

WHEN IN DOUBT, LEAVE THEM OUT: RETURN TO SPORTS AFTER CONCUSSION

IMGPT: 610-944-8140 805 NORTH RICHMOND ST. FLEETWOOD (LOCATED NEXT TO HIGH SCHOOL)

WHAT IS A CONCUSSION?

- A Concussion is a **BRAIN INJURY** caused by violent shaking of the brain either due to a direct blow to the head or shaking of the head and/or body.
- Concussions cannot be detected by imaging (MRI, CT Scan, x-ray, etc.). Diagnosis depends on reported symptoms.

SYMPTOMS: <i>PHYSICAL, COGNITIVE, EMOTIONAL</i>			RECOVERY:
<u>Physical:</u> - Headache - Dizziness - Blurry/double vision - Decreased balance - Nausea/vomiting - Feeling "pressure" in head - Fatigue - Sensitivity to light and/or noise	<u>Cognitive:</u> - Loss of memory (of events either immediately before or after the injury) - Confusion - Disorientation - Loss of consciousness (occurs in less than 10% of injuries)	<u>Emotional:</u> - Irritability - Sadness - Nervousness - Frequent changes in mood	High school athletes: - Typically have a <i>prolonged recovery</i> compared to collegiate athletes. - <u>On average, 7-30 days.</u> - 40% recovery in 1 week - 60% recovery in 2 weeks - 80% recovery in 3 weeks

TREATMENT OF CONCUSSIONS

INITIALLY:

****REST** is the cornerstone of recovery!! The brain requires a great deal of energy to heal. **

Includes cognitive and physical rest:

- NO physical activity
- LIMITED use of electronics (computer, phone, television, video games, texting, etc.)
- MODIFIED class work
- SLEEP

WHEN SYMPTOMS PERSIST LONGER THAN 4 WEEKS POST-INJURY:

Sleep Disturbances:

Most important symptom to address!!! Sleep = Healing.

Practice good sleep hygiene:

- No electronics 1 hour before bed
- Go to bed and wake up at the same time every day (7 days a week)
- Avoid caffeine
- Allow naps when needed after school. But still need to sleep through the night!!

Balance Dysfunction:

Needs to be addressed before returning to sports to prevent re-injury of the brain.

- PTs at IMGPT are well equipped to help with balance issues. Treatment includes retraining of the 3 sensory systems (visual, vestibular, and proprioceptive) that work together to control balance.

Headaches:

The source of headaches is important to identify before appropriate treatment is chosen.

- **Cervicogenic headaches:** These come from the neck and can be treated by a physical therapist at IMGPT with the use of modalities, motion, gentle stretching, release of sources of tension, and postural correction.
- **Migraine headaches:** can be treated with medication-- please discuss with your doctor.

Mood Imbalances:

Mood imbalances can be both cognitively and physically debilitating:

- Concussions cause anxiety/depression **OR** concussions can be depressing/anxiety-provoking
- Anxiety consumes a large amount of energy which leaves less energy is available for healing, which slows recovery
- Please speak with your doctor or neuropsychologist regarding these symptoms.

RETURN TO NORMAL FUNCTION AND SPORTS

Risks of increasing activity too quickly include:

- Return of symptoms
- **Second Impact Syndrome (SIS):** Severe swelling of the brain when a second blow to the head occurs before symptoms of initial injury have fully resolved; SIS is always severely disabling, but can also be fatal.
- **Post Concussive Syndrome (PCS):** Symptoms of concussion lasting weeks, months or up to / over a year.
- ❖ **NFL Rule: When in Doubt, Leave Them Out:** Any player suspected of having a concussion may not return to play until medically cleared by team physician and independent neurologist.
- ❖ **Pennsylvania's Concussion Legislature Effective July 2012:** Students must be removed from play (either game or practice) if exhibiting concussive symptoms. Students may not return to sports until cleared by appropriate medical professional. A PT/ATC may be consulted by the MD, but cannot clear you themselves.

STEPS TO RETURN TO SPORTS ACTIVITIES

- When cleared by **Medical Doctor** and symptoms are no longer present, slowly increase cognitive and physical activities.
- Must clear each step before progressing to next step. If symptoms return, stop immediately and return to previous step. Athlete must be symptom free for 24 hours before re-starting protocol.
- Must have Medical clearance to start steps 2, 4, 5, & 6.

Schedule with IMGPT @ 610-944-8140 before initiating Step 2!!!

- **Step 1: Rest until ALL symptoms subside**
- **Step 2: Light stretching and light aerobics**
- **Step 3: Sport Specific skills, Moderate Strength training and moderate aerobics**
- **Step 4: Return to NON-CONTACT TRAINING, Normal weight lifting**
- **Step 5: Return to Full Practice**
- **Step 6: Return to Game level Competition**

Return to Play Guideline after Concussion

Stage	Activity	Objective	Time
1 Rest/no activity	- Physical and cognitive rest	Recovery	Every day; until all symptoms (cognitive, physical and emotional) have resolved
2 Light aerobic exercise	- Walking, swimming or stationary bicycle; <70% max predicted heart rate -No resistance training -Schedule at IMGPT 610-944-8140	Increase heart rate to improve cardiovascular endurance	5-10 minutes
3 Sport specific exercise	- Sport specific “basic” drills, i.e. running, skating, throwing drills -No head impact! -Schedule at IMGPT 610-944-8140	Resume sport specific motions but with limited body and head movement	Reduced from normal training routine
4 Non-contact training	- More complex sport specific exercises, i.e. passing, dribbling, pitching - Return to regular weight lifting routine	Return to coordinated, cognitive and physical activities required for specific sport	Close to normal training routine
5 Full contact practice	- Participation in normal practice activities - ONLY FOLLOWING MEDICAL CLEARANCE	Return to sport to regain technique, improve confidence and allow coaching staff to assess functional skills	Normal training routine
6 Return to play	- Return to normal game play	Return to sport with no medical restrictions	Normal game time

- Progression to next level should only occur when no symptoms are reported or observed during or after exercise.
- If symptoms are experienced during any step, patient should stop activity and allow rest until symptoms fully resolve and are not reported for a period of at least 24 hours. Begin practice again at the stage prior to the stage in which symptoms began.
- There are no time minimums or maximums for progression to next level. Progression should be based on patient’s symptoms, previous level of function/skill, and physical endurance. Length of time spent on any one step may vary from one day to several weeks.