



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

<b>Name(s)</b> <b>Bryar W. Brandvold</b>	<b>Project Number</b> <b>J1803</b>
<b>Project Title</b> <b>Should Soccer Players Wear Protective Headgear?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> To determine whether soccer protective headgear prevents impact injury and if its underutilization is due to poor performance, comfort or coaching bias. <b>Methods/Materials</b> Three types of commercial protective headgear and an unprotected control were tested repeatedly for side and front impacts. A cranial model was struck by a reproducible impact and the compression and deformity to an applied clay slab was measured with a digital caliper. Competitive soccer players compared each product to their unprotected head for comfort and playability. Coaches were surveyed to assess their knowledge and biases. <b>Results</b> Protective headgear decreased the measured impact compression and deformity of the clay. The Full 90 Select had the best overall impact results and scored better than the unprotected head on the player survey. The coaches admitted little knowledge of headgear utility and one coach reported a negative bias. <b>Conclusions/Discussion</b> Soccer protective headgear consistently reduced the impact to the head and did not adversely affect reported player comfort and playability. Since athletes participating in football, skateboarding and cycling wear protective headgear, one has to question why not soccer players.	
<b>Summary Statement</b> Soccer protective headgear reduces impact injuries and does not affect playability.	
<b>Help Received</b>	