



American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



Hezekiah Beardsley Connecticut Chapter

February 27, 2014: Good afternoon Representative Urban, Senator Bartolomeo, Representative Betts and Senator Linares, and the distinguished Members of the Committee on Children.

My name is Karen Laugel. I am Chair of the Connecticut American Academy of Pediatrics Traumatic Brain Injury-‘Return to Learn’ Initiative and President of the non-profit community educational organization, ConcussionCORPS. I am also a pediatrician with over thirty years of experience, five of those in concussion recovery management. I speak on behalf of these organizations in support of Bill No. 5113, “An Act Concerning Youth Athletics and Concussions,” but with a request for its expansion to include public and private schools and sports organizations for children of all ages, and to include ‘best practice’ models and resources for “Return to Learn”.

Like many of you, I come to the table with a great appreciation of the benefits that organized sports provide our children and teens. All three of my children were student athletes, participating in baseball, basketball, ice hockey, lacrosse, track, and football. I am convinced that my oldest son, a US Naval Academy graduate and now a Marine officer stationed in Afghanistan, would not have been as successful in his career if it had not been for the outstanding mentorship of his high school football coaches.

I would not have wanted any of my children or the children in my pediatric practice to have missed the experience of growing up as part of a team. However, it is our job as responsible adults to create a nurturing environment for our young people, and that includes attending to their health and safety. As we gain knowledge about concussion injury and its ramifications, we must take action on that knowledge; an expansion of Bill 5113 can give us that opportunity. For example:

- We know that being female, fatigued, or having a history of prior concussion or loss of consciousness increases the risk for injury (PM&R, Vol. 3, Iss. 10S2, 2011; S452; Am J Sports Med 2000 & 2003; Res Sports Med 2008; Clin J Sports Med 2000) . What can we do with this knowledge? ... **We can do screening histories prior to the season and identify athletes at risks—perhaps that’s an athlete who should not be asked to play offense and defense in the same game, or to play multiple games in the same day, or to play in the positions at highest risk for collision.**
- We know that 70% of concussions are caused, not by head impact, but by rotational injuries (including body collision) and that helmets are not protective (Neurosurgery 2003; 4: 799). What can we do with this knowledge? ... **We can educate referees and coaches to encourage fair play and discourage high risk behavior. For example, Minnesota Hockey and the Mayo Clinic awarded youth hockey athletes ‘Fair Play points’ and saw a 30% reduction in checking and hits to the head (J. ASTM Intl., Vol. 6, 4/09). We can educate our athletes to take themselves out of play if they experience headache or dizziness after a collision.**

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- We know that the neurological damage from repetitive sub-concussive blows can be measured by blood tests and by special MRI's, and that these sub-concussive blows result in cognitive changes (poor impulse control) and balance abnormalities (67 college football players, Cleveland and Rochester; Marchi N, Bazarian JJ, (March 2013) Consequences of Repeated Blood-Brain Barrier Disruption in Football Players. PLOS ONE 8(3): e56805. doi:10.1371/journal.pone.0056805). We also know that repetitive head trauma, with or without symptomatic concussion, has been linked to chronic traumatic encephalopathy (CTE) (PM R 2011; 3: S460-S467) and that evidence of CTE has been found in the brains of adolescent athletes (Nathan Stiles, 17 y.o. 2010; Eric Pelly 18 y.o.; Owen Thomas, 21 y.o.; Ann McKee, MD, BU Center for the Study of CTE). What can we do with this knowledge? ... We can educate athletes, parents, coaches, referees, and trainers (of children of all ages and all sports organizations: from public and private schools, and from public and private teams) to recognize and respond appropriately to injuries and to put limits on those circumstances where we know those injuries occur; and we can educate doctors in 'best practices' to optimize the injured child's full recovery and safe return, and require their medical clearance for the child's return to school and play.
- We know that children with concussions miss a median of 37 school days (Corwin, CHOP, AMS Sports Med Conference, April 2013) and that children aged 13-19 years old with a history of two concussions suffer a significant decline in attention, concentration, and grade point average (GPA) even six months to one year post- injury (Moser RS: Neurosurgery, Vol. 57(2), August 2005) . We also know that post-injury children engaging in moderate levels of cognitive activity recover faster than those engaging in highest and lowest levels of cognitive activity. (Mean age 15yo; mean duration of symptoms 43 days; PEDIATRICS Volume 133, Number 2, February 2014; 335 pts, prospective study 10/09-7/11, Boston Children's Hospital). What can we do with that knowledge? ... We can educate our physicians, school nurses, and educators to monitor and pace an injured child's academic return, provide appropriate academic accommodations, and offer academic support with long-term learning strategies for those who need it. Using the current models from New York, Pennsylvania, Colorado, and Oregon, we can build a state resource for physicians, educators, and schools that provides model concussion management protocols, best practice guidelines, online training modules, guidance for long-term learning strategies, and access to psycho-educational services.

In summary, speaking on behalf of the Connecticut American Academy of Pediatrics and the non-profit educational organization, ConcussionCORPS, we are in support of Bill No. 5113, "An Act Concerning Youth Athletics and Concussions," but request expansion of the Bill to include public and private schools and sports organizations for children of all ages, and to include 'best practice' models and resources for "Return to Learn".

Thank you, Representative Urban, Senator Bartolomeo, Representative Betts and Senator Linares, and the distinguished Members of the Committee on Children, for giving me the opportunity to speak before you today.

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