



What's New in Concussion Care In the Lafayette Area

CONCUSSION TREATMENT CENTER



Franciscan HEALTH
SPORTS MEDICINE

Disclosure

**I have NO financial interests
or relationships to disclose.**



Franciscan HEALTH
SPORTS MEDICINE



Objectives

1. Recognize treatment approach has to be multi-disciplinary.
2. Understand evidence-based concussion facts.
3. Know clinical trajectories guide therapy.
4. Appreciate relevant statistical information regarding Concussions.
5. Realize new treatment approaches in concussion management.
6. Be aware of Return to Play Progression

Consensus Statement on Concussion in Sport

Vienna, Austria
2001

Prague, Czech Rep.
2004



Zurich, Switzerland
2008 & 2012

Berlin, Germany
2016

Berlin Guidelines

Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016



What is a Concussion?

- Latin for “To Shake Violently”
- 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 quickly back and forth**. This fast movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging the brain cells.

Misconception #1

- A Concussion only occurs when an athlete experiences a loss of consciousness (LOC).

Fact:

- Concussions can occur with or without LOC
- The vast majority of concussions (> 90% do not involve LOC)

Misconception #2

- **Everyone is at the same risk for Concussion.**

Fact:

- Various factors put an individual at risk for sustaining a concussion and having a longer recovery. These factors include a prior history with any of the following:

Migraines	Anxiety / Depression
Ocular Disorders	Age (Youth)
Car Sickness / Motion Sensitivity	Gender (Female)
ADHD / Learning Disability	

Misconception #3

- It is safe for a player to return to the same game or practice after suffering concussion-related symptoms.

Fact:

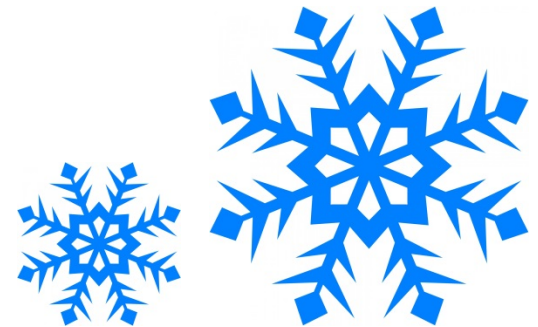
- 21 different signs and symptoms of concussion
- Any player who suffers **ANY** signs or symptoms that are specific to concussion should **NOT** be allowed to return the current game or practice no matter how quickly symptoms may clear.
- Symptoms do not always present themselves immediately, post event triggers may manifest symptoms that weren't present at time of injury.

Misconception #4

- **All Concussions, treatments and recoveries are alike.**

Fact:

- No two concussions are identical, through research at UPMC Concussion program has identified six different clinical profiles or types of concussion.
- Each profile presents with different risk factors, symptoms, outcomes, and specific treatment and rehabilitative needs.

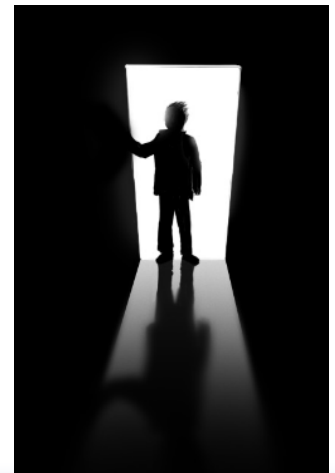


Misconception #5

- You must be placed in a dark room to recover from a concussion.

Fact:

- Evidenced-based and **active** treatments for concussion are available, including vestibular, vision, exertion, and medicine therapies.
- Certain Subtypes of Concussion are actually benefitted by movement / activity as opposed to rest.
- Concussion is a **TREATABLE CONDITION!**



Misconception #6

- Having one concussion places you at increased risk for future concussions.

Fact:

- If proper clinical management and full recovery occurs from an initial concussion, the athlete should not be at risk for future concussions. Proper clinical management of concussion is the best form of prevention.
- Some pre-existing conditions, place the athlete at higher risk of injury.



Misconception #7

- Concussion and “Sub-concussive” exposure definitely can cause long-term brain damage and Chronic Traumatic Encephalopathy or CTE.

Fact:

- Potential long-term effects from concussion come primarily from poorly managed injuries or athletes playing through symptoms.
- Concussion is a treatable condition (*if managed properly*)
- Need more long term studies to appropriately link concussion and sub-threshold injuries to long-term effects.

Concussion By the Numbers

1.7-3.0
Million

Sports and Recreation–related concussions annually

Source: University of Pittsburgh Medical Center

Concussion By the Numbers

300,000

ARE FOOTBALL RELATED

Source: University of Pittsburgh Medical Center

Concussion By the Numbers

2 in 10

high-school athletes who play contact sports
— including soccer and lacrosse —
will suffer a concussion this year.

Source: University of Pittsburgh Medical Center

Concussion By the Numbers



Second Most-Concussions Among All High School Sports

Source: University of Pittsburgh Medical Center

Concussion By the Numbers



5 – 8 % of HS Football Players will suffer a Concussion this year

Source: University of Pittsburgh Medical Center

Lafayette Area High Schools

186

Sport – Related Concussions

Source: Hall JE. Current Trends Survey: Concussion, Fall . November 2017.

Lafayette Area High Schools



116



15



13

Source: Hall JE. Current Trends Survey: Concussion, Fall . November 2017.

Lafayette Area High Schools

7.73

Avg. Days Symptomatic

Source: Hall JE. Current Trends Survey: Concussion, Fall . November 2017.

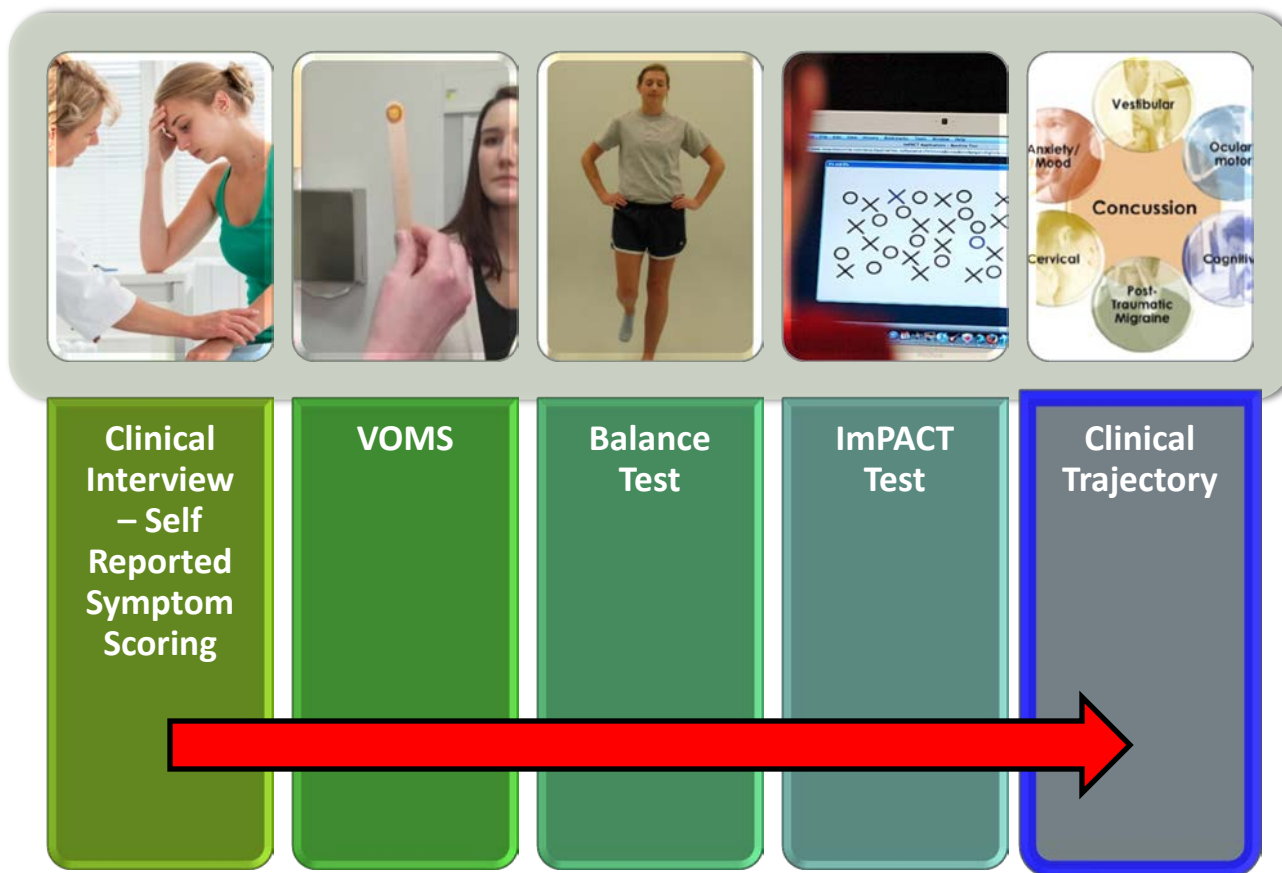
Lafayette Area High Schools

12.7

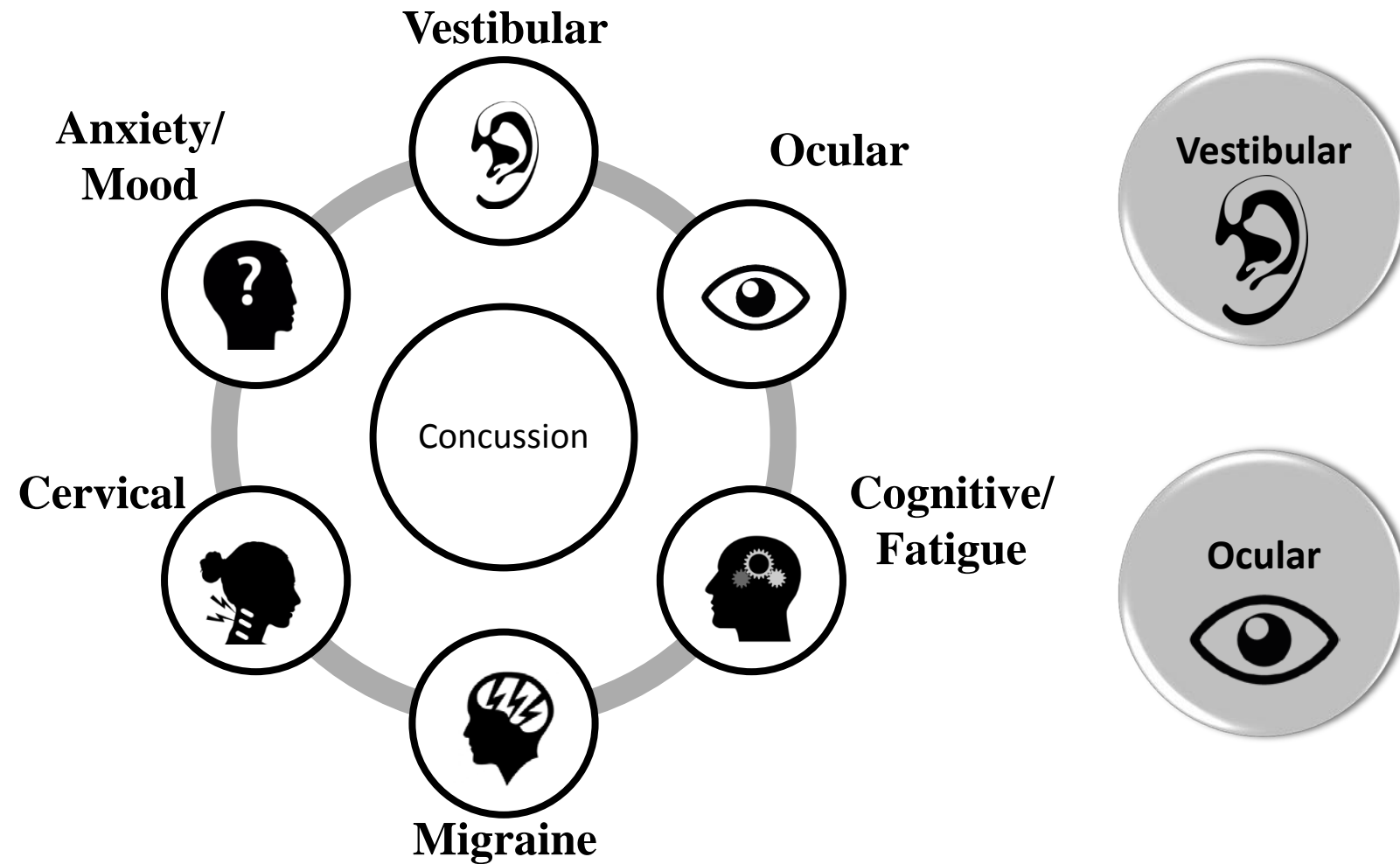
Avg. Days Return to Play

Source: Hall JE. Current Trends Survey: Concussion, Fall . November 2017.

Concussion Management



Clinical Trajectories



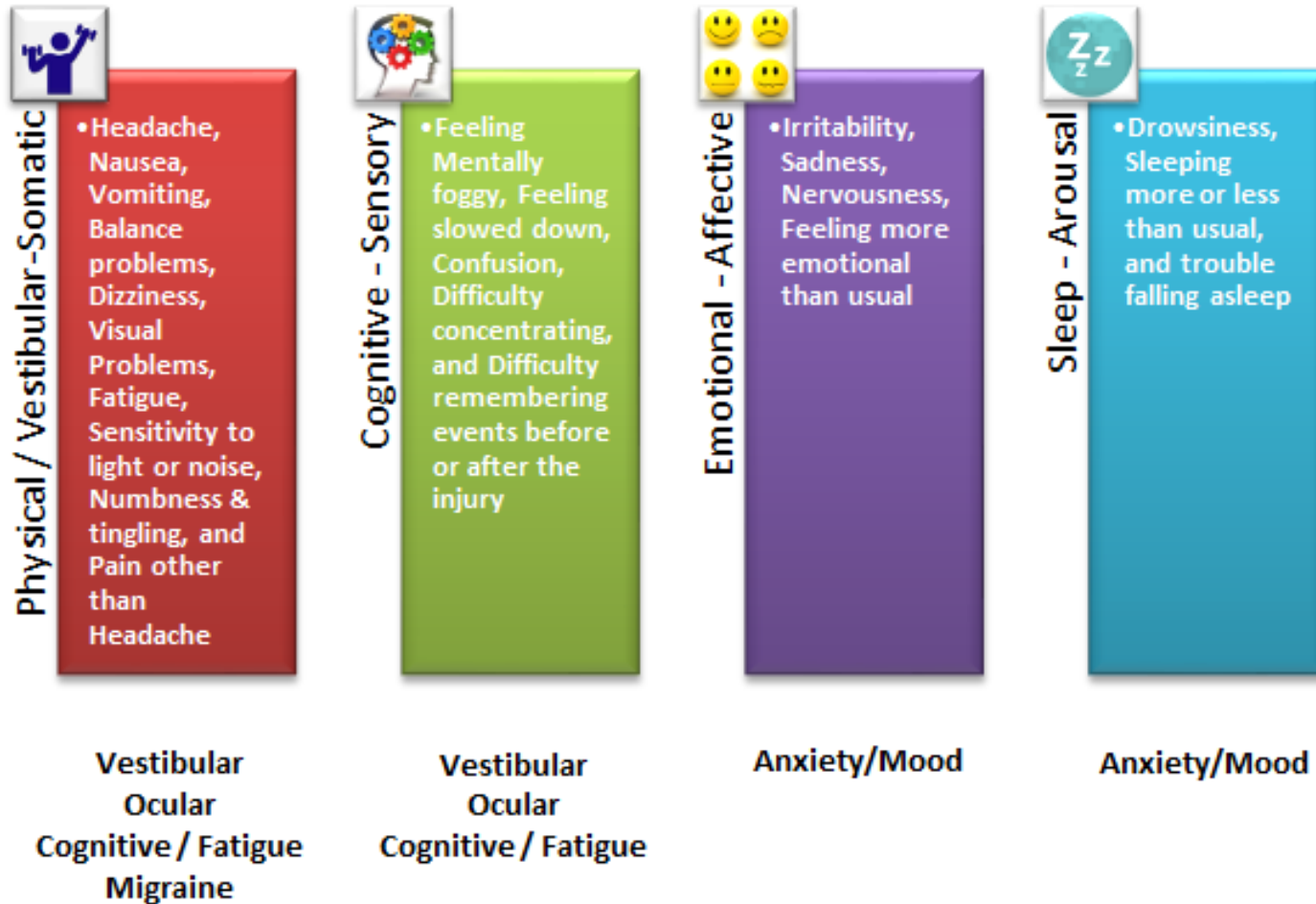
Increased Risk for Injury



Even though symptoms have cleared, lower extremity injury risk is 2.48 x greater in recently concussed athletes.

Brooks MA, Peterson K, Biese K, Sanfilippo J, Heiderscheid BC, Bell DR. Concussion Increases Odds of Sustaining a Lower Extremity Musculoskeletal Injury After Return to Play Among Collegiate Athletes. *The American Journal of Sports Medicine*. 2016;44(3):742-747. doi:10.1177/0363546515622387.

Self Reported Symptoms & Trajectories

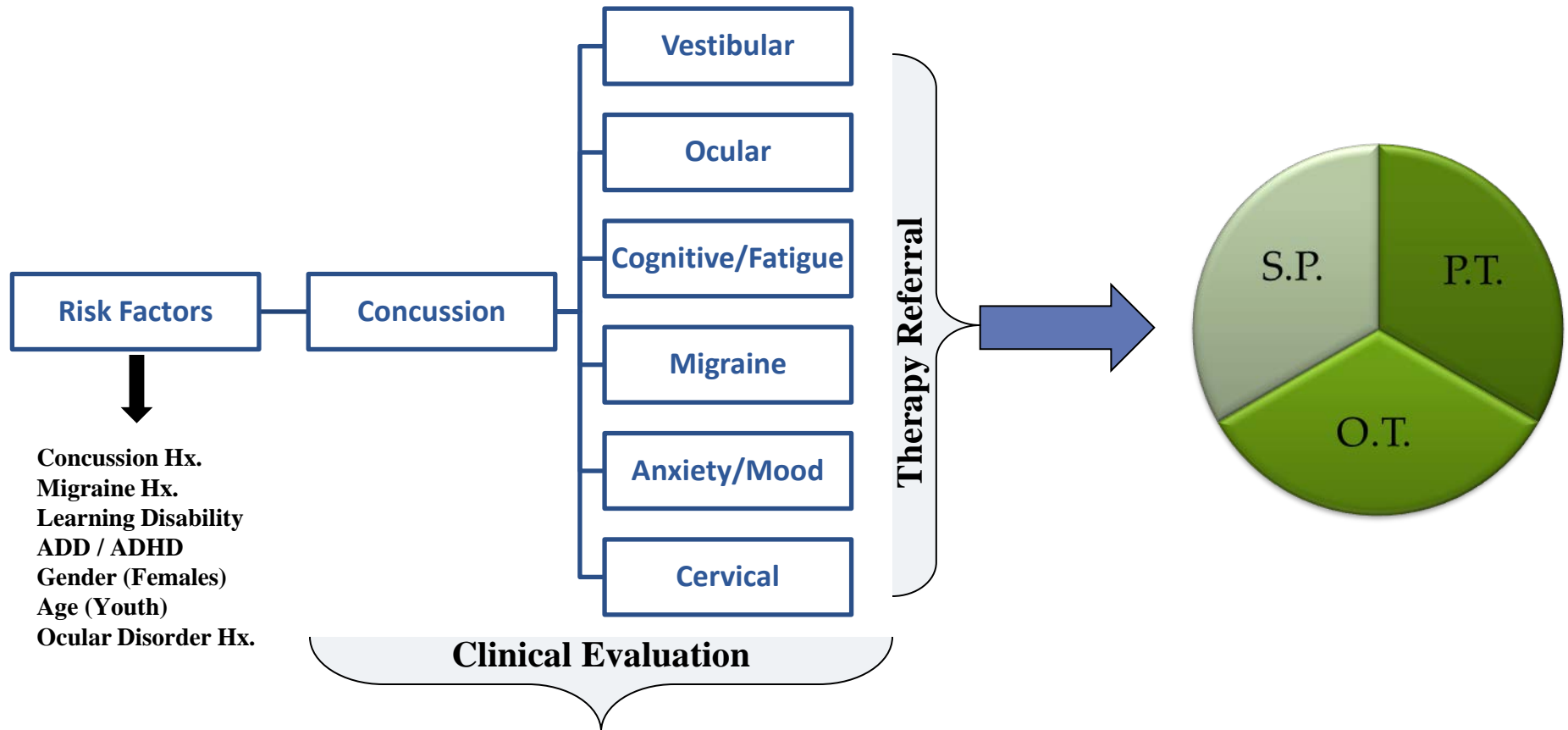


Dizziness

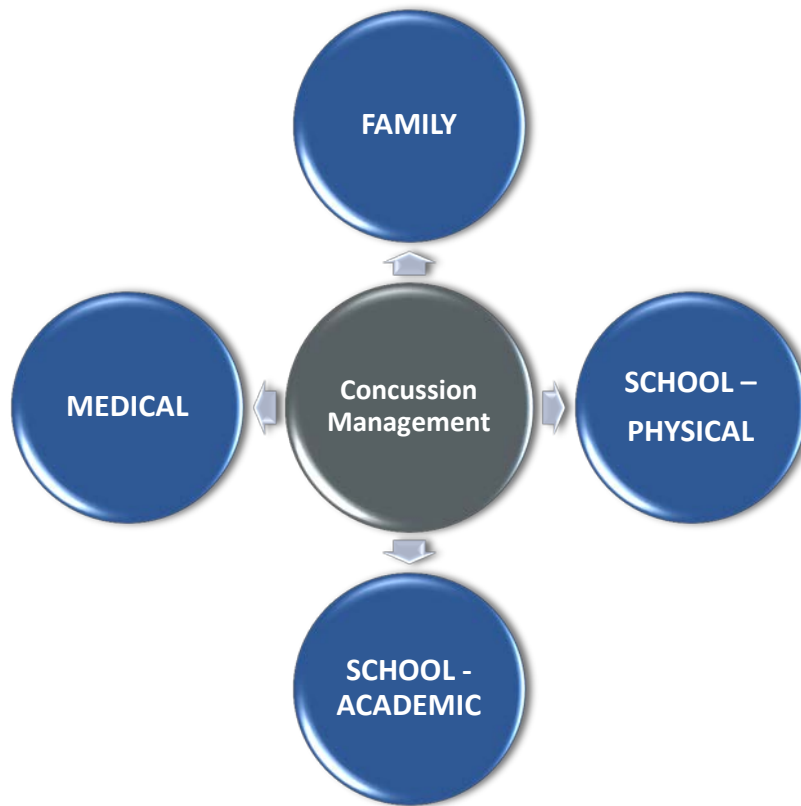


Dizziness was sole factor related to prolonged recovery,
Athlete was > 6x more likely to take > 3 weeks to recover

Treatment Pathways



Multi-disciplinary Approach



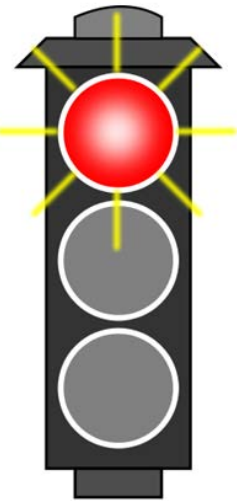
Responsibilities: report abnormal findings in the students normal environment

1. Family (Parents / Siblings)
2. School Physical (Coaches, AD, Phys. Ed)
3. School Academics (Teachers/ Counselors)
4. Medical (MD, NP, PA, ATC, PT,OT, Speech)

Medical Assessment



"You'd better sit out the rest of the game. You might have a concussion."

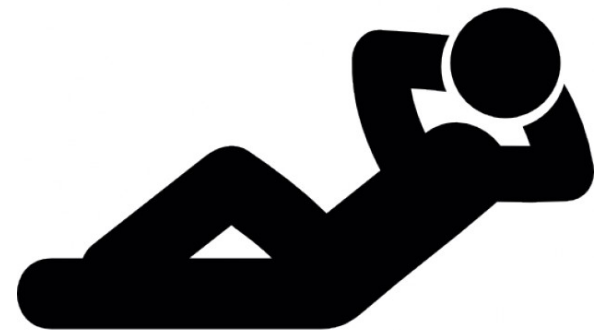
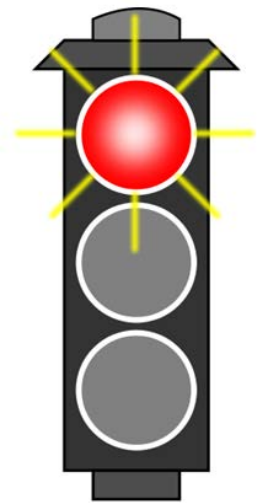




Rest

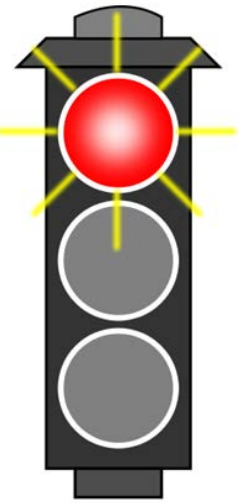
24-48

Hours



Franciscan HEALTH
SPORTS MEDICINE

Symptom Limited Activity



10 min.



No Weights

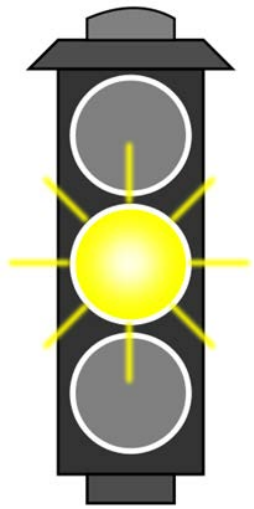


No Contact



Franciscan HEALTH
SPORTS MEDICINE

Light Exercise



20 min. /
70% MHR



No Weights

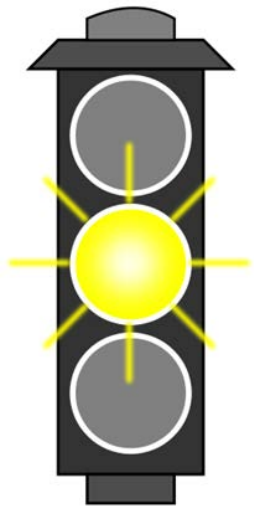


No Contact



Franciscan HEALTH
SPORTS MEDICINE

Sport Specific Exercise



30 min. /
80% MHR

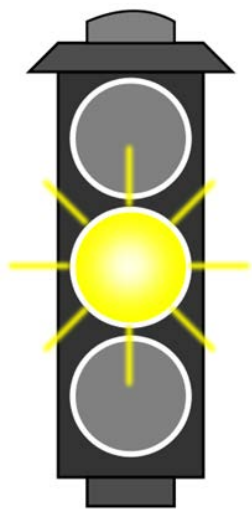


No Weights



No Contact

Non Contact Training



60 min. /
90% MHR



Weight Training

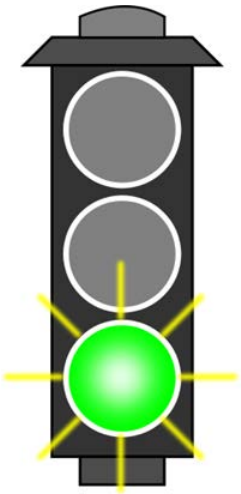


No Contact

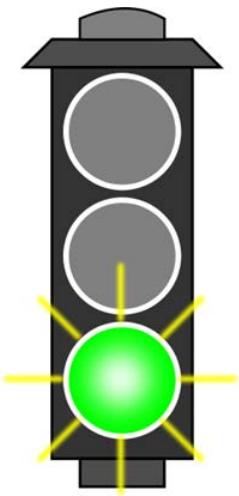


Franciscan HEALTH
SPORTS MEDICINE

Medical Clearance

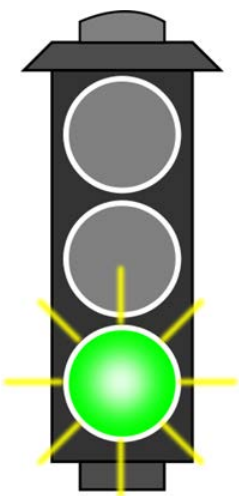


Full Contact Training



Normal Unrestricted Activity

Return to Sport



Normal Game Play

Recovery

40%

1 Week

80%

3 Weeks

60%

2 Weeks

Prevention

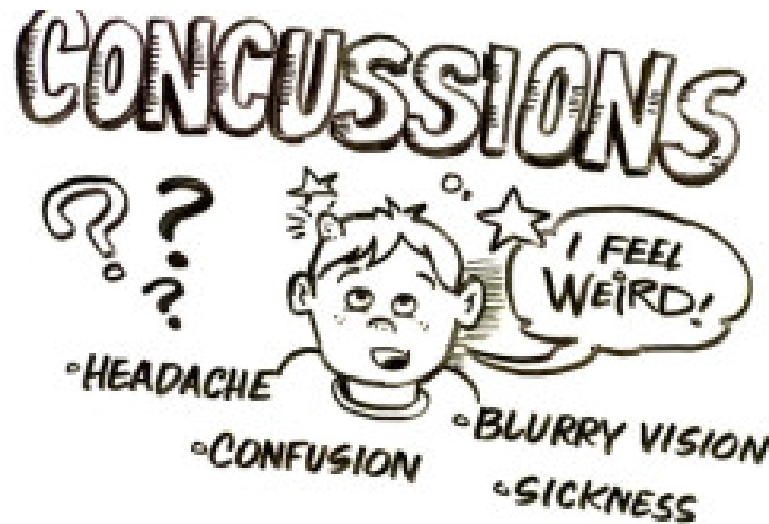


“A well-managed concussion is the best form of prevention.”

Dr. Michael “Micky” Collins, executive director, UPMC Sports Medicine Concussion Program

Source: University of Pittsburgh Medical Center

Three Phrases to Remember



- **When in doubt, keep'em out.**
 - If you suspect a concussion, keep them out until you have received clearance from the athlete's healthcare provider.

Three Phrases to Remember



- **Stand tall. Make the call.**
 - A good coach errs on the side of caution.

Three Phrases to Remember

- **No play without okay.**
 - Don't let any concussed athlete return to play without medical clearance.
 - Don't let them play, even with medical clearance, if you are still noticing signs and symptoms.

CONCUSSION
RETURN TO PLAY

**YOU MAY NOT RETURN TO
ACTIVITY WITHOUT PROPER
MEDICAL CLEARANCE !**

● Pearls of Wisdom ●

- 80 % of concussions will recover <3 weeks
- Dizziness is related to prolonged recovery; > 3 weeks
- Treatment approach has to be multi-disciplinary.
- Clinical Trajectories guide therapy.

● Pearls of Wisdom ●

- Even though symptoms have cleared, your athletes may still be at risk for lower extremity injuries.
- Concussions are treatable, if you know what you are treating and if they are properly managed.
- Evidenced-based and **active** treatments for concussion are available, including vestibular, vision, exertion, and medicine therapies.
- A well managed concussion is the best form of prevention!

References

- McCrory P, Meeuwisse W, Dvorak J, et al. Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016. *Br J Sports Med* Published Online First: 26 April 2017. doi: 10.1136/bjsports-2017-097699
- Fonseca J. (Producer). (2017). ImPact's Raw Data and Composite Scores [Video webinar]. Retrieved from <http://training.impacttest.com>
- Collins M. (Producer). (2017). Clinical Report Interpretation: Treatment Options [Video webinar]. Retrieved from <http://training.impacttest.com>
- Almquist J. (Producer). (2017). Clinical Patient Management [Video webinar]. Retrieved from <http://training.impacttest.com>
- Collins M. (Producer). (2017). Clinical Report Interpretation: Treatment Options [Video webinar]. Retrieved from <http://training.impacttest.com>
- Collins M., Mucha A., Reynolds E. (Producer). (2017). Concussion Clinical Trajectories (EBP) [Video webinar]. Retrieved from <http://training.impacttest.com>
- Almquist J. (Producer). (2017). Return to Learn [Video webinar]. Retrieved from <http://training.impacttest.com>
- Mucha A, Collins MW, Elbin RJ, et al. A Brief Vestibular/Ocular Motor Screening (VOMS) Assessment to Evaluate Concussions: Preliminary Findings. *The American journal of sports medicine*. 2014;42(10):2479-2486. doi:10.1177/0363546514543775.

References

- Assembly IG. Indiana General Assembly. Indiana Code 2017 - Indiana General Assembly, 2018 Session. <http://iga.in.gov/legislative/laws/2017/ic/titles/020/#20-34-7>. Accessed January 18, 2018.
- Hall JE. Current Trends Survey: Concussion, Fall . November 2017.
- SEA 234 – Student Athlete Concussions. IDOE. <https://www.doe.in.gov/>. Accessed January 18, 2018.
- UPMC Sports Medicine Concussion Program. UPMC Sports Medicine Concussion Program | UPMC. <http://www.upmc.com/Services/sports-medicine/services/concussion/pages/default.aspx>. Accessed January 23, 2018.
- Concussions Facts and Statistics. Concussion Statistics and Facts | UPMC | Pittsburgh. <http://www.upmc.com/Services/sports-medicine/services/concussion/Pages/facts-statistics.aspx>. Accessed January 25, 2018.
- Brooks MA, Peterson K, Biese K, Sanfilippo J, Heiderscheit BC, Bell DR. Concussion Increases Odds of Sustaining a Lower Extremity Musculoskeletal Injury After Return to Play Among Collegiate Athletes. *The American Journal of Sports Medicine*. 2016;44(3):742-747. doi:10.1177/0363546515622387.
- Collins, Michael . “Brain Awareness Week - Thiel College Haer Family Symposium .” You Tube. 3rd Annual Haer Family Symposium, 1 Feb. 2018, Greenville, Pennsylvania, Thiel College, youtu.be/jDJctZmuQeo?list=PL_m0Gq236xmUtO7ZI8yp5M21bEXqY-pBO

QUESTIONS



Franciscan HEALTH
SPORTS MEDICINE

QUESTIONS

