerate the current stage without worsening of symptoms.

Stage	Activity	Permitted Activities & Examples	Objective
0	Rest (up to 2 days)	<ul style="list-style-type: none"> Complete cognitive rest. No activity of any kind, no school, no texting, no video games, no computer work. 	Recovery.
1	Gradually integrate cognitive activity	<ul style="list-style-type: none"> Add cognitive activity for short periods of time, 5-15 minutes 	Gradual controlled increase in cognitive activities.
2	Continue integration of cognitive activities AND Normal daily activities	<ul style="list-style-type: none"> Cognitive activities in longer increments of time, 20 to 30 minutes. 	Increase cognitive stamina by repetition of short periods of self-paced cognitive activity.
3	School Re-entry	<ul style="list-style-type: none"> Partial day of school with 1 to 2 hours cumulative homework. 	Re-enter school with accommodations to permit controlled increase in cognitive load.
4	Integrate into school setting	<ul style="list-style-type: none"> Gradually increase to full day of school. 	Decrease accommodations.
5	Resume full cognitive workload	<ul style="list-style-type: none"> Introduce testing and catch up on essential work missed. 	Full recovery to school.

RETURN TO PLAY PROTOCOL FOLLOWING CONCUSSION

To advance beyond Stage 1, concussed person needs to be symptom-free (normal) *without any new medications* for headache, pain or sleep and have health care provider clearance.

If symptoms return after advancing to the next stage, the athlete should go back one stage and follow the activity level for that stage.

If symptoms are getting worse or not going away, see your licensed health care provider.

Stage	Activity	Permitted Activities	Examples/Guidelines
0	48 Hours of Rest	<ul style="list-style-type: none"> • Sleep. • Quiet activities that do not worsen symptoms. • Limit technology. 	<ul style="list-style-type: none"> • The key to recovery from a concussion is initial rest followed by a gradual increase in brain and body activity, as long as symptoms do not worsen.
1	Symptom Limited Active Rest	<ul style="list-style-type: none"> • Limit or avoid all activities that cause or aggravate symptoms. • May start before returning to school/social activities. 	<ul style="list-style-type: none"> • Time-limited social activities. • Casual walking, easy daily activities (bathing, cleaning). • No jogging, lifting, or activities that increase effort/breathing.
STOP until able to return to school with health care provider clearance. Return to Learn Protocol must be complete.			
This patient is safe to progress to Stage 2 of the Return to Play Protocol. He/she must receive final clearance from a health care provider before progressing to Stage 6 or participating in competition.			
2	Light Aerobic Exercise Very light to moderate activity	<ul style="list-style-type: none"> • Pulse below 70% of max • 20 minute increments of walking, elliptical, stationary bike • No lifting. 	<ul style="list-style-type: none"> • Able to talk while exercising. • Start to sweat while monitoring symptoms carefully. • Intensity is very light to moderate effort.
3	Moderate Exercise Non-contact drills, lower speed, moderate to somewhat hard effort	<ul style="list-style-type: none"> • Light lifting • Non-contact drills and activities at reduced speed. 	<ul style="list-style-type: none"> • Increased intensity and speed. • Somewhat hard effort, heart rate up to 80% of max in 20-40 min. increments. • Off to the side exercising during practice or event/class.
4	Non-contact Training Full Speed Heavy activity, school and cognitive function is normal	<ul style="list-style-type: none"> • No contact. • Heavier lifting. • Full aerobic activity. • 100% effort. • 30-60 minutes of continuous movement. 	<ul style="list-style-type: none"> • May participate in non-contact sport practice/PE class. • No game scrimmage or drills against other players. • Sport specific drills (dribbling, shooting, cones, jumping, sprints, etc.).
5	Full-contact Training All non-game/non-event activities	<ul style="list-style-type: none"> • All activities are permitted. 	<ul style="list-style-type: none"> • No symptoms before or after exercise. • Concussion scores back to baseline. • Full contact practice. • No game or event.
STOP until health care provider fills out Release to Participate Form.			
6	Full Return to Play Game activities	<ul style="list-style-type: none"> • Fully cleared by health care provider to return to normal activity. 	<ul style="list-style-type: none"> • 100% effort. • Game ready.

SAMPLE CONCUSSION ACTIVITY LOG

Date _____ Current Stage _____

Time	Activity	Duration	Intensity 0-6, 100% effort = 6	Symptoms	Worst Symptoms	Recovery Time
8:30	<i>brisk walk</i>	<i>20 mins</i>	4	Best Same ✓ Worse	<i>moderate headache & nausea</i>	<i>1 hr</i>
10:30	<i>calculus</i>	<i>50 mins</i>	3	Best ✓ Same Worse	<i>headache</i>	<i>20 mins</i>
2:30	<i>stationary bike</i>	<i>15 mins</i>	3	Best ✓ Same Worse	<i>mild headache</i>	<i>30 mins</i>
				Best Same Worse		
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3. How long did you participate in the activity?
4. How much effort did you put into the activity?
5. How were your concussion symptoms affected by the activity?
6. What was your worst symptom(s) when you participated in this activity?
(i.e. stopped you from doing/continuing the activity)
7. How long did it take before you felt better?

NOTES:

8:30 *My headache started after 15 minutes of walking. It began in the back of my head and wrapped around to my left eye. My nausea started at the 20 minute mark and it was the symptom that made me stop activity. I used some Tylenol and took a nap and woke up feeling better after an hour.*

10:30 *In calculus class, learning new formula. Headache started 15 minutes into class but did not intensify as class continued. After class, I was able to rest and recover, took 20 minutes.*

2:30 *Mild headache after 10 minutes, remained mild for last 5 minutes and resolved without medication after 30 minutes of sitting rest at my desk.*

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CONCUSSION MANAGEMENT PROGRAM

MISSION: TO DEVELOP AND PROMOTE A COHESIVE AND COHERENT CONCUSSION EDUCATION, EVALUATION, AND TREATMENT SYSTEM FOR NORTHWEST MONTANA

Concussion Clinic

Neuroscience and Spine Institute
Department of Physical Medicine & Rehab
205 Sunnyview Lane
Kalispell, MT 59901
Phone (406) 758-7035

Concussion Testing

Phone (406) 758-7323
savethebrain@logan.org

KRH Outpatient Therapy

Phone (406) 751-4520

Athletic Training Staff

Youth Development
<https://www.logan.org/youthdevelopment>

Resources

Save the Brain website:
<https://www.logan.org/savethebrain>

Centers for Disease Control (CDC):
<http://www.cdc.gov/headsup/index.html>

Brain Injury Association of America:
<https://www.biausa.org>

Brain Injury Alliance of Montana:
<https://biamt.org>

Brain Injury Helpline
1-800-241-6442

logan.org/savethebrain