

1. **Mark your confusion.**
2. **Show evidence of a close reading.**
3. **Write a 1+ page reflection.**

87 of 91 Tested Ex-NFL Players Had Brain Disease Linked to Head Trauma

Jason Hanna, Debra Goldschmidt and Kevin Flower, CNN.com

Eighty-seven of 91 former NFL players who donated their brains to science after death tested positive for a brain disease that is believed to be linked with repeated head trauma and concussions, researchers said.

The former players were found to have had chronic traumatic encephalopathy, known as CTE, according to the U.S. Department of Veterans Affairs and Boston University.

It's not clear why some players develop the disease and others don't.

The study results don't necessarily mean that 96% of all NFL players are at risk for CTE, said Dr. Robert Cantu. The brains came from players who, while they were alive, had concerns about CTE. His group began its work in 2008. The data was published on the website for the Concussion Legacy Foundation, which Cantu co-founded, and first reported Friday by the documentary TV program "Frontline."

NFL reacts

The NFL said it had taken several steps to make play safer. Among the changes in recent years has been conducting pregame medical assessments of players, along with on-field and postgame assessments of players involved in hard hits. Another has been moving the kickoff spot 5 yards forward, reducing the number of kick returns. "We are dedicated to making football safer and continue to take steps to protect players, including rule changes, advanced sideline technology and expanded medical resources," the league said. "We continue to make significant investments in independent research through our gifts to Boston University, the (National Institutes of Health) and other efforts to accelerate the science and understanding of these issues." In May, Dr. Russ Lonser, chairman of the NFL's Head, Neck and Spine Subcommittee, said there has been a 25% reduction in concussions and 40% reduction in helmet-to-helmet hits in the past three seasons.

Postmortem diagnosis

CTE is a progressive degenerative brain disease found in some athletes and others with a history of repetitive brain trauma. The brain tissue of people found to have CTE displays an abnormal build-up of tau -- a protein that, when it spills out of cells, can choke off, or disable, neural pathways controlling things like memory, judgment and fear.

Cantu is unequivocally clear that CTE is not unique to athletes. "There are a number of cases in people who never saw an athletic field," he said. Cantu gave the examples of former military members, people who have suffered from grand mal seizures, autistic children who rocked and banged their heads, abuse victims, and even people who were shot out of a cannon as part of a circus act.

CTE can be diagnosed only after death.

Earlier this year, the NFL and thousands of former players settled a lawsuit that provides up to \$5 million per retired player for serious medical conditions associated with repeated head trauma. While the lawsuit was a combination of hundreds of actions brought by more than 5,000 former players, it may apply to as many as 20,000 former ex-NFLers.

The overall rate of incidence of CTE among NFL players can only be determined after a number of brains from players who did not exhibit or experience any symptoms of CTE, are studied, Cantu said.

Should You Let Your Kids Play Football?

Roxanne Jones/CNN.com

When Oakland Raiders NFL running back Maurice Jones-Drew retired recently at just 29 years old, he said his life had been focused on football for 24 years and he needed a change. It's no wonder he wanted out. He has been playing football since he was 5 years old.

Sound too young to strap on a helmet? Not really. Jones-Drew is no different from thousands of other boys whose parents introduce them to the gridiron just a few years out of diapers.

Football is America's favorite sport. We pride ourselves on our toughness, on our ability to get back up when we're knocked down. What better sport is there to teach those lessons? But today, youth football is not looking like the best option. In 2012, an estimated 225,287 children -- down 9.5% since 2010 -- between the ages of 5 and 14 played Pop

Warner football, in which the weight class for the 5-year-olds ranges from 35 to 79 pounds. With such lightweight boys competing with children more than twice their size, it's no wonder parents feel less inclined to put their kids in this sport.

But not too long ago, parents thought nothing of sending their children out on the football field to run around and burn up a little energy. Many parents still insist youth football is safe. What could be healthier for a boy? Certainly, it beats sitting in front of a computer all day. That's exactly what Debra Pyka thought when she signed up her son, Joseph Chernach, for Pop Warner football in Wisconsin, then later in Michigan, when he was 11 years old, in 1997. If only she knew then that her son would be dead at 25. Joseph hung himself in his mother's shed on June 7, 2012. His brain was later found to have severe CTE, a degenerative brain disease that has been linked to concussions in football. Joseph Chernach had played sports, including wrestling, pole vaulting and football most of his young life. But he spent almost four years playing Pop Warner football from ages 11 to 14.

"My son was the class comedian, loved school, always fun to be around," Pyka told me. "But we noticed after high school Joseph changed. He got depressed, angry, paranoid and withdrew from sports and his friends. We just didn't know why. After learning about CTE, I knew he had it even before we got the results. The symptoms were all there."

Pyka is convinced those early days playing Pop Warner football triggered her son's CTE. Last month, Pyka and her son's estate filed a lawsuit against Pop Warner football for \$5 million, claiming the nonprofit failed to protect its youngest players and warn them and their parents about the permanent dangers of head trauma. The lawsuit further alleges that Pyka's son and other children were intentionally put in danger because Pop Warner used amateur coaches with short tenures, who were never properly trained in the game of football, injury prevention, concussion or head injury identification. So now, this mother is on a mission. She wants to stop children younger than 14 from playing tackle football in youth leagues.

"I don't want any kids to suffer the way my son suffered, the way my family suffered. It's devastating. Young children should not be allowed to play tackle football until they reach high school," said Pyka.

Since filing her suit, Pyka, a registered nurse, said she's found some solace by connecting with other parents who want to make football safer for children, but she also has received plenty of hateful emails criticizing her for allowing her son to play in the first place. Critics say that she knew what she was doing when she signed her son up to play football and some even suggest that Pyka should be charged with murder for allowing Joseph to sign up for football, Pyka told me, clearly upset.

"I didn't sign my son up to get a brain disease," she said. "We wanted him to play sports, to be active. We knew nothing about concussions then. It wasn't discussed much. It's still not talked about enough today. Should we all be arrested for letting our kids play football?"

Clearly, the lawsuit faces obstacles, especially since Chernach did play other sports and it may be hard to prove the CTE was triggered by injuries suffered while playing for Pop Warner. But Pyka and her attorney, Gordon Johnson, at the Brain Injury Law Group, which is representing Chernach's estate, insist this case is not just about winning. They are going after the economics of youth football leagues. And if they win the lawsuit it may be less possible for those leagues to buy the insurance policies that allow very young children to play tackle football.

"We have to prove that Pop Warner was a substantial factor in him getting it [CTE], and we knew from research that playing under 12 is when you're most vulnerable," Johnson told media when he filed the suit. "The airing of these issues will benefit everybody," he added.

Jon Butler, executive director of Pop Warner Little Scholars Inc., told me on Thursday via email: "Pop Warner has been, and will continue to be, at the forefront of addressing player safety. ... While there is incredible sadness in this story, we question the merits of singling out four years of youth football amid a career of sports that lasted through high school." Still, when the lawyer talk is done, Debra Pyka won't get her son back. And amazingly, she did not sound bitter. And she's not out to end football. But "a 5-year-old playing football, it's ridiculous to have them out there banging their brains around."

Some good has come out of all this, said Pyka. More people are talking about CTE. She said it's important that parents listen closely to NFLers like 24-year-old Chris Borland, the San Francisco 49ers linebacker who retired this week after just one season. Borland said he quit because he was afraid of brain injuries. He understands how his decision may affect parents and he has a message: "Parents ... if you weigh the risk and decide this is something you want to partake in. ... It's a free country. ... But If I could relay a message to kids and their parents it would be twofold: Number one: make an informed decision. And number two: Don't play through concussions. Who knows how many hits is too many?"

Possible Response Questions:

- Will you let your child play football? Explain.
- Pick a passage from the article and respond to it.