## Bo Jackson Opens Up about Football's CTE Risk

By Jacqueline Howard from CNN January 13th, 2017

Bo Jackson knows football, but he didn't know that much about the risk of head injuries that can come with playing the game, he said in a recent interview with *USA Today*.

The Heisman Trophy winner and NFL Pro Bowler, who also had a baseball career, would have never played football if he had known more about the health risks, he said in the interview, which published Thursday.

"If I knew back then what I know now," Jackson told *USA Today Sports*, "I would have never played football. Never. I wish I had known about all of those head injuries, but no one knew that. And the people that did know that, they wouldn't tell anybody.

"The game has gotten so violent, so rough. We're so much more educated on this CTE stuff (chronic traumatic encephalopathy), there's no way I would ever allow my kids to play football today."

Jackson went on to say, "If I had young kids, to be honest, and if they came and said, 'Dad, I want to play football,' I'd smack them in the mouth," he said. "No. No."

Most scientists believe that CTE, a progressive degenerative brain disease, is associated with repeated blows to the head, such as those suffered while playing football. The brain can shake inside the skull whenever the head gets hit, which can trigger the buildup of an abnormal protein in the brain called tau, leading to progressive degeneration of brain tissue.

In March, the NFL publicly acknowledged a connection between football and CTE.

"I think that the NFL has a responsibility —one could say an obligation— to really focus on player health and game safety. And by doing so, it would have a watershed effect on football, reaching into the NCAA and down into youth football. But I think the watershed effect extends to all sports and will affect men and women, so I think that's a good thing," Dr. Betsy Nabel, the NFL's chief health and medical adviser, told CNN's Dr. Sanjay Gupta in a 2015 interview.

"Any contact sport is going to have a risk of injury," Nabel continued. "We see that, for example, in women's soccer. I think what's critical is knowing how to play the game right, knowing how to play the game safely. If you understand the best way to tackle, if you've got good equipment in place and you know how to recognize injuries, then you're going to know how to play the game as safely as possible."

Indeed, athletes from other sports, such as boxing, soccer, and rugby, also can suffer CTE. Last year, US soccer player Brandi Chastain announced that she plans to donate her brain to Boston University for CTE research.

Chastain, 47, said she suffered two concussions while playing in college at California and Santa Clara but experienced no side effects and came right back into the game both times.

"I'm not going to be needing it at the end of my life, No. 1," Chastain said in a phone interview with *USA Today Sports*, "and hopefully, what can be learned is, can doctors and scientists and neuroscientists look at the brain of someone like me, who has been playing soccer a majority of my life, and really dissect the brain and say, 'Here's where we see it beginning?' Could we then use that information to help say that before the age of 14, it's not a good idea to head the ball?"

Many athletes from other sports have made that same commitment including three-time Olympic gold-medal swimmer Nancy Hogshead-Makar and NASCAR legend Dale Earnhardt Jr.

CTE can cause Alzheimer's like symptoms. They can include cognitive impairment, impulsive behavior, depression, memory loss, difficulty planning or carrying out tasks, emotional instability, substance abuse, and suicidal thoughts, according to the Mayo Clinic.

Out of 94 ex-NFL players' brains that have been studied to date at the US Department of Veterans Affairs and Boston University, 90 have been diagnosed with CTE, according to the Concussion Legacy Foundation.

Legendary sportscaster and Hall of Famer Frank Gifford, who died in 2015 of natural causes at the age of 84, is among some of the players diagnosed with CTE -- as well as Hall of Famer and San Diego Charger Junior Seau, who died in 2012 at the age of 43, former Minnesota Vikings linebacker Fred McNeill who died at 63, and former Oakland Raiders quarterback Ken Stabler who died at 69.

"Unfortunately the only definitive way to determine CTE is with an autopsy," said Gupta, CNN's chief medical correspondent.

Although, as reported by CNN last year, McNeill is believed to be the first person diagnosed before death with CTE. His diagnosis was confirmed by an autopsy after he died.

"There's a lot of work now focused on trying to pinpoint biomarkers and brain imaging that can potentially lead to a diagnosis when a player is still alive -- and hopefully that can also lead to new therapies. Currently there is no way to treat the disease," Gupta said. "The only thing we know is that it's a result of repeated hits to the head, and if we cut down that exposure, that may help."

Bo Jackson isn't the only former athlete to weigh in on the brain injury risks of football. Last year, former NFL wide receiver Antwaan Randle El told the *Pittsburgh Post-Gazette* that "If I could go back ... I would play baseball."

In 2015, former NFL defensive end Neil Smith told 610 Sports Radio in Kansas City that he regrets playing football due to health problems and if "he had to do it all over again, probably not."

Chris Borland, a former rookie linebacker in the NFL, retired early from the game in 2015 citing concerns about brain injuries.

In 2013, former NFL running back Tony Dorsett was diagnosed with signs of CTE in a preliminary study and he told CNN's Wolf Blitzer, "I can't put a price on my health."