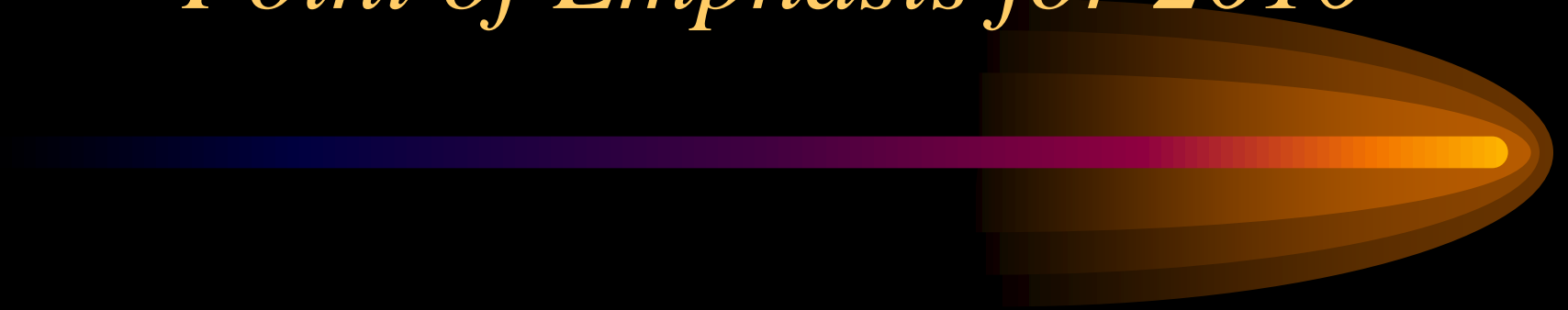


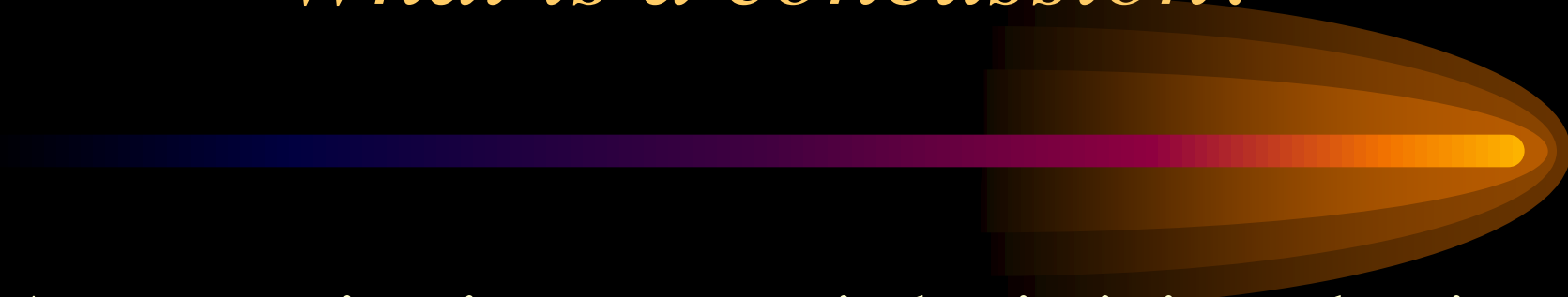
*Concussion Overview for NFHS  
Point of Emphasis for 2010*



# *NFHS Rule*

Any player who exhibits signs, symptoms or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the game and shall not return to play until cleared by an appropriate health-care professional.

## *What is a concussion?*



A concussion is a traumatic brain injury that is caused by a sudden blow to the head or to the body. The blow shakes the brain inside the skull, which temporarily prevents the brain from working normally.

# *Signs & Symptoms*

- Passing out.
- Unable to remember what happened after the injury.
- Acting confused, asking the same question over and over, slurring words, or not being able to concentrate.
- Feeling lightheaded, seeing "stars," having blurry vision, or experiencing ringing in the ears.
- Not being able to stand or walk; or having coordination and balance problems.
- Feeling nauseous or throwing up.
- Headache.

# *Severe Concussions*

- Develops new symptoms over time and feels worse than before the injury.

- Post-concussive syndrome

Changes in ability to think, concentrate, or remember.

Headache or blurry vision.

Changes in sleep patterns, such as not being able to sleep or sleeping all the time.

Changes in personality such as becoming angry or anxious for no clear reason.

Lack of interest in usual activities.

Dizziness, lightheadedness, or unsteadiness that makes standing or walking difficult.

# *Concussion Grade 1*



- Grade 1

Post-traumatic amnesia <30 minutes, no loss of consciousness.

Confusion, no loss of consciousness.

Confusion, symptoms last <15 minutes, no loss of consciousness

## *Concussion Grade 2*

- Loss of consciousness <5 minutes or amnesia lasting 30 minutes–24 hours
- Symptoms last >15 minutes, no loss of consciousness

## *Concussion Grade 3*

- Loss of consciousness >5 minutes
- Amnesia >24 hours



# *Diagnosis*



- Ask simple questions such as "What day is it?" "Who is the President of the US."
- Strength, balance, coordination, reflexes, and sensation.
- Imaging tests such as a CT or MRI

# *Treatment*



- Some require hospitalization, many go home
- For swelling, cold packs
- Prescription/non-prescription pain meds.
- Rest / normal sleep
- Prevention of recurrent concussions.

# *Recovery Time*



- Depends on severity

Few hours

Days

Weeks

Months

Years

# *Prevalence*



300,000 sport related concussions per year.

Football & Soccer have the highest rates.

Female rates are higher than males

## *Same Day Return to Play*

- If removed pursuant to NFHS Rule, and it is determined by a licensed physician of medicine or osteopathic medicine (MD/DO), sufficiently familiar with current concussion management, that the removed student-athlete did NOT sustain a concussion, return to play is permissible.
- Football officials are NOT and should not be authorized to determine whether or not a student-athlete may return to play.

# *Returning to Play in Subsequent Contest(s), After Sustaining a Concussion*

- Association must require either an MD or DO, who is sufficiently familiar with current concussion management, to complete a doctors note to allow a player to return to play in subsequent Contest(s).



Questions?

# References

- American Academy of Neurology guidelines.  
[www.neurology.org](http://www.neurology.org)
- Bates, B. (2006) A Guide to Physical Examination and History Taking. (9th Ed) Philadelphia, PA. J.B. Lippincott Co.
- Gessel et al. (2007) Concussions Among US High School & College Athletes. Journal of Athletic Training. 42(4):495-503
- Conversation with Mr. Brad Cashman, PIAA Executive Director, May 19, 2010