

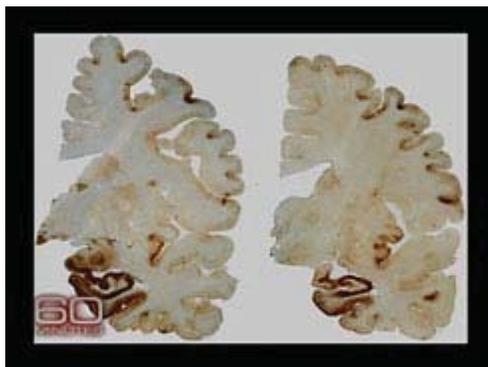
# Study Links Concussions To Brain Disease

## 60 Minutes Looks At Alarming New Research On The Longterm Effects Of Concussions And Head Trauma



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New studies show that athletes, especially professional football players, who suffered many blows to the head, became brain damaged. Bob Simon reports.



The dark coloration in this brain cross-section is an indicator of repeated trauma and Chronic Traumatic Encephalopathy or CTE. (CBS)

(CBS) You can't separate violence from football - it's part of the thrill of the game. Players know what they're risking when they hit the field, including injuries such as torn ligaments and broken bones. But what about a blow to the brain? According to the Centers for Disease Control, concussions from sports are an epidemic in this country.

As many as three million sports related concussions happen every year.

And new research shows that their effects can be frighteningly long-lasting, even leading to permanent brain damage and the early onset of dementia. While concussions happen in many sports, most happen in football. They can happen to kids, to the pros, and as we saw recently, to one of today's top college players.

Two weeks ago, everything was going right for Tim Tebow, the best college quarterback in the country. His team, the Florida Gators, was coasting to victory and Tebow seemed invincible, until he took a hit.

Tebow suffered a concussion, meaning his brain went slamming into his skull, causing a disruption in normal brain activity. He spent a night at the hospital

and wasn't allowed back on the field for 10 days.

Multiple concussions have ended the careers of other star players, including NFL Hall of Fame quarterbacks Steve Young of the San Francisco 49ers, Troy Aikman of the Dallas Cowboys, and three-time Super Bowl champ linebacker, Ted Johnson from the New England Patriots.

Johnson was such a hard hitter, that in one play he ran into an opponent with so much power, he cracked the other guy's helmet in two.

By Johnson's own estimate, he suffered more than 50 concussions, but kept on playing even though he sometimes couldn't remember the plays and had trouble seeing.

"Lot of times, if I didn't get my vision back before the next snap, I'd have to have another linebacker call the plays. I couldn't see on the sideline. I couldn't see my defensive coordinator signaling in 'cause my vision was still blurred," Johnson told **60 Minutes correspondent Bob Simon**.

But he kept playing, suffering a concussion and getting right back onto the field. Asked why he did that, Johnson said, "Well, I didn't know any better."

"But you weren't that worried about it at the time?" Simon asked.

"I wasn't as worried as maybe I could've been if I knew what the potential risks," Johnson replied.

Much of the information about those risks has come out only recently. The University of North Carolina studied retired NFL players and found a correlation between the number of concussions and the onset of dementia and depression, something Ted Johnson was suffering from when he retired four years ago.

"I was in bed with no contact with anybody, curtains drawn. I would get up, go eat, go back to bed. That was my routine for a long, long time," Johnson said.

Asked how long, Johnson told Simon, "Close to a year and a half."

Dr. Robert Cantu, a neurosurgeon, who co-authored the University of North Carolina study, treated Johnson and says he believes Johnson is suffering from brain damage.

"A large segment of society thinks that concussions are innocuous and everybody recovers from them, and in life is gonna be merry ever after," Dr. Cantu said.

But Cantu said that notion is not true at all.

"When pro football players collide, how great is the impact?" Simon asked.

"The impacts can be tremendous, because athletes can run almost 20 miles an hour, and their size and their weight would be equivalent to crashing a car into a brick wall going 40, 45 miles an hour," Cantu explained.

Too much of that causes brain damage you can actually see.

Dr. Ann McKee, a neuropathologist at Boston University School of Medicine, has been working on a brand new area of research on the brain that has provided physiological proof of brain disease in athletes who have suffered concussions.

A brain sample she showed to Simon was from Walter Hilgenberg, a former Minnesota Viking who died last year of Lou Gehrig's disease at age 66.

His wife donated his brain to research because he had so many severe concussions during his career.

"We do have evidence that he did have trauma to his brain," McKee explained.

Dr. McKee says slides, cross-sections of his brain, show that Hilgenberg was suffering from a devastating, degenerative brain disease, called chronic traumatic encephalopathy, or CTE. It was first seen in boxers and can only be diagnosed after death, when the brain is dissected.

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Produced by Catherine Olian and Michael Radutzky

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