# St. Francis High School

# **Concussions:**

# PARENT AND ATHLETE INFORMATION



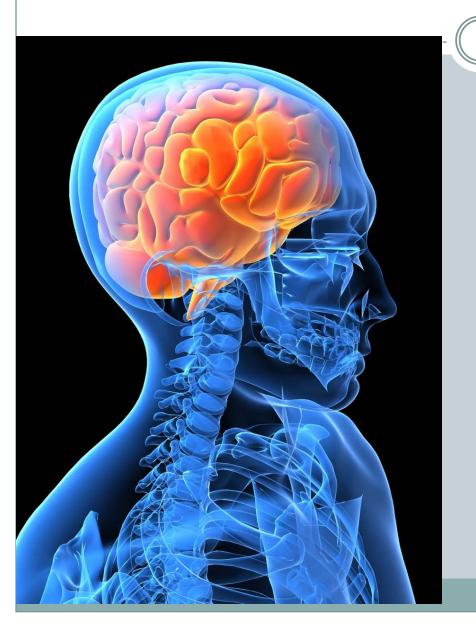
## Purpose of this Presentation

On October 15<sup>th</sup> 2011 Gov. Brown signed AB 25 creating the first concussion bill in CA.

Part of the bill required parents of student-athletes to sign a concussion information slip before the athlete can participate.

Education will help you identify when your athlete has sustained a possible concussion and the seriousness of the injury.

## What is a concussion?



A concussion is a type of traumatic brain injury (TBI) caused by a bump, blow, or jolt to the head that can change the way a brain normally works. Concussions can also occur from a fall or a blow to the body that causes the head and brain to move quickly back and forth.

## Research shows:

### Athletes who sustain concussions:

- Don't need to have been unconscious
- Don't need to have directly hit their head
- Don't need to have been amnesic
- Must have some concussion related symptoms
- A CT or MRI will be clear most of the time
- May or may not have post concussion symptoms

# Why Are Concussions Such a Hot Topic?

- There are 250,000 300,000 sports related TBIs reported annually in the U.S alone. Thousands more worldwide.
- Sports concussion is unique in that it is generally mild, but carries a high risk of recurrent concussion and subsequent illness due to early return to competition.
- Long term dysfunction often follows repeated concussions. (Mohamed Ali, Steve Young, Troy Aikman)
- >98% of sports related head injuries are concussions.

## Not Just a Bump On The Head

The brain is vulnerable after an initial concussion to further injury due to altered physiological function. This period can last minutes to months



Repeat injury CAN result in seriously altered brain function

## Signs and Symptoms of a Concussion

Athlete may exhibit only a few of these



### SIGNS AND SYMPTOMS OF A CONCUSSION

## SIGNS OBSERVED BY PARENTS OR GUARDIANS

- Appears dazed or stunned
- Is confused about events
- Answers questions slowly
- Repeats questions
- Can't recall events prior to the hit, bump, or fall
- Can't recall events after the hit, bump, or fall
- Loses consciousness (even briefly)
- Shows behavior or personality changes
- Forgets class schedule or assignments

#### SYMPTOMS REPORTED BY YOUR CHILD OR TEEN

#### Thinking/Remembering:

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

### Physical:

- Headache or "pressure" in head
- 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"

#### Emotional:

- Irritable
- Sad
- More emotional than usual
- Nervous

#### Sleep\*:

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

\*Only ask about sleep symptoms if the injury occurred on a prior day.

# Concerns with Returning Too Early: Post Concussion Syndrome

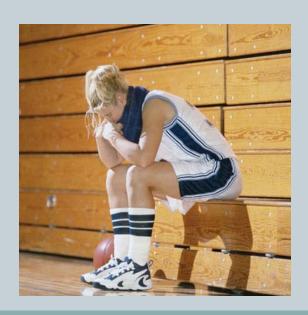
- A complex disorder in which a variable combination of post-concussion symptoms last for weeks and sometimes months after the injury that caused the concussion.
- In most people, post-concussion syndrome symptoms occur within the first seven to 10 days and go away within three months, though they can persist for a year or more.
- Headaches
- Dizziness
- Fatigue
- Irritability
- Anxiety
- Insomnia
- Loss of concentration and memory
- Noise and light sensitivity

All of these symptoms can lead to problems in school, learning new skills (like driving) and possible personality changes

# Concerns with Returning Too Early: Second Impact Syndrome

- The brain has not fully healed form the initial concussion when it sustains another blow.
- The second impact does not have to be significant injury.
- Can cause sever mental damage, coma and even death

Second impact syndrome is very easy to avoid with proper return to play criteria



## The Rules

- California's new concussion Law as well as CIF regulations both require athletes who have sustained concussions:
- 1. Be immediately removed form activity for a the remainder of the day.
- 2. Not be permitted to return to activity until he or she receives written clearance to return to the activity from that licensed healthcare provider.

## What is St. Francis doing to protect our athlete

- ANY Symptoms or Signs: NO RETURN TO ANY SPORTS ACTIVITY; whether competition, or training
- We have a Certified Athletic Trainer on site to help facilitate immediate proper medical response in case of injury.
- We are implementing the ImPACT neurocognative evaluation program to help create safe return to play criteria.

## What is ImPACT?

ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing) is a computerized concussion evaluation system.

Approximately 20 minutes to complete. The program measures multiple aspects of cognitive functioning in athletes, including:

- Attention span
- Working memory
- Sustained and selective attention time
- Response variability
- Non-verbal problem solving
- Reaction time

## How we will use ImPACT?

- High risk sports will be tested at the beginning of the season their Freshman and Junior years\*
- If an athlete sustains an concussions during the year they will take the post concussion evaluation. Test results will be released to their parents in order to assist their doctor with medical clearance.

<sup>\*</sup>All athletes in high risk sports will be tested during the first year of implementing in order to have a baseline on file. Only freshman and juniors will be tested in subsequent years. We test juniors due to natural brain development that occurs.

# **Advantages of ImPACT**

- Athletes with a mild TBI will often deny symptoms
- Athletes may lack awareness of symptoms
- Testing provides unique information
- Trusting an athlete's self-assessment is very dangerous!
- Eliminates bias, favoritism, and revenge



# Sports To Be Tested

**Fall** 

Water polo
Volleyball
Cheer

Winter

**Basketball** 

**Spring** 

Lacrosse

Soccer

Softball

Diving

TOTAL = approx 300 athletes tested first year



### **Concussion Management Model for Schools and Teams**

#### STEP 1

Pre Season Baseline Testing & Education

Educate Athletes, Parents, Coaches, Teachers on Concussions

Take an ImPACT Training Webinar or Workshop to Learn about Baseline Test Administration

Have a Concussion
Management Protocol
On-hand and Have Your
Team of Key Professionals
(listed below) Ready to
Treat Athlete - Roles/
Duties Should be
Established for:
- ATC

- Concussion Specialist (MD/DO/ PhD) - Rehabilitation

> Have Parents Sign High School Permission Slip

Schedule Supervised Baselines in School's Computer Lab

Test Administrator Confirms All Baselines are Valid (if Invalid retest Athlete)

#### STEP 2

Concussion is Suspected

Sideline Assessment

If Concussion is Suspected – Immediate Removal from Play/ Activity

ATC Sets Up Referral for Concussion Specialist (MD/ DO/PhD)

Vestibular Screening

At the discretion of trained medical personnel... Optional Brain imaging if needed

#### STEP 3

Post Injury Testing & Treatment Plan

Athlete to Take Supervised Post Injury Test 24-48 Hours After Injury Supervised

ATC Continues to Coordinate Concussion Specialist (MD/DO/PhD) Referral

Team Coordinates Care between Athlete, Parent, MD/DO/PhD, ATC, Teachers, Coaches

Does the athlete need additional and more extensive neuropsychological Testing? If so, Refer to Neuropsychologist

#### STEP 4

Is Athlete Ready for Non Contact Activity

#### CRITERIA:

- A. Symptom Free @ Rest & With Cognitive Exertion
- B. Post ImPACT Test: Within Normal Range of Baseline
- C. Written Clearance for Progression to Activity by Supervising Doctor (non-ER Doctor)

Normal Vestibular Evaluation

IF NOT: Return to STEP 3

IF YES: Stepwise Returnto-Play Progression Beginning with Light Non-Contact Activity Progressing to Full Non-Contact Exertion

#### STEP 5

Determining Safe Return-to-Play

Return-to-Play Decisions Should Always be Made by a Concussion Specialist (MD/DO/ PhD)

No Recurring Symptoms at Rest or Following Physical or Cognitive Exertion

ImPACT Test Scores Back to Baseline

After Return to Play Athlete's Final ImPACT Score is Set as their New Baseline

In accordance with the American College of Sports Medicine Guidelines: http://www.acsm.org/AM/Template.c/m/Section=ACSM\_News\_Releases&CONTENTID=12895&T EMPLATE=IC/M/ContentDisplay.c/m ACSM's Team Physicians Consensus Statement on Concussion:

http://www.acsm.org/AM/Template.cfm?Section=Home\_Page&SECTION=Annual\_Meeting& TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=12896

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# Return to Play

- Athletes will be allowed to return to play in stages depending on severity of injury.
- Athlete must be completely symptom free without the use of medication.
- Athlete mush have a written medical clearance from a licensed health care professional.
- Athlete must retake and have acceptable return to activity score on their ImPACT evaluation (if participating in high risk sport)

## Stages of Return to Play

- Stage 1: No activity, complete rest; once asymptomatic proceed to level 2
- Stage 2: Light aerobic exercise such as walking or stationary cycling
- Stage 3: Sport-specific training. Running drills. No weight lifting / contact
- Stage 4: Return to practice with attention to consistent, competitive times or abilities. No Scrimmaging / contact
- Stage 5: Return to competition under observation during practice then competition

Any re-occurrence of symptoms along the line, athlete should go back to previous level!!

## **Great Resources**

http://www.cdc.gov/concussion/ - The CDC has a great site all about TBI and concussion information

http://www.impacttest.com/ - Information about our new ImPACT concussion assessment tool

http://www.cifstate.org/index.php/the-latest-news/concussions -

The CIF link to concussion bylaw and other resources