

## Supplementary Materials for

### **A common neural signature of brain injury in concussion and subconcussion**

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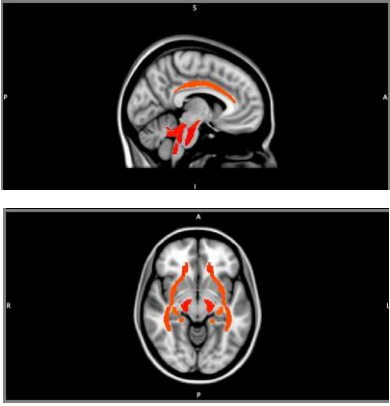
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#### **This PDF file includes:**

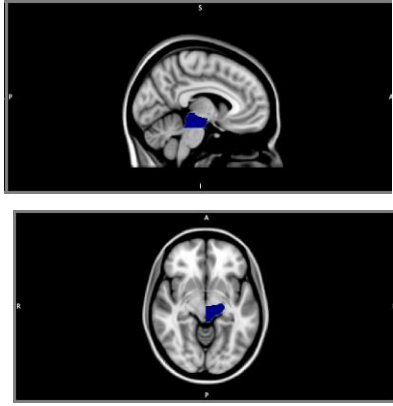
Fig. S1. Schematic of how FA values were extracted for the CST ROI in the midbrain.

Table S1. Summary statistics for head impact data for the RSHI cohort.

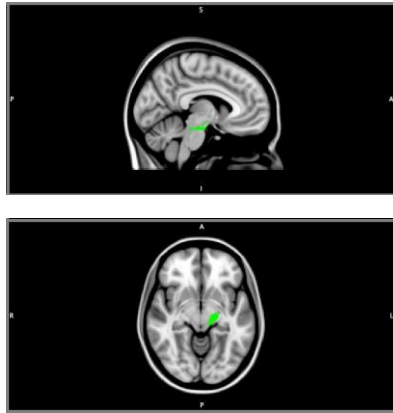
**A. Atlas-defined corticospinal tract**



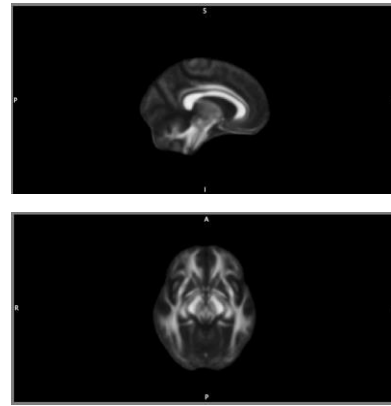
**B. Whole midbrain ROI**



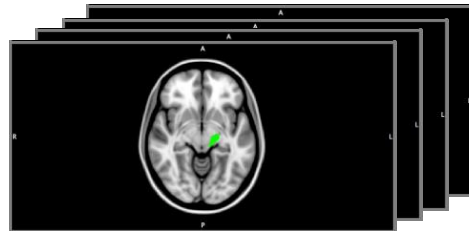
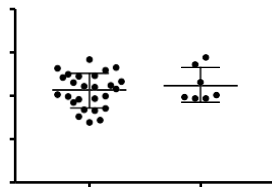
**C. Midbrain corticospinal tract**



**D. Fractional Anisotropy Map**



**E. Subject- and ROI-specific Fractional Anisotropy Values**



**Fig. S1. Schematic of how FA values were extracted for the CST ROI in the midbrain.** First, the intersection was computed between the atlas defined corticospinal tract (Panel A, colored red) and a midbrain ROI (Panel B, colored blue). The resulting midbrain ROI for the corticospinal tract (Panel C, colored green) was used to extract fractional anisotropy values from each subject's whole-brain global fractional anisotropy map (Panel D), and the results averaged over all voxels in the ROI and plotted (Panel E).

**Table S1. Summary statistics for head impact data for the RSHI cohort.**

<b>Session</b>	<b>Rotational Acc (median)</b>	<b>Rotational Acc (mean)</b>	<b>Linear Acc (median)</b>	<b>Linear Acc (mean)</b>	<b>Numb of Hits</b>	<b>%Tota l</b>
<b>Competition</b>	1631.7	1947.5	25.1	31.5	7022	37%
<b>Meeting</b>	1463.6	1753.7	23.1	28.5	118	1%
<b>Practice</b>	1578.7	1791.4	24.9	30.1	11334	59%
<b>Scrimmage</b>	1526.9	1878.1	24.2	30.6	654	3%
					<b>Total:</b>	19128