



From the MAFP Presidents Pen -

Float like a butterfly, but avoid CTE!

By William Sturrock MD, MAFP President
June 2016

This past weekend the world mourned the passing of one of the greatest athletes of the 20th Century: the colorful and controversial poet of the boxing ring, Muhammed Ali. Tributes to his athletic skills as well as courage in the face of multiple adversities during the turbulent 60's and 70's have filled the airwaves as we prepare to say our final farewell to this American icon. Yet as a doctor, I can't help but be concerned about the risk that his sport carries for all who would follow in his foot-steps.

Chronic Traumatic Encephalopathy (CTE) has become new jargon in the lexicon of many sports, including all the martial arts, football, hockey, and even soccer. The term refers to permanent neuronal damage that occurs following repeated blows to the head, and may not develop until 8-10 years after a person has suffered the injuries. The clinical manifestations are in 4 stages:

- 1) First there can be deterioration in attention and orientation with headaches, dizziness and memory loss as the early symptoms
- 2) Second stage problems include social instability due to poor judgment and erratic behavior
- 3) Third stage disabilities may include slowing of movements, impaired speech and tremors
- 4) Fourth stage symptoms show the progressive dementia, sensory problems with hearing and balance, difficulty swallowing, and even suicidality.

Unfortunately the condition cannot be accurately diagnosed early on – even CT scans and MRI's are not specific even if there has been clinical evidence of a concussion. Although there are many ways an expert can examine and question a potential sufferer, certainty of the brain injury cannot be proven until an autopsy is done. Certainly Ali's early onset Parkinson's symptoms have long been felt by many experts as one manifestation of this neurologic degeneration, but I have not heard whether there is any plan for a post-mortem exam.

The NFL currently is embroiled in the CTE controversy, as there have been many high profile cases including Ken Stabler and Junior Seau both diagnosed after death as having this syndrome. In 2015 researchers at the VA and BU reported results of their study that showed evidence of CTE in 79% in football players at any level and 96% of NFL athletes! Not surprising, later that same year a lawsuit between the NFL owners and players was settled, whose terms actually may reach over a billion dollars over the next 60 years for medical exams, research and



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an unspecified amount for retirees (or their heirs) who can prove that they suffered from this serious problem. As many fans know, the rules surrounding what is a legal tackle have changed to prevent the more blatant hits to the head. But it is not just American football and martial arts that put athletes at risk. Hockey, rugby, and even soccer players have been shown to have suffered, with reports that the great soccer star Pele has shown clinical signs of CTE.

So what is a concerned parent to do if his or her child expresses an interest in playing a sport that can be associated with head injury? First, you will need to exercise your parental right to make a decision with your child about whether to support that interest or to encourage alternative sports. Second, make sure your child has the best protective gear for that sport. Third, and perhaps most important, be certain that the coaches involved in that sport are up to date on the latest on-field evaluation and management of every player that has a blow to the head. One widely used tool is call the 'Sport Concussion Assessment Tool version 2' (SCAT2), but to implement these safety tools correctly, there needs adherence to protocols that outline how long to keep a person out of play as well as how to return the athlete on a graduated basis back to contact sport. Now more than ever a coach has to know the game, but also to know the basics of being a sports trainer to protect the players and keep them healthy, not just for the rest of that season, but for the rest of their life.