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Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6115
Majority (202) 225–2927
Minority (202) 225–3641

May 4, 2016

Mr. Mark Emmert
President
The National Collegiate Athletic Association
700 W. Washington Street
P.O. Box 6222
Indianapolis, IN 46206

Dear Mr. Emmert:

At a House Energy and Commerce Committee roundtable in March, the National Football League (NFL) acknowledged for the first time that there is a link between football and degenerative brain disorders. As the NFL recognizes the risks posed by concussive and subconcussive hits that are inherent to the game of football, we are writing to understand how the National Collegiate Athletic Association (NCAA) plans to prevent and mitigate the risks of degenerative brain disorders for your student-athletes.

There is significant scientific evidence to support a link between concussive and subconcussive hits and brain damage. Repetitive hits to the head—even in the absence of the clinical signs of concussion—can have cumulative, long-term effects on brain function and physiology.[1] Researchers have found that athletes who had no observable symptoms of concussion but who nevertheless sustained repeated impacts to the head performed worse than their non-athlete peers on memory tests, displayed altered brain function on fMRI scans, and showed evidence of altered brain chemistry.[2]

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[1] *Expert Consensus Document: Mind The Gaps—Advancing Research Into Short-Term and Long-Term Neuropsychological Outcomes of Youth Sports-Related Concussions*, Nature (Apr. 2015).

[2] Thomas M. Talavage et al., *Functionally-Detected Cognitive Impairment in High School Football Players Without Clinically-Diagnosed Concussion*, Journal of Neurotrauma (2013); Nicola Marchi et al., *Consequences of Repeated Blood-Brain Barrier Disruption in Football Players*, PLOS One (Mar. 6, 2013); Inga K. Koerte, et al., *White Matter Integrity in the Brains of Professional Soccer Players Without a Symptomatic Concussion*, JAMA (Nov. 2012).

Researchers have also discovered pathologic and clinical evidence of long-term neurological effects—including the development of degenerative diseases like amyotrophic lateral sclerosis (ALS) and chronic traumatic encephalopathy (CTE)—related to collision sports like football.[3] Boston University (BU) researchers have found CTE in the brains of 90 out of 94 NFL players, in 45 out of 55 college players, and in 26 out of 65 high school players who donated their brains to the BU Brain Bank.[4] Additionally, new research suggests a link between participation in amateur contact sports during youth and the development of CTE.[5] Researchers at the Mayo Clinic recently found that close to one-third of the brains donated to the Mayo Clinic Brain Bank of young males who participated in contact sports during youth had CTE.[6] Notably, the Mayo Clinic study found zero instances of CTE in the brains of 198 individuals who had no history of playing contact sports, and neuropathologists studying CTE have similarly never found the disease in brains that were not subjected to repetitive head trauma.[7]

The statement by Jeff Miller, Senior Vice President of Health and Safety for the NFL, at the Committee's March 14 roundtable acknowledging that there is a link between football and degenerative brain disease represents a significant change in the League's policy.[8] Commissioner Goodell has confirmed that Miller's statement is consistent with the NFL's position.[9] We look forward to seeing how this new approach manifests in increased safety, education, and awareness for professional athletes, coaches, and the public.

Accordingly, we look to the NCAA to understand what rule or policy changes you are considering to address the risks posed by both concussive and subconcussive hits. While changes at the professional level are important, football organizations across all levels, as appropriate, should consider rule changes and educational outreach to ensure the safety of all

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[3] Ann C. McKee et al., *TDP-43 Proteinopathy and Motor Neuron Disease in Chronic Traumatic Encephalopathy*, Journal of Neuropathology and Experimental Neurology (Sept. 2010); Daniel H. Daneshvar et al., *Long Term Consequences: Effects on Normal Development Profile after Concussion*, Physical Medicine & Rehabilitation Clinic of N. America (Nov. 2011).

[4] *Id.*

[5] *Evidence Suggests Amateur Contact Sports Increase Risk of Degenerative Disorder*, Mayo Clinic News Network (Dec. 2, 2015) (online at newsnetwork.mayoclinic.org/discussion/mayo-clinic-cte-fl-release/); *Brain Damage Study Shows Student-Athletes May Risk Same Injuries as NFL Players*, Bloomberg Business (Dec. 1, 2015) (online at www.bloomberg.com/news/articles/2015-12-01/brain-damage-found-in-one-third-of-former-student-athletes).

[6] *Id.*

[7] *Id.*

[8] Committee on Energy and Commerce, *Roundtable on Evaluating the State of Concussion Research and Implications for Public Health*, 114th Cong. (Mar. 14, 2016).

[9] *Roger Goodell Calls C.T.E. Link to Football Consistent With N.F.L.'s Position*, New York Times (Mar. 23, 2016).

athletes and their developing brains. Additionally, we need to ensure that parents have accurate, up-to-date information necessary to make informed decisions about their children's participation in football and other contact sports.

To assist our inquiry, please provide a briefing with responses to the following questions by May 25, 2016:

1. In January of 2015, the five NCAA Division I conferences passed Concussion Safety Protocol Legislation, requiring each school to submit a concussion safety protocol.[10] While concussion management protocols and protocols governing return to play after a concussion are certainly an important component to protecting athletes from head trauma, such protocols do little to address the issue of subconcussive hits. As referenced above, subconcussive hits, even in the absence of a concussion diagnosis, have been linked to decreased cognitive functioning and changes in brain chemistry.

    a. What is the NCAA doing to address the risks of subconcussive hits to student-athletes, particularly football players?

    b. What is the NCAA doing to ensure that student-athletes, particularly football players, are aware of the risks of subconcussive hits and the linkages between repetitive head trauma and CTE?

2. In 2014, the NCAA adopted guidelines recommending football coaches hold no more than four full-contact practices per week in the preseason and two full-contact practices per week during the season and post-season.[11] It is our understanding that these guidelines are not binding and that NCAA has no current legislation addressing the frequency of contact practices allowed during the preseason or regular season.

    a. What is the NCAA doing to monitor teams' implementation of these guidelines? How many teams have adopted the guidelines limiting full-contact practices?

    b. Is the NCAA considering further reducing the number of full-contact practices per week, as the eight Ivy League football coaches have done, to protect their student-athletes?

    c. Is the NCAA considering making these guidelines mandatory, in light of the growing body of scientific evidence on the dangers of subconcussive hits and the linkages between repetitive head trauma and CTE?

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[10] NCAA, *Concussion Safety* (online at www.ncaa.org/health-and-safety/concussion-safety) (accessed Mar. 23, 2016).

[11] NCAA, *Football Practice Guidelines* (online at www.ncaa.org/health-and-safety/independent-medical-care-guidelines) (accessed Mar. 23, 2016).

3. The NCAA also adopted guidelines recommending independent medical care. The guidelines recommend that an institution have, at minimum, a licensed physician to serve as a medical director, empowered "with unchallengeable autonomous authority to determine medical management and return-to-play decisions of student-athletes."[12] It is our understanding that these guidelines are not binding.

    a. What is the NCAA doing to monitor teams' implementation of these guidelines? How many teams are in compliance with the guidelines?

    b. Is the NCAA considering making these guidelines mandatory, in light of the growing body of scientific evidence on the dangers of subconcussive hits and the linkages between repetitive head trauma and CTE?

4. The NCAA has touted the organization's NCAA-DoD Care Consortium study as the "equivalent of the Framingham Heart Study."[13] According to press reports, this $30 million initiative will follow 37,000 male and female NCAA student-athletes over a three-year period, offering insight into the risks, treatment, and management of concussions.

    a. Will researchers be able to conclude anything about the impact of subconcussive hits at the end of the three-year study? Please explain.

    b. It is our understanding that the NCAA-DoD Care Consortium researchers decided not to conduct any baseline imaging of student athletes' brains using fMRI imaging.[14] Is this correct? If so, please explain the rationale for the study design.

        i. Given that researchers are not conducting any baseline imaging, will they be able to track the cumulative effects of exposure to concussive and subconcussive hits on student athletes' brains over time?

Your assistance in this matter is greatly appreciated. If you have any questions, please contact Una Lee or Elizabeth Letter of the minority committee staff at (202) 225-3641.

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[12] NCAA, *Independent Medical Care Guidelines* (online at www.ncaa.org/health-and-safety/independent-medical-care-guidelines) (accessed Mar. 23, 2016).

[13] NCAA, *A Gray Matter* (online at www.ncaa.org/static/champion/gray-matter/#sthash.6cXi44fB.dpbs) (accessed Mar. 23, 2016).

[14] NCAA, Presentation to House Energy and Commerce Committee, Oversight and Investigations Subcommittee Minority Staff (June 29, 2015).

Sincerely,

Frank Pallone, Jr.
Ranking Member

Gene Green
Ranking Member
Subcommittee on Health

Diana DeGette
Ranking Member
Subcommittee on Oversight and Investigations

Jan Schakowsky
Ranking Member
Subcommittee on Commerce, Manufacturing, and Trade