Pre-Season Concussion Education Sheet

What is a Concussion?

A concussion is a mild traumatic brain injury (mTBI) that occurs when there is rapid acceleration/deceleration of the brain inside the skull due to a hit to the head, face, neck, or elsewhere on the body with forces transmitted to the brain. This causes multiple different signs and symptoms, including: physical, cognitive, emotional, and sleep-related issues.

If an incident happens where a concussion is suspected, the athlete should be removed from play and monitored for ANY symptoms. Coaches, parents, teammates, and medical event staff should be aware of the incident, help monitor the athlete, and report any signs or symptoms of concussion.

What does a Concussion look like?

As a coach, family member, spectator, or fellow athlete, these are signs to look for if you suspect someone may have a concussion:

- Direct or indirect hit to the head - this could include a hit to the body or neck
- Lying motionless on the court
- Needs help or is slow to get up after incident
- Disorientation, confusion, isn't able to respond to questions appropriately
- Seems "out of it" - blank or vacant stare
- Balance or gait difficulties, lack of coordination, stumbling, moving slowly
- Holding head or neck
- Any obvious facial injuries

What are the Signs and Symptoms of a Concussion?

If an athlete shows **ANY ONE** of the following symptoms, they are diagnosed with a concussion. These symptoms also may appear in the hours following an incident.

Cognition	Physical Symptoms	Overall Wellbeing
Difficulty concentrating	Headache	Nervous or anxious
Amnesia - troubles remembering before or after injury	Dizziness	Irritable
Confusion	Neck pain	Sadness
Drowsiness	Nausea or vomiting	More emotional
Fatigue or low energy	Pressure in head	Feeling slowed down
	Blurred vision	Feeling like they're in a fog
	Balance problems	"Don't feel right"

Cognition	Physical Symptoms	Overall Wellbeing
	Light sensitivity	Trouble falling asleep
	Noise sensitivity	

Red Flags

Medical attention required **immediately** if any of the following red flags are present.

Severe or worsening headache	Severe drowsiness or can't be awakened	Seizures
Decreasing consciousness	Repeating the same question: - What happened? - Where are we? - Why are we here?	Weakness/numbness in the arms or legs
Unsteadiness on feet or slurring of speech	Fluid leaking from ears	Bruising behind the ears
2 black eyes	Repeated vomiting	Inability to remember more than 30 minutes before OR after the injury

What should I do if I think an athlete has a concussion?

- Immediate removal from play - if they continue to play, they risk a second hit to the head or prolonging recovery

- Monitor for red flags

- **Rest**
  - Physical and cognitive rest is crucial during the acute phase of a concussion
  - This includes avoiding activities that can make symptoms worse, such as screen time, reading, or physical exertion.

- A **Complete Concussion Management Certified Clinician** should be seen 24-48 hours after injury to:
  - Assess and screen for red flags
  - Assess to determine which systems were affected by the concussion
  - Provide education and guidelines for recovery
  - Provide exercises to help with rehabilitation of the deficits found in assessment

Please note: we do not recommend keeping an athlete in a dark room or trying to deprive their sensory systems after a concussion. This can lead to hypersensitivity, and can make it more challenging for an athlete to return to pre-concussion functioning.

How long does concussion rehab take?

Each athlete will be different in terms of healing times. However, **research shows that even if symptoms are no longer present, the brain is not fully healed until at least 22-45 days.** This means that even if an athlete feels better before that timeline, the deficits in their brain are still present and risking another concussion could prolong their recovery and make their symptoms even worse. A Return to Learn and Return to Play protocol will be followed and guided by the certified clinician involved in the athlete's care. These are outlined below.

Return to School Plan for an athlete with Concussion

Stage	Title	Description	Goal
1	**Symptom-Limited Cognitive Activity**	Light reading, TV, etc - provided no increase in symptoms - also encourage plenty of rest. Take it easy for a day or two, but don't just lie in bed all day Should last 2-3 MAX	Gradual return to typical activities
2	**Light Cognitive Activity**	Increase cognitive load - encourage homework and working from home (assignments) Once able to tolerate 45 mins - 1 hour with minimal increase in symptoms, move on to stage 3	Increase tolerance to cognitive work
3	**Half Days of School - With Restrictions**	No tests, no gym, no recess, no (added) homework or loose deadlines to reduce pressure	Increase academic activities
4	**Full Days of School - With Restrictions**	Same restrictions as above - once able to tolerate full days with no increase in symptoms, gradually lift restrictions (guided by healthcare practitioner)	Slowly return to full capacity, start to introduce more challenging cognitive tasks
5	**Full Days of School - No Restrictions**	Return to full capacity at school	Return to full academic activities, catch up on missed school work

Return to Play Plan for an athlete with Concussion

Stage	Title	Description	Goal of Stage

1	**Symptom-Limited Physical Activity**	Encourage light daily walks, and household chores that do not provoke symptoms to a significant degree or place you at risk for hitting your head	Gradual reintroduction of light exercise and activities of daily living
2	**Light Physical Activity - Buffalo Treadmill Test**	If it's been more than 5-7 days since the injury - it's time to find a threshold and start a sub symptom threshold exercise program. This can speed up recovery vs. just resting. Movement is needed! If athlete passes the treadmill test (done by healthcare provider), they can move to Stage 3. If they fail, they continue with subsymptom program, and re-test in 1 week	Increase heart rate to allow brain to adapt to an increase in blood flow. Buffalo Treadmill Test will determine what the ideal pre-symptom heart rate for the athlete is so they can exercise at that level
3	**Sport-Specific Activity**	Light, non-contact practice with team or individually. This can include: - Standing serving - Passing - Setting - Standing hitting drills This excludes: - Scrimmages - Pepper - Hitting drills with full approach - Blocking drills - Defensive drills (due to risk of being hit in the head) - Sprinting/conditioning - Resistance training	Start to add movements that mimic what the athlete will do in their sport
4	**Non-Contact Training Drills**	Higher intensity, non-contact practice with team. Still avoiding drills that could cause hit to head Resistance training can begin - start to push yourself This includes: - Serving - Passing - Setting - Hitting drills with full approach - Sprinting, conditioning, or agility drills - Individual blocking drills (working on footwork/technique/jump height)	Higher intensity drills, higher heart rate, more cognitive involvement
5	**Medical Clearance**	Must be completely **asymptomatic** and back to full time school with no issues, and no increased symptoms with physical activity/practices	Return to full practices, no longer a risk of second impact syndrome

6	**Full Return/ Discharge**	Should have at least one full practice prior to playing in a game	Pre-concussion functioning at full capacity

NOTE: Each stage must be separated by at least 24 hours. If symptoms occur at any stage, the athlete must return to the previous stage

Preseason Preparation

Baseline testing is a good way to prepare for a possible concussion. Having a current baseline test will give your healthcare professional objective data about your healthy brain function. If a concussion is sustained, they will use that data to be able to confidently determine whether the brain is fully healed and ready for medical clearance and a full return to sport.

Aside from this, it is the responsibility of coaches, athletes, and parents to report any possible concussions. The athlete must also report concussive symptoms honestly and promptly to ensure proper management of the concussion.

Athlete Agreement

- I will read this guide to understand what a concussion is and how it might occur.
- I will follow the safety rules and regulations of volleyball in order to minimize the risk of concussion.
- I will make every effort to avoid making contact with my own head or any other players' heads.
- I will tell my coach if I have or suspect I have a concussion or am experiencing concussion symptoms.
- I will not attempt to continue to play if I am experiencing concussion symptoms or suspect I have a concussion.
- I will follow Return to Play guidelines and medical advice provided to me.

The following signatures confirm that the athlete and their parent/legal guardian have reviewed and understand the above information about concussions.

Printed name of Athlete	Signature of Athlete	Date
Printed name of Guardian	Signature of Guardian	Date