Concussions: What parents and kids need to know

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Goals of this talk:

• Learn “What is a concussion?”
• What should I do if my child gets a head injury?
• Red flags for head injuries: Things to be worried about
• Returning to school after a head injury
• Returning to sports after a head injury
• House Bill 143—The Concussion Bill
Concussion: The Statistics

• 1.6-3.8 million sports related concussions per year in the US
• 30% of all concussions in 5-19 year olds are related to sports
• Increasing incidence
  – ? More awareness
  – No increase in catastrophic injury
Concussion: The Statistics

• Highest rates:
  – Football
  – Girl’s soccer
  – Boys wrestling
  – Girl’s basketball

• More in competition than practice

• Rates higher in females.
What is a concussion?

• Injury to the brain that does not result in any structural brain damage
  – Nothing wrong on MRI or CT scan
  – No bleeding, swelling, or bruising
• Injury happens at the chemical level
  – Constant chemical changes happening in the brain
  – Concussion disrupts the balance of chemicals and blood flow to the brain
What is a concussion?

• Both adults and children can experience concussions
  – Have similar symptoms
  – Children have a harder time and take longer to recover
How do head injuries happen?

• Sports related
  – Head to head
  – Head to body
    • Does not need to be direct contact
  – Head to floor/playing surface
    • Grass vs. court vs. pavement
  – Hit by object
    • Bat, ball, etc.

• Non-sports related
  – Falls
  – Motor vehicle accidents
  – Bike accidents
What you may notice on the sideline

- Confusion
  - Not sure where he/she is
  - Not sure what the score is
- Headache
- Stumbling
- NOTHING
  - Can take up to 48 hours to develop symptoms
When to go to the ER

- Loss of consciousness > 1 min
- Neck pain
- Worsening headache
- Seizures
- Persistent confusion
- If you are concerned...
Signs and Symptoms

• Physical
  – Headache
  – Dizziness
  – Balance problems
  – Nausea/vomiting
  – Visual disturbance
  – Sensitivity to light/sound
  – Numbness/Tingling

• Cognitive
  – Mentally “foggy”
  – Slowed down
  – Difficulty concentrating
  – Memory problems
  – Confusion
Signs and symptoms

- Emotional
  - Irritable
  - Sadness
  - More emotional
  - Nervous

- Sleep
  - Drowsiness
  - Sleeping more/less than usual
  - Difficulty falling asleep
Important to remember

Symptoms will develop over the 48 hours after the injury...and symptoms may worsen.
What they will do at the ER/pediatricians office

• History of the incident
• Memory testing, concentration testing
• Neurological exam
  – Test all muscles
  – Reflexes
  – Finger to nose
  – Balance
• Neck exam
• CT scan
• Plan
Plan for treatment

• REST!
  – Physical and Mental
    • No activities that raise the heart rate
      – No gym class, weightlifting*
    • No loud music, TV, movies, or video games
      – 30 min of low level “boring” TV okay
    • Stop if something worsens your symptoms
    • OK to nap as long as having fairly normal bedtime

• Headache
  – Treat with Acetaminophen (Tylenol)
Plan for treatment

• Close follow up with the pediatrician/family med
  – May need weekly follow-up
• Other specialists may be involved
  – Sports Medicine
  – Neurologist
  – Neuropsychologist
    • More memory, concentration testing
  – Physical therapy
How long will it last?

- 80-90% athletes resolve in 7-10 days
- However, *every child/athlete is different!*  
  - Can take weeks to months
- Treatment including school accommodations and returning to play will be tailored to each patient
Getting my child back to school

• Going back can be difficult after concussion
  – Headaches
  – Sensitivity to light and noise
    • School bus
    • Cafeteria
  – Difficulty concentrating
  – Fatigue
  – Unable to do recess or PE
Return to Learn

• Out of school until symptoms become manageable
  – Usually out of school for min 2-3 days
  – Good rule: back when can read/do homework for 20 minutes without significant exacerbation in symptoms
  – Start with ½ days for the first two days back
    • Morning vs. afternoon
Return to Learn

• Homework
  – Do in short 20-30 min blocks
  – If symptoms worsen, take a break and retry
  – Give note for overall reduction of workload
  – More time to complete assignments

• Tests
  – Postpone testing
  – Additional time for testing
• Additional Accommodations:
  – Quiet place for lunch
  – Audio learning
  – Sunglasses
  – To nurses office if symptoms worsen
  – Home if symptoms worsen
Return to Learn

• Work with school and school nurse
  – More understanding by admin/teachers
  – Physician and parents as advocate

• Work in progress
  – Keep student from falling far behind without worsening symptoms
  – Adjust accommodations as symptoms change/improve
Return to Play

• Consider if:
  – Back to school for full days
  – Symptom free—feeling 100% back to normal
    • Parental input is very helpful for physicians
    • You know your child the best!
Return to Play

• Return to sports occurs over 5 days and should be closely monitored
  – Day 1: Light aerobic activity (walking, jogging, riding stationary bike) for about 20 min.
  – Day 2: 20-30 min more vigorous activity—sport specific—ball handling, running
  – Day 3: Non-contact training drills—throwing the football, passing in hockey
Return to Play

• Day 4: Full contact practice
• Day 5: Full contact game

• If symptoms return—rest for 24 hours and go back to the previous day of activity
• Call your doctor if symptoms persist or if you are noticing changes in your child
• Athletic trainers and physical therapists are available to help with returning to play safely
Additional Needs

• Kids with certain conditions may have a more difficult time getting back to school/sports
  – ADD/ADHD/learning disabilities
  – Migraines or chronic headaches
  – Anxiety/Depression
  – Multiple concussions
What if my child has had a few concussions?

• No good answer for how many is too many
  – Every kid responds differently
• May need to undergo additional testing
  – Check memory, learning, reaction time
• Discuss with sports medicine physician or primary care physician
Long Term Consequences

• Ongoing studies
• Most looking at ex-NFL players and boxers
  – Long term exposure to head injuries
• Possible problems
  – Depression
  – Memory issues
  – Cognitive deficits
House Bill 143

• Zachary Lystedt
• Ohio’s Bill
  – April 26, 2013
  – Pulled by ref or coach for symptoms concerning for concussion
  – NO same day RTP
  – RTP by physician or other licensed healthcare provider

– Online training program
Summary

• Concussion is an injury to the brain that causes a chemical change
• Lots of symptoms can occur with concussion
• If you are worried or see any of the red flag symptoms, call 911 or go to ER
• Return to school and sports should be monitored by your child’s doctor
• Coaches and referees should have concussion training
Questions?