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“Legal Issues Relating to Football Head Injuries”

Congress of the United States

House of Representatives, Committee on the Judiciary

Members of the United States House Judiciary Committee

Thank you for inviting me to testify today concerning issues related to concussion and the NFL. My name is Dr. Joel Morgenlander. I am a Professor of Neurology at Duke University Medical Center, where I run the Clinical Neurology Service and the Neurology Residency Training Program.

I was contacted three years ago by Dr. Thom Mayer, the medical director of the NFL Player's Association (NFLPA) and was asked to consider joining the Mild Traumatic Brain Injury (MTBI) Committee of the NFL. At that time, Dr. Elliott Pellman was the chair of the MTBI Committee. I was very clear with Dr. Pellman from the beginning that I was interested in helping with the Committee's work on player safety as long as I was convinced that the Committee was going to take my ideas and concerns seriously. I am a neurologist, and, to my way of thinking, all concussions are to be avoided. I wanted Dr. Pellman to understand my vantage point. The MTBI Committee is comprised of team physicians, trainers, an engineer, a statistician, neurosurgeons, a neuro-radiologist, a neuro-psychologist, neurologists, and NFL and NFLPA representatives. It is important for the Members of the Judiciary Committee to hear that in the three years I have participated in this work, I feel that all of my ideas and those of other Committee members have been heard and discussed fairly. The support for our work goes past the MTBI Committee to the Commissioner's office. I have been privy to no hidden agenda during my work with the MTBI Committee. Those that I have worked with are focused on player safety. Our hope is that the lessons learned will help with

injuries beyond the realm of professional football, but the NFL players are our central concern.

The issues of the MTBI Committee's work include injury prevention, player and medical personnel education, return-to-play decisions, and the evaluation of late effects of concussion. During the years I have been on the committee, we have communicated directly with players and families about the symptoms of concussion to try to facilitate understanding on their part. We have held several conferences with leaders in the field of head injury and sports concussion, including the Department of Defense, to share ideas and better understand opportunities for future research. With the Commissioner's support, we instituted a rule to not return any player with loss of consciousness to the same game. Each team is now required to have a neuro-psychology consultant and baseline cognitive testing for each player. We continue to work with manufacturers of helmets and other equipment on improvements targeted at player safety. We have much more to do, but I believe we are making a difference.

As physicians, we strive to use the highest level of medical evidence when making evaluation and treatment recommendations. Unfortunately, in my opinion, the area of sports concussion is behind many areas in neurology in the amount of prospective data on injury and recovery. Retrospective data is never as reliable as prospective results and associations do not prove causation. Therefore, at this time, it is not possible to specifically determine the long term risk of a single or repeated concussion.

For the return-to-play decision, it is recommended that the player be asymptomatic both at rest and with exercise. This medical evaluation rests partly on the player's report. NFL team concussion data has shown that over the past several years, more players with concussion are not returning to play on the same day. Our committee has worked with the team physicians and trainers to update our concussion report forms for the purposes of improving data collection and looking for clinical keys to player outcomes.

Members of the MTBI Committee are concerned about reports of pathological brain findings in retired NFL players and other athletes as well as non-athletes who have sustained multiple head injuries. The syndrome termed Chronic Traumatic Encephalopathy (CTE) appears to be pathologically different from other neurodegenerative diseases. In my conversations with the NFL players, it became clear to me that nearly all of them have had concussions. This includes concussions occurring during high school, college and professional football. If the majority of players sustain concussions during their career, why are only certain players affected? The majority of players lead cognitively normal lives after football, so what is different about these subjects that predispose them to additional risk? We know from the Alzheimer disease literature that genetic factors interact with environmental factors to advance cognitive decline. We do not know the effects other medical factors, including illness and exposures, may have in the setting of repeated head injury. We now hear reports of high school and college athletes with pathological changes of the brain consistent with CTE. Might there be a particular age at injury that predisposes the player to these late effects?

All of these questions need to be sorted out in order to determine the actual risk of brain injury from contact sports for those who choose to participate.

In one attempt to get more information, the MTBI Committee and the NFL have sponsored the Retired Players Study. This study is an attempt to gain more information about the middle aged retired players, comparing players with different NFL career duration. We are including past medical history and player examinations with state of the art magnetic resonance imaging studies, genetic screening, and neuro-psychological testing. These tests have normative data by age. Neuro-radiology and neuro-psychology consultants independent from the MTBI Committee have been involved in the study design, data analysis, and will be involved in the publication. We hope data from this study will add further information concerning the risk to players and help improve future player evaluation and testing.

I personally feel that this neuro-pathological work is important and know that those involved plan to continue. Players with no history of cognitive complaints are currently being recruited as controls. Future prospective studies following a cohort of young players may be particularly helpful. These studies should include medical and concussion histories, neuro-psychological evaluations, and neuro-imaging. Many researchers are interested in these issues concerning sports concussion and more precise information will be forthcoming.

I hope that my testimony has been helpful to the House Judiciary Committee. I will be happy to answer any questions you may have.

Respectfully,

Joel Morgenlander, MD

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Disclosure: I receive \$5200 annually for my consultant work on the MTBI Committee, which averages to less than \$50/hour for my work. I also receive travel reimbursement.