FHBC Concussion Seminar

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Gavin Leung, BHK, Dip SIM

- Certified Athletic Therapist since 2005
- With FHBC since 2004
- FHC in 2011
- IST Coordinator for Gymnastics BC
- Team BC Medical Manager 2007 WCSG, 2009 CSG, 2011 CWG

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What is a Concussion?

- A Concussion is a disturbance in brain function caused by a direct or indirect force to the head.

Much Has Changed..

- No Grading System
- Loss of Consciousness no longer key
- No return to play the same day (Vienna 2001)
- Prague 2004 Professional Athletes
- Graduated return to play
- First consensus statement after Vienna Symposium (2001).
- Forth Consensus Statement 2012 (Zurich)

How Does a Concussion Happen?

- Anything that causes a sudden stop can cause a concussion.
- Can be a direct blow to the head or whiplash caused from a hit to the body.
- Concussions are more likely to happen in competition than training.

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What Happens During a Concussion?

- Concussion typically results in the rapid onset of symptoms that resolve spontaneously.
- May or may not involve loss of consciousness (90% do not).
- Symptoms largely reflect a functional disturbance rather than a structural injury.
- Resolution of the clinical and cognitive symptoms typically follows a sequential course. In a small percentage of cases, however, post-concussive symptoms may be prolonged.

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Signs and Symptoms

- The suspected diagnosis of concussion can include one or more of the following clinical domains:
  1. Symptoms—somatic (ex. headache), cognitive (ex. feeling like in a fog) and/or emotional symptoms (ex. instability)
  2. Physical signs (ex. loss of consciousness, amnesia)
  3. Behavioural changes (ex. irritability)
  4. Cognitive impairment (ex. slowed reaction times)
  5. Sleep disturbance (ex. insomnia).
- If any one or more of these components are present, a concussion should be suspected.
- Signs and Symptoms may be delayed for several hours following the concussion.

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Management

- Removal from play
- Physical and Cognitive rest until symptoms subside
- Use of the SCAT3 and childSCAT3 (Preseason Screens)
- The majority of injuries (90%)will recover spontaneously over 7-10 days.
- The player should not be left alone following the injury and should be monitored for deterioration over the initial few hours.
- Activities that require concentration and attention may exacerbate symptoms and delay recovery.

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Management Continued

- MRI and CT scans contribute little to management.
- The final determination regarding concussion diagnosis and/or fitness to play is a medical decision based on clinical judgment.
- If symptoms worsen, refer to ER
- Referral to Sport Physician

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Graduated Return to Play

- 1. No activity: Complete physical and cognitive rest
- 2. Light aerobic exercise: walking, swimming or stationary cycling keeping intensity <70% MPHR. No resistance training.
- 3. Sport-specific Exercise: Running drills, stick and ball.

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Graduated Return to Play

- 4. Non-contact training drills: Progression to more complex training drills (Passing/Shooting Drills). May start progressive resistance training).
- 5. Full contact training: Following medical clearance, participate in normal training activities
- 6. Return to play: Normal game play

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Children and Adolescents

- Evaluation and management protocols above can be applied to ages 10 and up.
- Below that age children report concussion symptoms different from adults and would require age-appropriate symptom checklists as a component of assessment.

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Prevention

- Protective equipment – mouthguards and helmets
- There is no good clinical evidence that currently available protective equipment will prevent concussion, although mouthguards have a definite role in preventing dental and orofacial injury

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Questions?

References

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