

NFL Concussion Protocols

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The National Football League or NFL is one of the defining features of the United States. Besides baseball, football would probably be the most popular pastime for the country as countless families tune in to the latest games every Sunday. People not only just watch the programs but, in most cases, worship those athletes on their screen with jerseys, betting, and even spending hours tailgating to be the first in the stadium. This has led to the emergence of a million dollar industry and the belief that the NFL could do no wrong. However, in the NFL's most recent history long term issues have arisen with former athletes threatening the future of not only professional football but contact sports as a whole. The problem is concussions and their prolonged impacts to the future health of athlete's brains. In turn, the NFL was required to change their status on how they are to prevent and treat a head injury as to not just protect their players from fatal blows to the head or concussion but the destiny of future players. The game of football has remained in the hearts of Americans ever since it was created, although as time has gone on a deeper look into the sport has revealed potential long-term risks to its athletes through concussions which required the National Football League to implement set protocols to treat and combat the epidemic of the injury.

In September of 2002, Dr. Bennet Omalu stumbled on an interesting case. He was investigating the death of football star Mike Webster, who had played for the Pittsburgh Steelers and earned a spot in the Hall of Fame as a center. Overall Webster had seemed like a healthy 50-year-old man with little signs of any distinct problems, however what Omalu didn't know was the madness Webster had endowed before he died (Reiter). Ben Reiter writes in his article for

Sports Illustrated Magazine, called “Will Smith tries to shine a light on the darkest side of the sport he loves,” “[Omalu] hadn't heard the local whispers about Webster's subsequent descent into headache-wracked insanity. Webster's illness led him to live in his pickup truck, to pull out his teeth and super glue them back in and to repeatedly shock himself with a taser” (Reiter). With more searching Omalu finally discovered exactly what plagued the former player, chronic traumatic encephalopathy or CTE. Dr. Omalu was blown away, inside Webster’s brain was riddled with an overwhelming amount of dark tangled tau proteins. Basically, meaning that his brain suffocated from the inside out due to his thousands of hits during his football career (Reiter). Since the discovery of CTE there have been a lot of changes in play to limit its impacts on the players of the NFL and it is continuously advancing as new information comes out.

Chronic traumatic encephalopathy is a physically invisible disease. Anyone with CTE looks completely healthy on the outside with no visible issues, however their brain under examination paints an entirely different picture. As stated previously those with CTE develop dark tau proteins in their brain, the same thing seen in other degenerative diseases like Alzheimer’s and dementia (Lazarus). Although, CTE is exclusively brought on by regularly getting hit in the head excessively. CTE has also been heavily associated with concussions as the more concussions a player acquires the more likely they are to develop CTE. In turn the disease has been linked famously to former football players, as football has one of the highest rates of concussions compared to all other sports. Concussions have an extremely long symptom list such as ataxia, being the most recent. Ataxia refers to the “abnormality of balance/ stability, motor coordination or dysfunctional speech caused by a neurological issue” (“NFL Concussion Protocol Explained: Symptoms, Evaluation, Return To Play”). Some of the other symptoms

include confusion, amnesia, impact seizures, gross motor instability, etc ("NFL Concussion Protocol Explained: Symptoms, Evaluation, Return To Play"). Individually these issues are not life-threatening however when combined and associated with an injury, especially a head injury, they cause an extremely high chance of error in diagnosis of a concussion which leads to the injury not healing, also increasing the odds of CTE development (Lazarus). Unfortunately, even if faculty and athletes do everything right when it comes to trying to heal, the term “medically clear” isn’t inclusive and the head injury can still provide long term impacts despite the player seemingly looking healthy. CTE has been diagnosed in at least twenty former dead professional and college football players despite the NFL disregarding the issue (Lazarus).

The NFL’s reaction to the discovery of CTE has been far from inviting. At the beginning, they completely denied the relation and until the last decade have had an overall vow of silence on the harm of concussions or even some faculty and the public bashed scientist in charge of researching the disease. They had already reluctantly created the first head injury committee years prior due to some of the high-profile medical retirees but it seemed like their purpose was to nullify the criticism, concern, and work in favor of the NFL company then actually protect their players (“The NFL Tried to Intimidate Scientists Studying the Link Between Pro Football and Traumatic Brain Injury”). In fact, in a case study written by the Union of Concerned Scientists, they reference that the NFL’s first head injury committee, the Mild Traumatic Brain Injury Committee (MTBI), had published research in a journal of neurosurgery and “heavily downplayed the breadth and severity of concussions”(“The NFL Tried to Intimidate Scientists Studying the Link Between Pro Football and Traumatic Brain Injury”). They even went to as far as “to publish an unprecedented series of papers, several of which were rejected by peer

reviewers and editors and later disavowed even by some of their own author” (“The NFL Tried to Intimidate Scientists Studying the Link Between Pro Football and Traumatic Brain Injury”). Unfortunately for the NFL the concussion discussion continued and became studied more and more from scientists not under their own payroll. Even after the previously mentioned founder of CTE research, Bennet Omalu, had published his second paper the NFL and correspondence still refused to give him their approval and he was not the only one. About a dozen other scientists witnessed the same ostracization as Omalu, including Dr Ann McKee, who was also called in to look at the brains of former NFL players and was ridiculed by the head of the MTBI and questioned about her findings. Through the hard work of scientists like Omalu and McKee built enough momentum to finally make headway through the NFL and the MTBI was disbanded, switched with the current NFL Head and Neck Injury Committee (“The NFL Tried to Intimidate Scientists Studying the Link Between Pro Football and Traumatic Brain Injury”). Since then the NFL has made valiant efforts in order to improve their concussion policies and research by incorporating protocols for athletes as well as specialized medical plans and personnel.

Due to its more recent discovery and acceptance, how to combat chronic traumatic encephalopathy is constantly being studied and updated even daily, especially during the football season. In 2011, the NFL began developing stricter standards in the form of an established protocol and renovations of the rule book. In which their Head, Neck, and Spine Committee constantly reviews it. The protocol's purpose is to restrict players from entering a game or practice if they show signs of a concussion like dizziness or headaches (“NFL Concussion Protocol Explained: Symptoms, Evaluation, Return To Play”). Some of these protocols include players passing inspection from a variety of different professionals like unaffiliated neurotrauma

consultants, team doctors, an independent neurotrauma consultant, athletic trainers, and even the own words of the affected athlete. They also have to go through specialized testing that could consist of memory tests, eye exams, and more that all depend and are specialized for the specific player's diagnosis. The protocol's duration all depends on the player as well as a concussion is very much an invisible condition and cannot always be directly determined from outside perspective ("NFL Concussion Protocol Explained: Symptoms, Evaluation, Return To Play"). Additionally, the NFL has also renovated some of its rules in order prevent players from getting head injuries in the first place. A few of these changes can be seen in the form of the NFL moving the kickoff line 5 yards down the field increasing the amount of touchbacks, in turn causing less high impact hits when trying to cover the kick from the opposing team, and through head-to-head hits as players are no longer allowed to use their helmets (head) as their main source of impact on the tackle. Not to mention, if you are running the ball you are also no longer allowed to lead with your head to hit others (Vox). The NFL has also implemented a select team of professional medical analysts in order to observe each game on the field (Collins et al. 699-711). On paper, these changes in the game of professional football and requirements for players have decreased the amount of overall head, neck and spine injuries especially concussions but some problems still linger and the issue has not totally been resolved.

Despite the NFL's change of heart and effort in trying to solve the problem of concussions it may not be able to be solved. Regardless of the protocol established as previously mentioned it is all dependent on the players diagnosis and symptoms. As the paper titled, "Sport-related Concussion: Experience from the National Football League" by a variety of different authors, explains "Individualized clinical profiles after concussion have started to

emerge and are being studied to potentially allow for targeted treatment from the injury rather than a “one-size fits-all” approach” which has changed the perspective in recent times and has shown massive success (Collins et al. 699-711). However, without a certain degree of specialization athletes symptoms and severity can go unnoticed due to following the specific plans. Even if the NFL, medical faculty, coaches, and players are as cautious with a head injury as they can, there are some possible errors that can appear no matter what just because of human error. One of the important errors that come with a concussion is a missed diagnosis. The problem being that even the tiniest subconcussive hits, that don't make the front story of ESPN, can also lead to the development of CTE overtime as they build up in quantity. Although more of a most recent discovery, it is still being researched and could potentially impact football as a whole, virtually making it completely unsafe to participate (Vox). The error in diagnosis of a player can furthermore include the promotion of more advanced equipment, miscommunication errors between faculty, and probably the most deciding the pressure to clear a player (Lazarus). These problems are extremely hard to navigate but the only thing able to combat this is to take the process slow, listen to experts. Overall, the main thing that can determine the concussion protocol is to encourage players to give and receive the medical information and treat them as a partner in the concussion process as a medical professional (Lazarus).

In conclusion, the NFL has been dealing with the concussion crisis for over a decade now and have taken steps to help its athletes. Although, this only came from the push of medical doctors and the discovery of CTE. Yet the change is noticeable with many rules being renovated and plans or protocols being added as a baseline for healing and prevention. As CTE is studied more and more there are constant updates of how the disease works and what the causes are. In

turn this has directly impacted the NFL not only in the present day but could alter the future of the sport as a whole. Despite how extremely crucial the diagnosis of a concussion is there are errors that can prevent a concussion from being diagnosed including not promoting more quality equipment, not observing concussion caused by mild hits, miscommunication and also the pressure to clear a player. Granting all this, as Arthur Lazarus states in his article “NFL Concussions and Common Sense: A Recipe for Medical Errors and a Lesson for Physician Leaders,” “ sound medical opinions cannot always be provided in a pressure-cooker atmosphere where split-second decisions are required. A longer time to assess the injury and a more extensive exam was needed (Lazarus)”. This can be done by listening to the athlete overall and encouraging them to listen to their bodies and make the right decision. As the NFL continues to encourage studies of CTE as well as inform the public, athletes and faculty on its dangers and lastly taking measures to prevent and treat concussion in the first place football players will now be less likely to develop CTE in the long run.

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