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It is with great enthusiasm that I support your efforts to protect student athletes from concussions. As a researcher, author, educator, an activist regarding concussions especially in the scholar athlete, and their immediate and long term implications, I believe this Federal Legislation is urgently needed. Presently there is compelling evidence that our youth and particularly young ladies maybe more vulnerable to concussions and recover more slowly from them. Whether this is due to the developing nature of their brain, weak neck muscles, or other factors not yet presently identified is unknown. What is known is that concussions are a "silent epidemic" and that for every recognized concussion in certain sports such as football the true incidence is probably six to eight times higher.

I have been a part of a number of research studies that have shown that if observers are given the task of identifying who might have had a concussive blow in an athletic contest and that athlete is examined during or at the end of the contest for a concussion that the true incidence of concussive events is four to eight times higher than that recognized by medical personal on the field.

This month in the Journal Neurotrauma Elisa Gean and I published ten cases of second impact syndrome occurring in our youth most of which had catastrophic outcomes. In all cases these young athletes were playing symptomatic from a previous head injury that had gone unrecognized. The catastrophic consequences of this included death and permanent catastrophic brain disability in those that survived. While this catastrophic outcome is fortunately not common, it nonetheless happens several times each year and accounts for deaths and catastrophic disabling neurologic disabilities for athletes each year.

Far more common than the catastrophic second impact syndrome though is the much more common and definitely not rare post concussion syndrome that often results when an athlete already symptomatic from a previous concussion receives a second concussion. I have also along with fellow researchers at the University of North Carolina authored a paper regarding the long term consequences of concussion in a large series of over 200 athletes with post concussion syndrome. The great majority of these disabling injuries could have been prevented if an initial concussion had been appropriately

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diagnosed and managed. Therefore legislation mandating concussion education to athletic trainers, coaches, parents, the athletes themselves as well as the entire medical team taking care of athletes, is essential. Also it is essential that if an athlete is suspected of having a concussion the athlete is pulled from that athletic contest and serially assessed. It should only be medical personnel with proper training that is allowed to return an athlete to competition after a cerebral concussion.

I strongly support this needed legislation which will be a first step in reducing the concussion crisis that is prevalent in our schools today. Eventually legislation, I would hope, would be advanced that would put in place minimum standards for individuals who are making return to play decisions regarding concussions, but this is indeed a second step down the line.

Attached are the two papers I refer to above.

Respectfully,



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