

# IS IT TIME TO PUT A LID ON IT ?

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# What constitutes a closed head injury?

- The head is struck
- The head comes in contact with an object
- Significant acceleration deceleration of the brain within the skull occurs as a result
- Causing a “brain bruise” 180 degrees from the hit
- Subsequent brain swelling that resolves within 7 days

# Severity of Injury

- NONE Alert, not confused or disoriented, no stars
- MILD Stunned, saw stars, able to shake it off and return to normal within 20 minutes, no symptoms the following day or with activity
- MODERATE Headache, stunned, confused, disoriented, unable to shake it off, symptoms do not resolve in 20 minutes
- SEVERE Loss of consciousness, disoriented, unable to get up, poor balance, difficult speech, vomiting, condition worsens with time

# Standard Assessment of Concussion

Table 2. Standardized Assessment of Concussion (SAC)

## 1) ORIENTATION:

Month: \_\_\_\_\_ 0 1  
 Date: \_\_\_\_\_ 0 1  
 Day of week: \_\_\_\_\_ 0 1  
 Year: \_\_\_\_\_ 0 1  
 Time (within 1 hr): \_\_\_\_\_ 0 1  
 Orientation Total Score \_\_\_\_\_ / 5

## 2) IMMEDIATE MEMORY: (all 3 trials are completed regardless of score on trial 1 & 2, total score equals sum across all 3 trials)

List	Trial 1	Trial 2	Trial 3
Word 1	0 1	0 1	0 1
Word 2	0 1	0 1	0 1
Word 3	0 1	0 1	0 1
Word 4	0 1	0 1	0 1
Word 5	0 1	0 1	0 1
Total			

Immediate Memory Total Score \_\_\_\_\_ / 15

(Note: Subject is not informed of delayed recall testing of memory)

## NEUROLOGIC SCREENING:

Loss of Consciousness (occurrence, duration)

Retrograde & Posttraumatic Amnesia  
 (recollection of events pre- and post-injury)

Strength

Sensation

Coordination

## 3) CONCENTRATION:

Digits Backward (If correct, go to next string length. If incorrect, read trial 2. Stop after incorrect on both trials.)

4-9-3      6-2-9      \_\_\_\_\_ 0 1  
 3-8-1-4      3-2-7-9      \_\_\_\_\_ 0 1  
 6-2-9-7-1      1-5-2-8-6      \_\_\_\_\_ 0 1  
 7-1-8-4-6-2      5-3-9-1-4-2      \_\_\_\_\_ 0 1

Months in Reverse Order (entire sequence correct for 1 point)

Dec-Nov-Oct-Sep-Aug-Jul  
 Jun-May-Apr-Mar-Feb-Jan      \_\_\_\_\_ 0 1  
 Concentration Total Score \_\_\_\_\_ / 5

## EXERTIONAL MANEUVERS (when appropriate):

5 jumping jacks      5 push-ups  
 5 sit-ups      5 knee bends

## 4) DELAYED RECALL:

Word 1      \_\_\_\_\_ 0 1  
 Word 2      \_\_\_\_\_ 0 1  
 Word 3      \_\_\_\_\_ 0 1  
 Word 4      \_\_\_\_\_ 0 1  
 Word 5      \_\_\_\_\_ 0 1  
 Delayed Recall Total Score \_\_\_\_\_ / 5

## SUMMARY OF TOTAL SCORES:

ORIENTATION      \_\_\_\_\_ / 5  
 IMMEDIATE MEMORY      \_\_\_\_\_ / 15  
 CONCENTRATION      \_\_\_\_\_ / 5  
 DELAYED RECALL      \_\_\_\_\_ / 5  
 OVERALL TOTAL SCORE      \_\_\_\_\_ / 30

# RETURN TO PLAY PROTOCOL







# DATA 2015

- 31 Colleges responded
- 916 Sailors
- 368,000 hours of sailing in varied conditions
- 38 head injuries
- 4% injury rate (1/9600 hours)



# Youth Sailing Programs 2015

- 6218 Sailors
- 318,000 hours of sailing
- 83 injuries
- 1.3% rate of injury

## MECHANISM OF INJURY

- Hit in the head with the boom on own boat during a tack, jibe or fall
- Take an elbow in the face/head
- Hit by a piece of equipment (jib clew)
- Hit by the boom of another boat
- Come into contact with the hull/mast during a capsize
- Slip and fall on the dock striking one's head





# RISK FACTORS

- Boats
- Experience
- Conditions
- Supervision
- Situational Awareness







# Boats

- FJ
- Boom composition
- Jib Luff length
- Gooseneck Height
- Leach length





# Experience

- Beginner
- Intermediate
- Seasoned

# Conditions





# Supervision



# Situational Awareness

# DATA

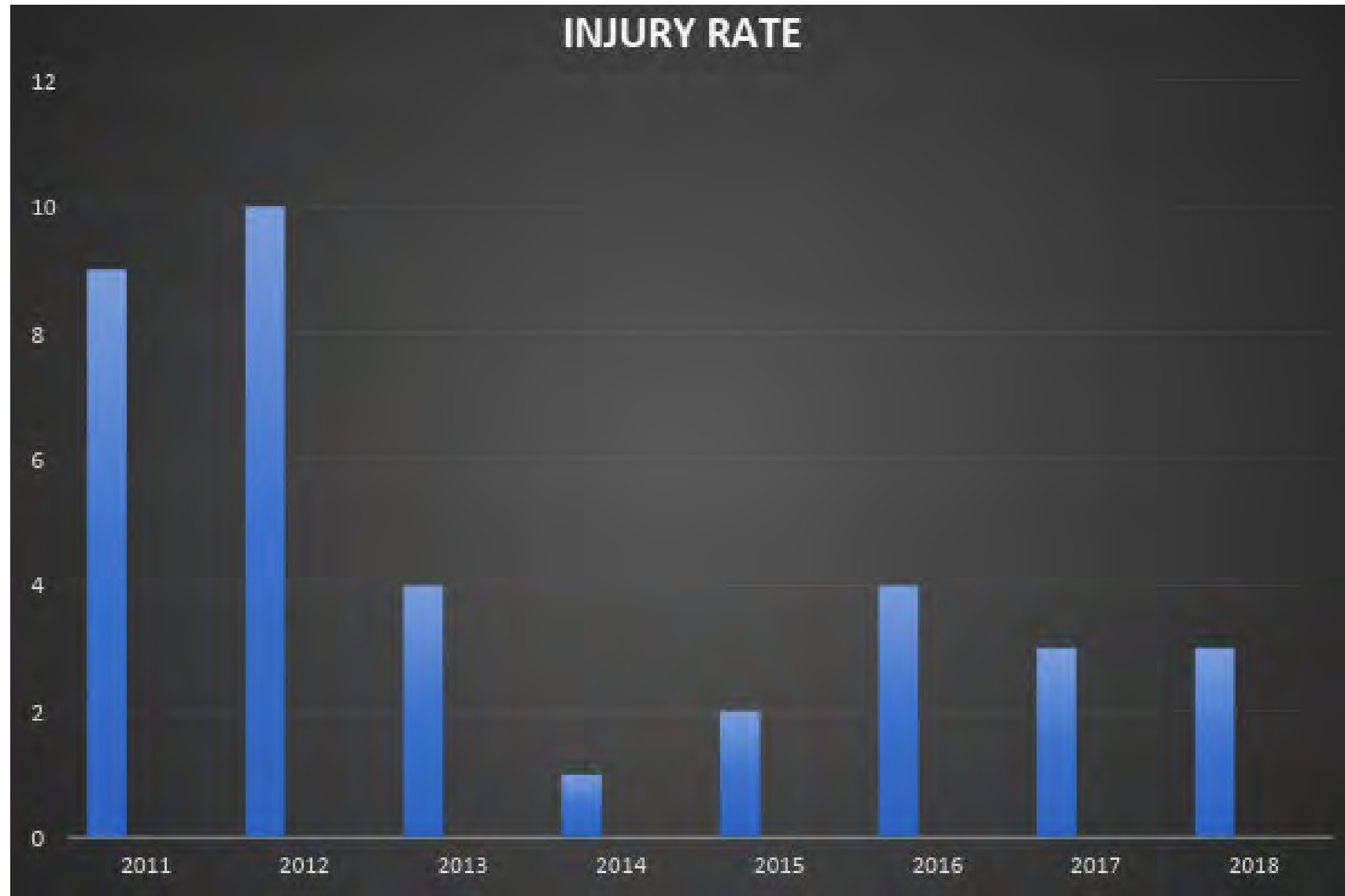
PROSPECTIVE STUDY

NOT BLINDED

N=35

OBSERVATIONS OVER 8 YEARS

3 INTERVENTIONS TAKEN





# TAKE HOME MESSAGE

- Sailing, like soccer and basketball is a safe activity
- Like most activities there is the risk of injuries
- Equipment/playing fields should have a safe design to minimize risk
- Protective equipment like PFDs, shin guards, mouth guards should be worn (sports specific)
- Additional protective gear can be worn if the individual chooses
- There is currently no good data that wearing a helmet prevents injuries



Duxbury Bay  
Maritime School

- Nonprofit community access
- Subsidize 50% of program cost with fundraising, donations, and grants
- 850 - 1000 students enrolled in Junior Sailing annually
- 31 seasonal instructors
- 2017 Outstanding Community Sailing Program from US Sailing

# US Sailing Recommendation

“It is the position of the Sports Medicine Committee of US Sailing that helmets should be considered and encouraged but not mandated for aggressive competitive sailing, crew positions at increased risk for strikes to the head, and sailors who are learning the sport and thus unfamiliar with the position and movement of rigging and equipment.”







## Instructor Certifications:

- US Sailing Level 1
- SafeSport
- First Aid/ CPR
- Heads Up
- MA boaters License



# Heads Up

- CDC Concussion Training Course takes 30 minutes
- Concussion in Youth Sports is a free, online course available to coaches, parents, and others helping to keep athletes safe from concussion.
- Free Heads Up app
  - 3D helmet fit feature
  - “will help you learn how to spot a possible concussion”
- <https://www.cdc.gov/headsup/youthsports/coach.html>

## Customizable Materials



Customize these HEADS UP handouts and posters with your team's colors and logo. Begin by selecting a thumbnail below. Once a thumbnail is selected, the page will scroll down allowing you to save or customize your PDF.

### HEADS UP Concussion Action Plan



[8-1/2" x 11" - 1 Page]

### Concussion Fact Sheet for Middle School Athletes



[8-1/2" x 11" - 2 Pages]

### Concussion Fact Sheet for High School Athletes



[8-1/2" x 11" - 2 Pages]

### Concussion Fact Sheet for Coaches



[8-1/2" x 11" - 4 Pages]

### Concussion Facts & Contact Numbers (large)



[9" x 13" - 1 Page]

### Main Message Poster



[24" x 36" - 1 Page]

### Parent & Athlete Concussion Information Sheet



[8-1/2" x 11" - 2 Pages]

### Concussion Fact Sheet for Parents



[8-1/2" x 11" - 2 Pages]



# Head Strike Procedure

## Anything more severe than a scrape:

- Radio base
- Get them off the water
- Call emergency contact
- Document with "Ouch! form" or Incident report
- "We recommend you see your primary care physician"
  - Document the recommendation
- Follow up with emergency contact

## DBMS "Safety Manual" - Subdocument of Emergency Action Plan:

- **Head Strikes**
  - If a head strike of any kind is observed or reported, instructor must call launch and have child picked up and sent to program directors office
  - If an emergency, instructor can bring them to Scot Dock themselves, as long as their class is not put in harm's way by them leaving

### INJURY REPORT

Date of injury: 7-19-17 Time of injury: ≈ 9:40 AM/PM  
Name of person filling out report: Peter Graceffa  
Position: Sailing Coach  
Phone Number: 781 [REDACTED]

Describe injury using who, what, where, when, and what happened:

Justin [REDACTED] was hit by a boom from another boat as it gybed over during a team racing drill. Eyes dilated and looked poorly soon after impact (20 mins max). Justin was immediately taken off the water as his family (brother and mother) were contacted. Possible concussion based on key symptoms (slight nausea & poorly reacting eyes).

Who was injured?: Justin [REDACTED]  
What type of injury? Boom made contact with head, Possible Concussion  
Was first aid administered? YES/NO By whom? Peter Graceffa  
Was injured party referred to medical assistance? YES/NO  
Signature of person filling out report: [Signature]  
Date: 7/19/17 Time: 10:50 am  
Reviewed by: [Signature] Date: 7/19/17 Time: 11:03 am  
(Report must be reviewed by Lead Instructor or Executive Director)\*\*



# “Ouch!” Form



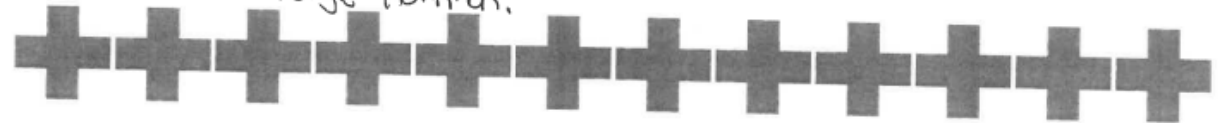
✚ Ouch! ✚

Name: Sydney

What happened: Sydney bumped her mouth/chin while putting a boat away. She bit the inside of her lip and was bleeding a little.

What we did: Notified the Sailing director, Addy White, and called a launch to bring Sydney in. An instructor accompanied her on the launch to the DBMS office. She was given an ice pack and did a coloring page with me.

Instructor: Paige Hoffren.



For more information please contact the Junior Sailing Director, Addy White, via email at [addy@dbms.org](mailto:addy@dbms.org) or via phone at 781-934-7555

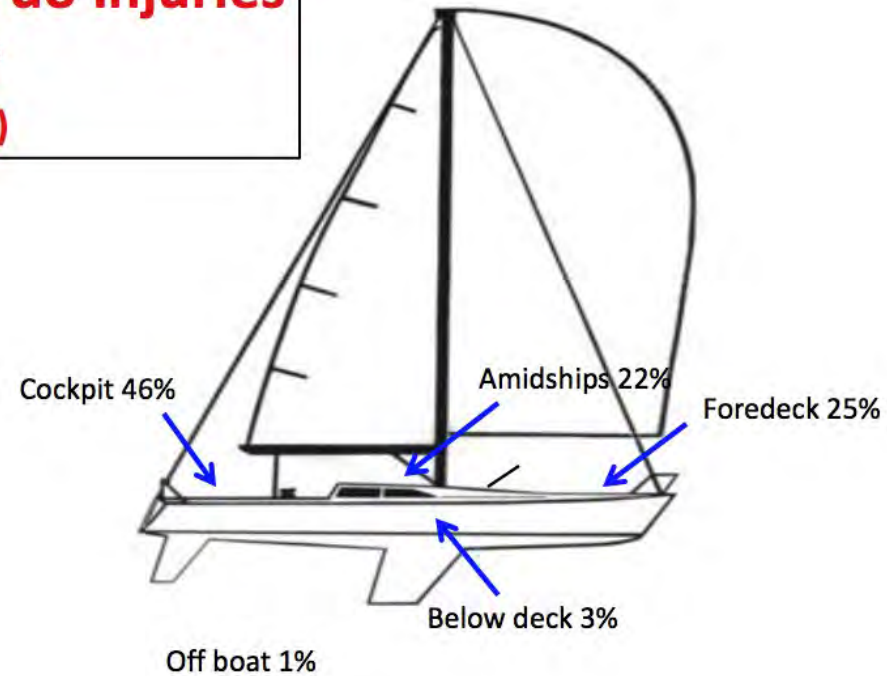


# When We Used Helmets

- Beginners at any junior level
- 12 knots/white capping with race teams
- Helmets go on when life jackets go on
- Provided by school
- Discount code if you want to buy your own



## Where do Injuries Occur? (N = 1,228)



### “Sailing Injuries”

- Andrew Nathanson, MD, FACEP, FAWM Clinical Professor Department of Emergency Medicine Alpert Medical School of Brown University: presentation to UC denver about Sailing injuries
- Offshore study





- Security blanket
- Cool colors
- Incentives work well
- If they learn to sail wearing a helmet they don't mind it
- Peace of mind for parents and instructors
- **Reduced number of tears!**

Less tears = More time on the water



# Conclusion:

## Benefits outweigh the cost

Ambulance ride \$500- \$1000  
Emergency Dept. visit \$1000 + eval \$500  
~\$2500

1:75 helmets @ \$30  
\$2,250

\*This is one of many steps we are taking to ensure the safety of our participants.

What works for us may not work for you.

# WHO MIGHT BENEFIT FROM A HELMET

## ANYONE!

### Helmets Help Reduce Head Injuries





## IN THE CRITICAL 5-10 MILLISECONDS OF AN IMPACT ...

A blink of an eye lasts 100 milliseconds.



# Reasons to Consider Helmets

- Sailing is evolving
- Boats are lighter
- Technology is evolving
- Accidents happen
- Stay on the water longer
- Long term brain damage



WATSH2O

WOMEN'S STYLE WAYS

SIZE S - XXL  
G.WEIGHT 510g  
M.DARDS EN 1205



EAR PAD BY ORANGE - 1205000  
\*IN MODELS AVAILABLE LE 1205000 AND  
1205000 OFF EARS AND  
A LE 1205000 LE 1205000.

STYLE	bern PROFILE	SHARP	1205
COMFORT	TEAMAT	2SHLS25	1205
PROTECTION	H2O		

Matte Black

Matte Sand

Matte Orange Hattyle

Gloss Azure Blue

NEW

Matte Grey/Neon Green Brim

# ■ We Need Your Help!

- All feedback is encouraged!
- Product protection
- Evolution of safety and protection
- Designing the next sailing helmet

7

**Requests and more Product Information**

[tderedon@bernhelmets.com](mailto:tderedon@bernhelmets.com)

*ANY QUESTIONS?*

# Your Opinion Matters

Please open the **NSPS app**  
and complete the **session survey** found in the  
**menu bar** for a chance to win a **free drink ticket!**

*Thank you for attending this session*