

International
Paralympic Committee

Concussion in Para athletes

Jamie Kissick, IPC Medical Committee
March 8, 2018

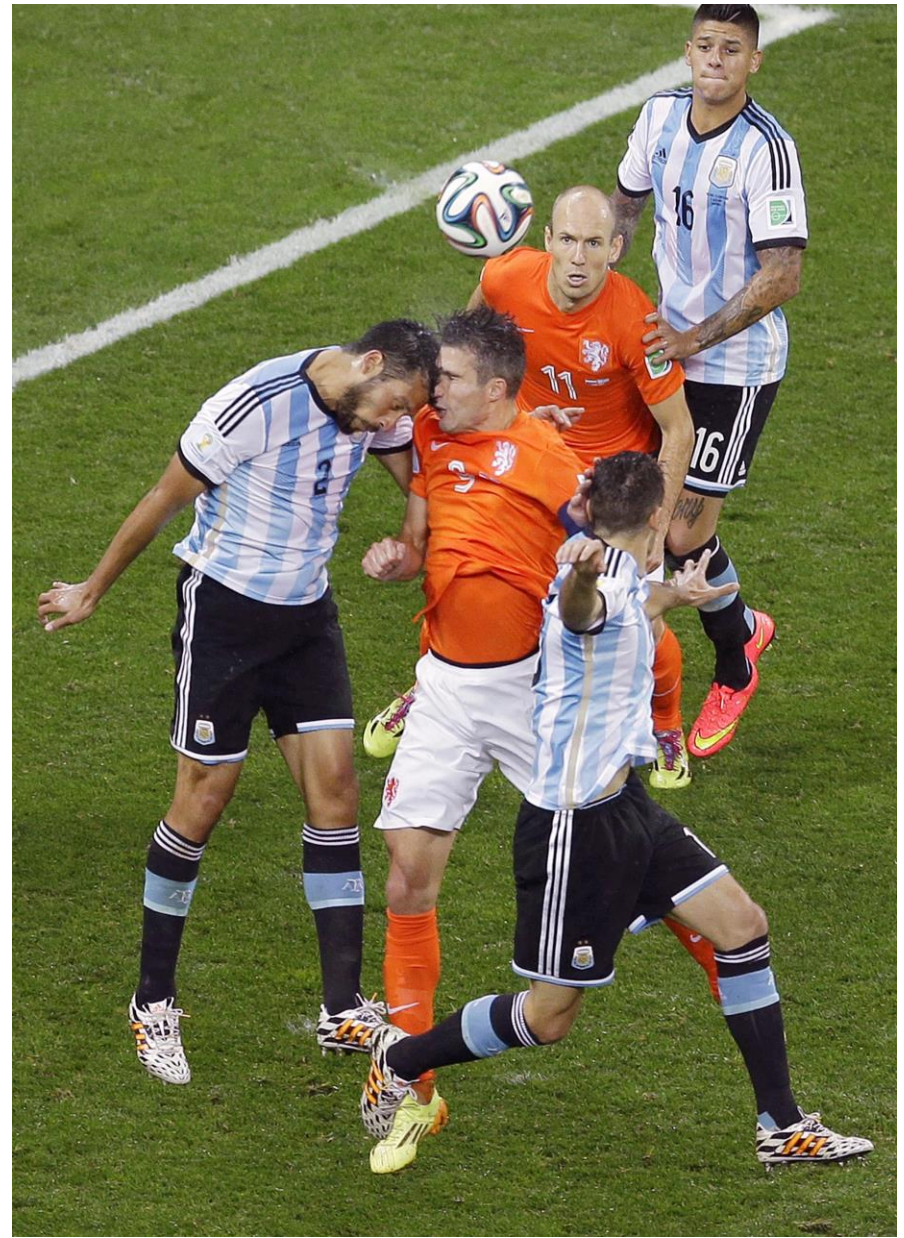


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Athletes and concussion: 6000+
Athletes with disability and
concussion: 60

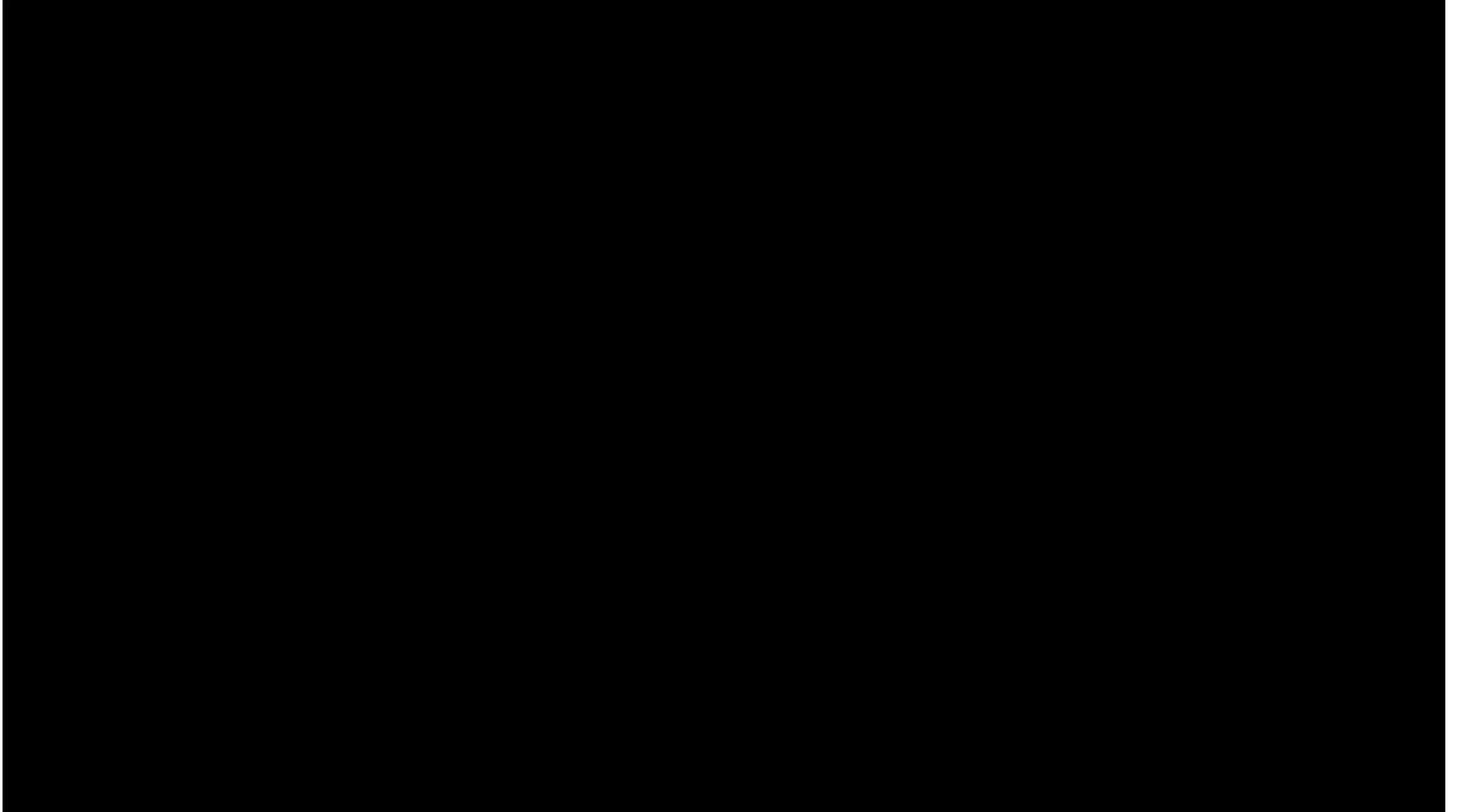
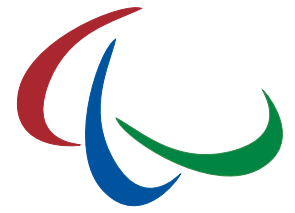


Consensus statement

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

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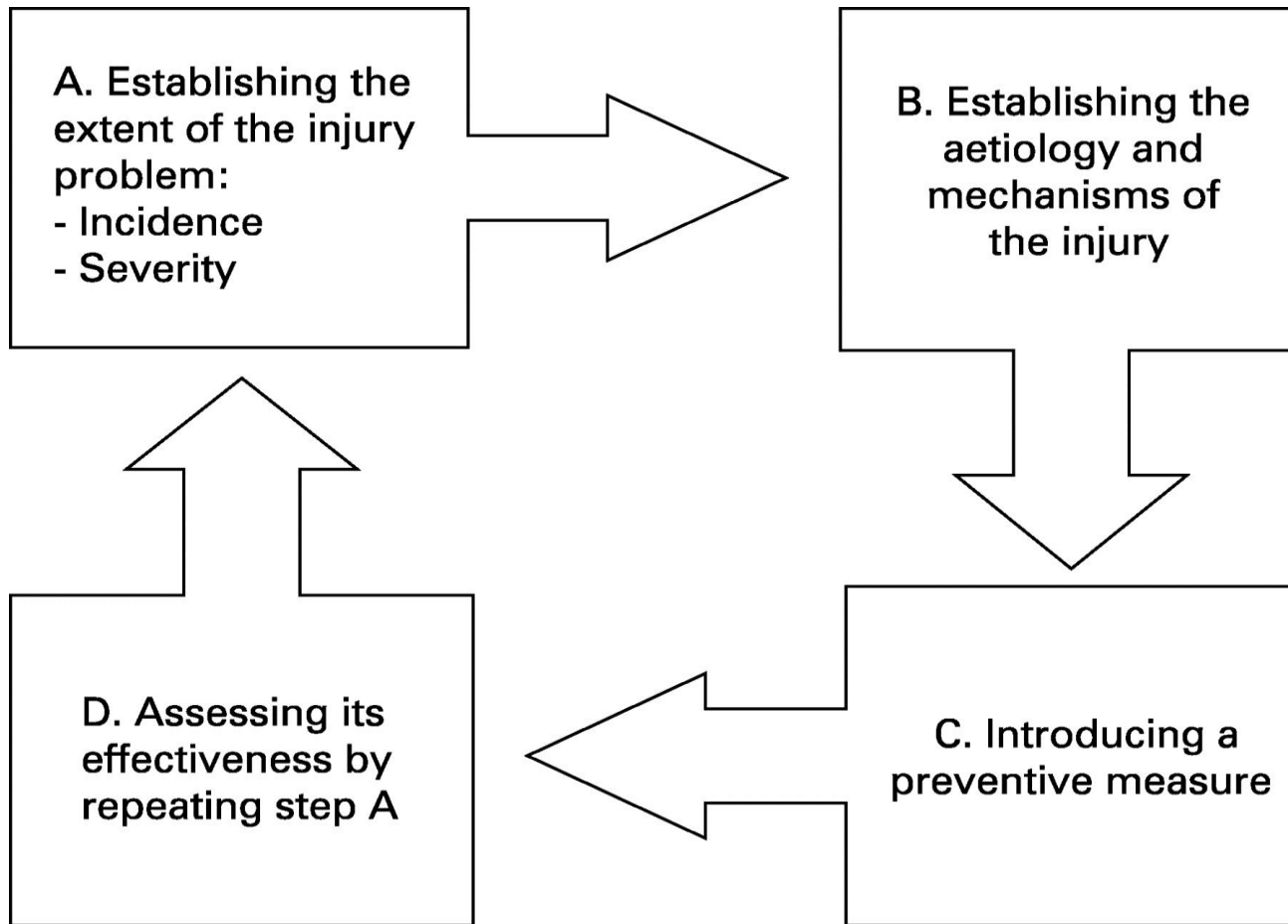
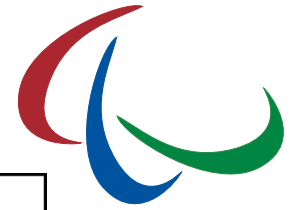






How to recognize the moods of an Irish Setter

How to recognize the moods of an Irish setter



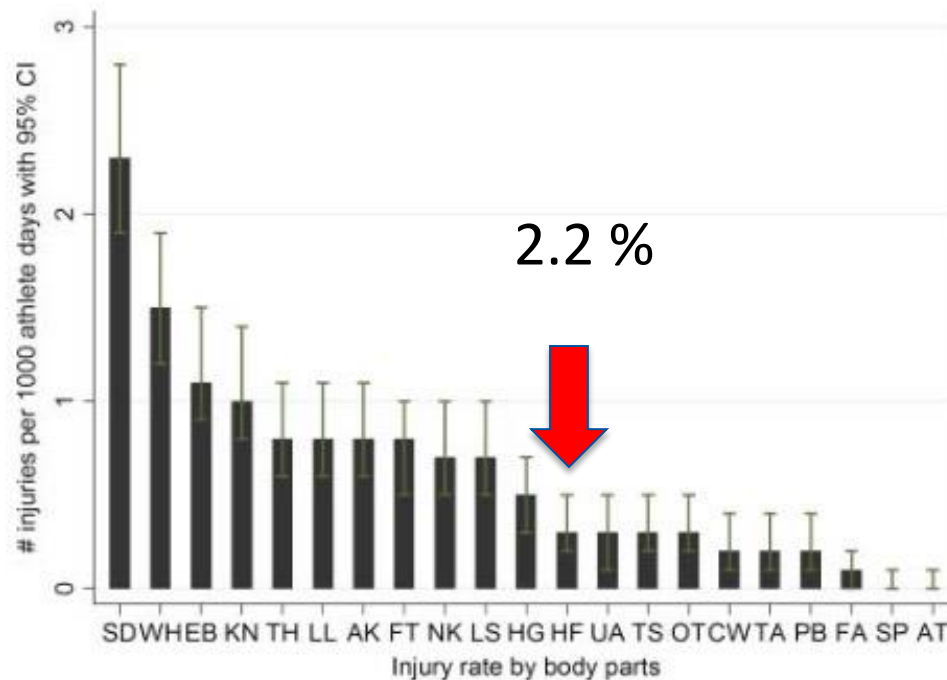
Van Mechelen W, Hlobil H, Kemper HC. Incidence, severity, aetiology and prevention of sports injuries. A review of concepts. Sports Med 1992 Aug 14(2): 82-89



2012 London Paralympics

Willick et al (BJSM 2013)

- 14/633 injuries to head and face





2010 Vancouver Paralympics

Webborn et al (CJSM 2012)

- Sledge hockey: 118 athletes, 40 presented re injury, 2 head injuries (not defined specifically as concussion)
- Alpine: 194 athletes, 42 presented re injury, 3 new head injuries
- Nordic: 140 athletes, 26 presented re injury, 1 concussion



2014 Sochi Paralympics

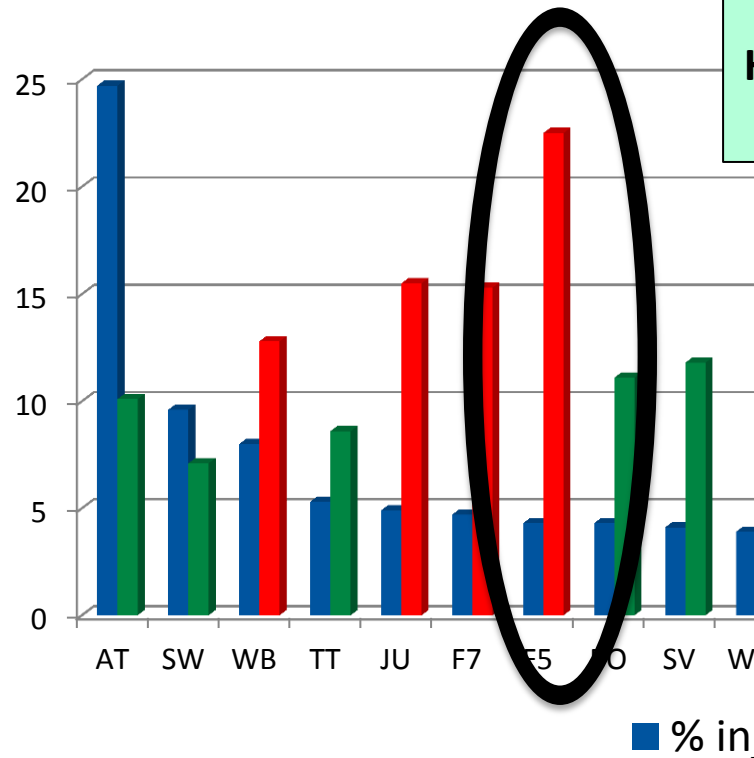
Derman et al (BJSM, 2016)

Head, face and neck injuries

- 31/174 injuries
- 26/134 athletes with an injury (4.8 %)
- Incidence rate (IR) 4.7 injuries/1000 athlete days



Rio 2016 Paralympic Games Injuries



Football 5-a-side
High risk for collisions resulting in concussion
No concussions reported







Concussions in wheelchair basketball

Wessels et al (Arch Phys Med Rehab 2012)

263 US wheelchair basketball players aged 18-60

- 6.1 % of players reported concussion in 09-10 season
- 44 % did not report to team staff
- 67 % of these because they did not want to be removed
- 50 % did not know it was a concussion
- Females had 2.5X higher concussion rate, but limited number of females
- Regular wheelchair users had less concussions





Safety concerns in ice sledge hockey

Hawkeswood et al (IJSPT 2011)

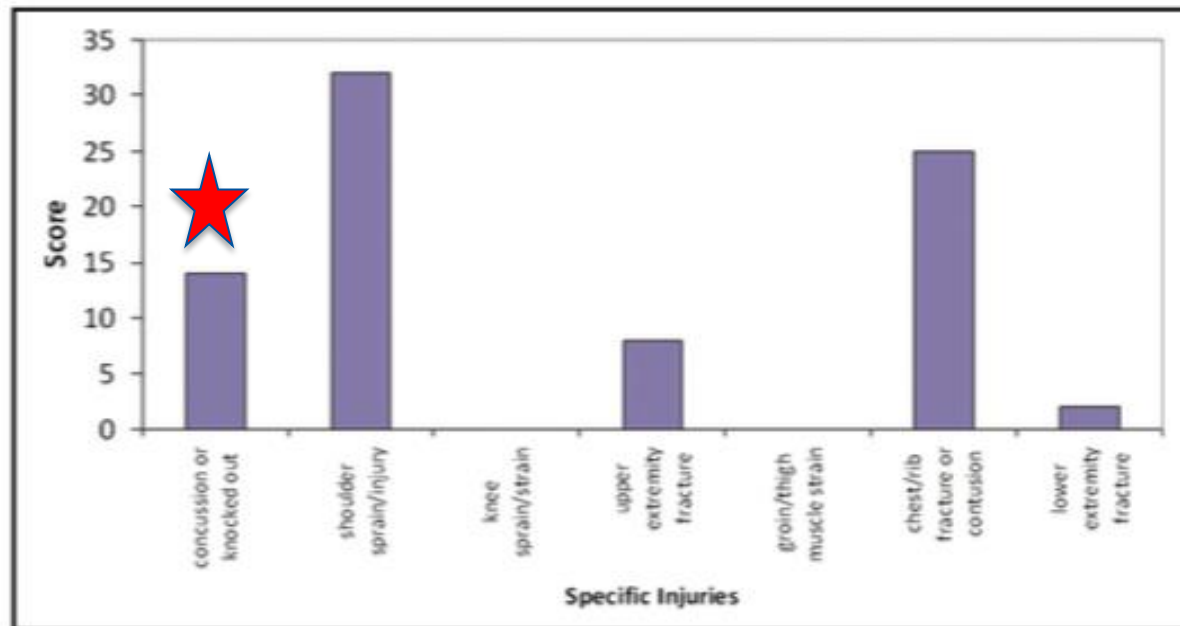


Figure 5. *Most frequent specific injuries based on summated scores from respondent rankings.*



Safety concerns in ice sledge hockey

Hawkeswood et al (IJSPT 2011)

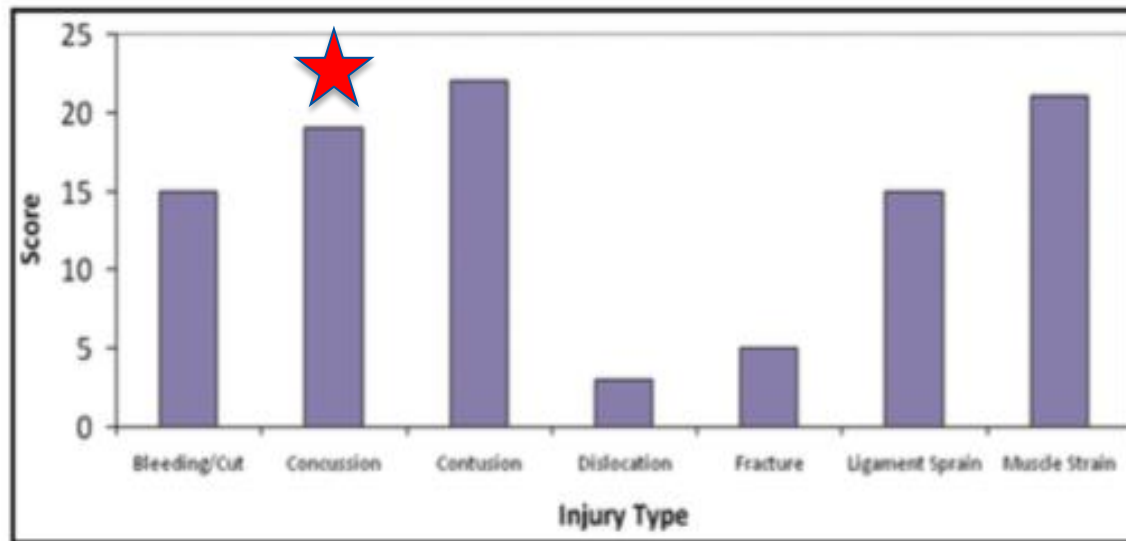


Figure 3. *Most frequent injury types based on summated scores from respondent rankings.*



Safety concerns in ice sledge hockey

Hawkeswood et al (IJSPT 2011)

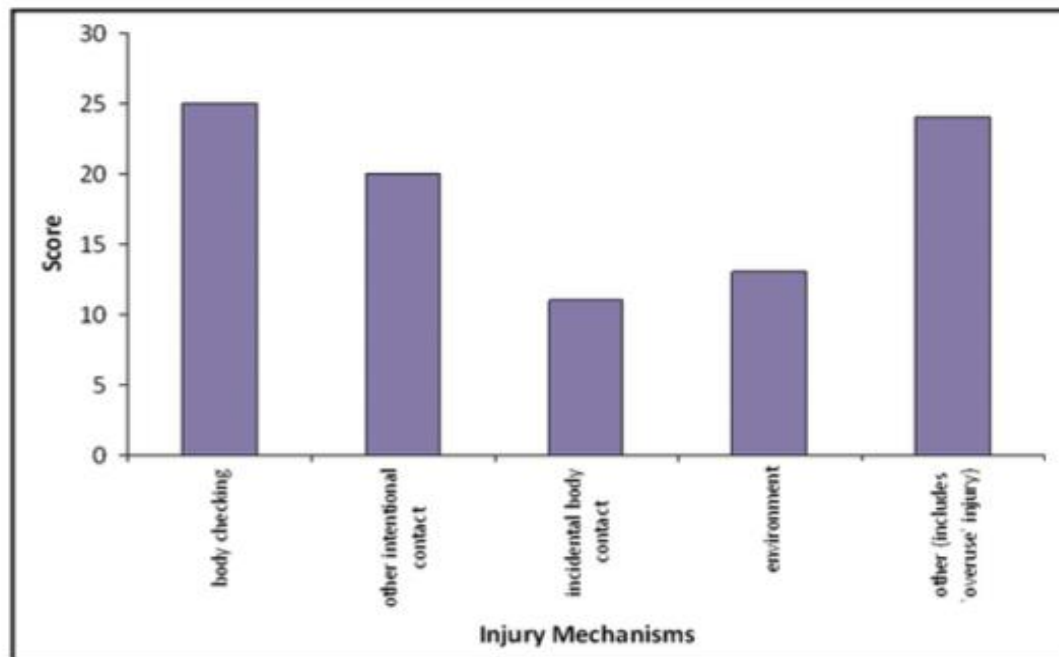
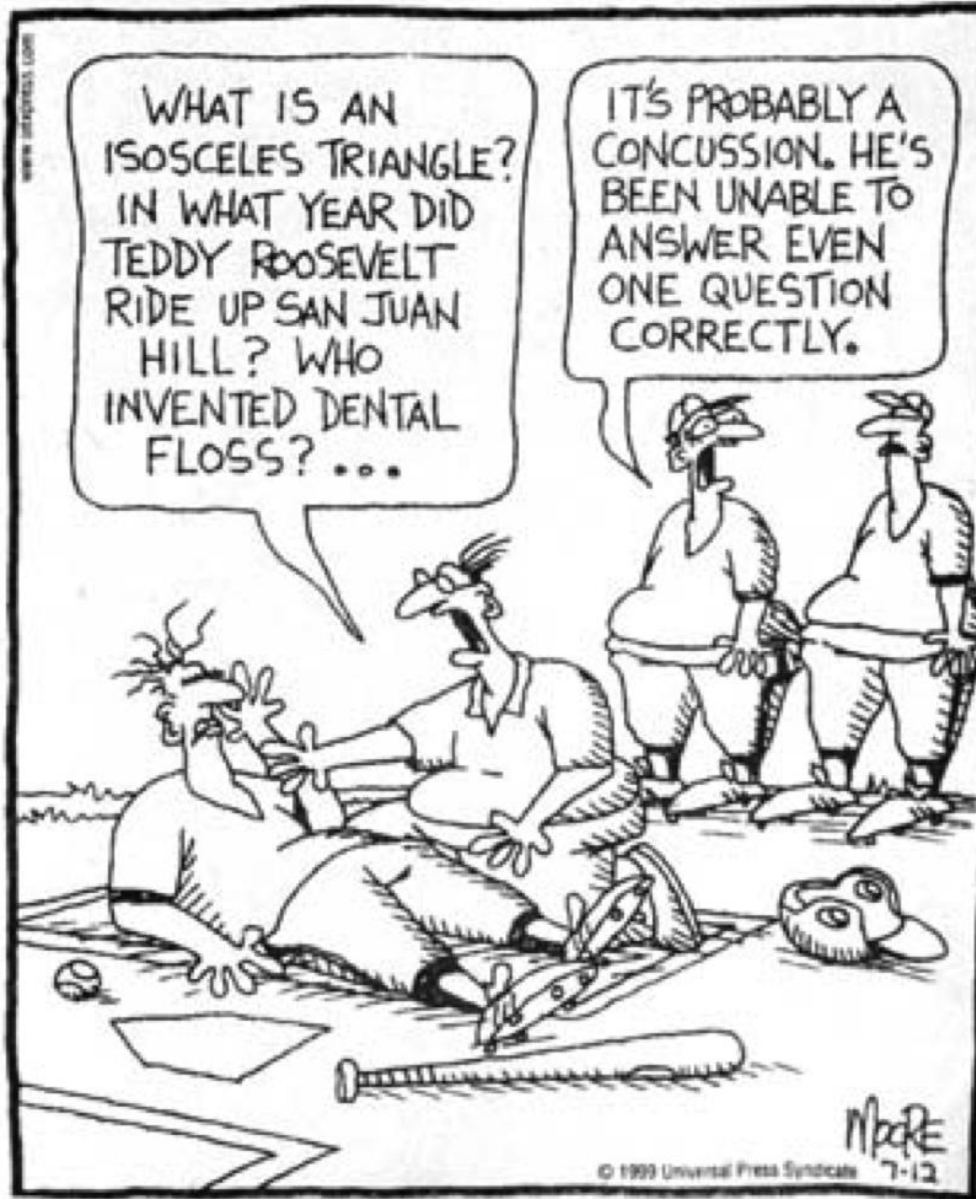


Figure 6. Most frequent injury mechanisms based on summated scores from respondent rankings.

IN THE BLEACHERS

By Steve Moore



SCAT5

SPORT CONCUSSION ASSESSMENT TOOL – 5TH EDITION

DEVELOPED BY THE CONCUSSION IN SPORT GROUP
FOR USE BY MEDICAL PROFESSIONALS ONLY

supported by



Patient details

Name: _____
DOB: _____
Address: _____
ID number: _____
Examiner: _____
Date of Injury: _____ Time: _____

WHAT IS THE SCAT5?

The SCAT5 is a standardized tool for evaluating concussions designed for use by physicians and licensed healthcare professionals¹. The SCAT5 cannot be performed correctly in less than 10 minutes.

If you are not a physician or licensed healthcare professional, please use the Concussion Recognition Tool 5 (CRT5). The SCAT5 is to be used for evaluating athletes aged 13 years and older. For children aged 12 years or younger, please use the Child SCAT5.

Preseason SCAT5 baseline testing can be useful for interpreting post-injury test scores, but is not required for that purpose. Detailed instructions for use of the SCAT5 are provided on page 7. Please read through these instructions carefully before testing the athlete. Brief verbal instructions for each test are given in italics. The only equipment required for the tester is a watch or timer.

This tool may be freely copied in its current form for distribution to individuals, teams, groups and organizations. It should not be altered in any way, re-branded or sold for commercial gain. Any revision, translation or reproduction in a digital form requires specific approval by the Concussion in Sport Group.

Recognise and Remove

A head impact by either a direct blow or indirect transmission of force can be associated with a serious and potentially fatal brain injury. If there are significant concerns, including any of the red flags listed in Box 1, then activation of emergency procedures and urgent transport to the nearest hospital should be arranged.

Key points

- Any athlete with suspected concussion should be REMOVED FROM PLAY, medically assessed and monitored for deterioration. No athlete diagnosed with concussion should be returned to play on the day of injury.
- If an athlete is suspected of having a concussion and medical personnel are not immediately available, the athlete should be referred to a medical facility for urgent assessment.
- Athletes with suspected concussion should not drink alcohol, use recreational drugs and should not drive a motor vehicle until cleared to do so by a medical professional.
- Concussion signs and symptoms evolve over time and it is important to consider repeat evaluation in the assessment of concussion.
- The diagnosis of a concussion is a clinical judgment, made by a medical professional. The SCAT5 should NOT be used by itself to make, or exclude, the diagnosis of concussion. An athlete may have a concussion even if their SCAT5 is "normal".

Remember:

- The basic principles of first aid (danger, response, airway, breathing, circulation) should be followed.
- Do not attempt to move the athlete (other than that required for airway management) unless trained to do so.
- Assessment for a spinal cord injury is a critical part of the initial on-field assessment.
- Do not remove a helmet or any other equipment unless trained to do so safely.

SCAT5 Challenges



SCAT5 SECTION	POTENTIAL CHALLENGES
<p>1. Immediate or on-field assessment</p> <ul style="list-style-type: none">• Red flags• Observable signs• <u>Maddocks</u> questions• Glasgow Coma Scale• Cervical spine assessment	<p>Motor/sensation impairment, visual impairment Balance/coordination impairment Balance difficulty, motor incoordination Hearing impairment, cognitive impairment, speech impairment Hearing impairment, visual impairment, motor impairment, speech impairment Neck movement impairment</p>
<p>2. Symptom evaluation</p>	<p>More likely to have pre-existing symptoms; different baseline</p>
<p>3. Cognitive screening</p>	<p>Cognitive impairment, learning disability, speech impairment</p>

SCAT5 Challenges



<p>4. Neurologic screen</p> <ul style="list-style-type: none">• Reading aloud• C-spine movement• Looking up and down without diplopia• Finger-nose test• Tandem gait• Balance exam (modified BESS)	<p>Visual impairment, cognitive impairment, speech impairment, learning disability</p> <p>Neck movement impairment</p> <p>Visual impairment, including physical conditions, <u>anophthalmia</u></p> <p>Amputation, coordination impairment</p> <p>Wheelchair user, coordination impairment, amputation</p> <p>Wheelchair user, amputation/prosthetic use, coordination impairment</p>
<p>5. Delayed recall</p>	<p>Hearing impairment, cognitive impairment, speech impairment, learning disability</p>



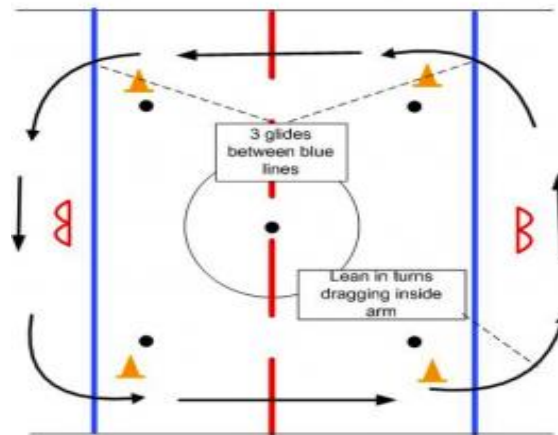








Glides (warmup)



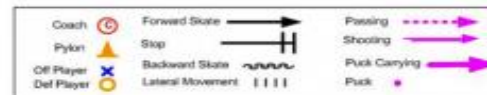
Technical Skills:
Long glides between the blue lines

Drill Overview:
Not a race. We are stretching and concentrating on leans in turns and long powerful glides between the lines.

Key Teaching Points:
Long strong pushes.

Key Execution Points:
This is not a race. Emphasize long strides.
Keep to 3 or less between the blue lines.
Pushed players with pusher work on leaning in corners.

Variations:
After 5 laps switch direction.





Injury prevention

The “3E” model


- Education
- Engineering
- Enforcement











MIND THE GAP

The image shows a close-up view of a railway platform. At the top, there are several parallel metal rails of a track, with dark gravel visible between them. Below the tracks is a white-painted concrete edge. Underneath that is a dark grey, textured surface, possibly a tactile paving strip. A bright yellow double-line is painted across the platform. Below the yellow lines is a section of light-colored tiles with a dark grid pattern. The words "MIND THE GAP" are printed in large, bold, black capital letters across these tiles. The tiles are arranged in a herringbone pattern.



**“OK, Mr Dittmars,
remember that brain
is only a temporary,
so don’t think too
hard with it.”**



“OK, Mr. Dittmars, remember, that brain is only a temporary, so don’t think too hard with it.”



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Thank you!