OBJECTIVE
Very little is known about the rate of concussions in adolescents with learning disabilities (LD). It was hypothesized that high school athletes with LDs would report a comparable history of concussion compared to students without LDs.

METHOD
Participants: 6,230 high school student athletes from Maine, USA, between the ages of 14 and 18 (M=15.9, SD=1.2 years), who completed baseline preseason testing with ImPACT® in 2010. 3,547 boys (56.9%) and 2,683 girls (43.1%)
Measure: Demographics and history questionnaire embedded in the ImPACT® program. All information in this study is retrospective and based on self-report.

RESULTS
Total Sample
• 17.4% reported a history of one or more concussions
• 5.6% reported a history of two or more injuries
• 20.2% of boys and 13.8% of girls reported one or more past concussions
• 6.9% of boys and 3.9% of girls reported two or more injuries
• 3.7% self-reported a diagnosis of LD (4.5% of the boys and 2.6% of the girls)

Comparing LD to No LD: One or More Concussions
LD: 30.1%; No LD: 16.9% [X² (1, 6,230)=26.73, p<.00001; OR=2.12, 95% CI=1.58 – 2.83]
Boys with LDs: 32.9%; Boys without LDs: 19.6% [X² (1, 3,547)=16.7, p<.00005; OR=2.02, 95% CI=1.43 – 2.84]
Girls with LDs: 23.9%; Girls without LDs: 13.5% [X² (1, 2,683)=6.32, p<.012; OR=2.02, 95% CI=1.16 – 3.52]

Comparing LD to No LD: Two or More Concussions
LD: 11.4%; No LD: 5.4% [X² (1, 6,230)=14.75, p<.00013; OR=2.24, 95% CI=1.47-3.33]
Boys with LDs: 12.0%; Boys without LDs: 6.7% [X² (1, 3,547)=6.74, p<.009; OR=1.91, 95% CI=1.16 – 3.15]
Girls with LDs: 9.9%; Girls without LDs: 3.8% [X² (1, 2,683)=6.86, p<.009; OR=2.81, 95% CI=1.25 – 6.28].

CONCLUSIONS
In this large-scale, retrospective survey study, boys and girls with LDs were significantly more likely to report a history of one or more and two or more concussions than those who do not have LDs.

Additional research is needed to determine if students with LDs are more susceptible to injury (i.e., have a lower threshold) or have different recovery trajectories.