

# 'We've all lost friends who didn't need to die': Four ex-NFL players unite to launch largest ever CTE study into finding a test during life

- Jamir Miller, Steve Jordan, Solomon Wilcots, and Jim Joyce will be monitored by scientists - alongside up to 200 other current and former NFL players.
- The study is an attempt to diagnose CTE during life by finding a biomarker.
- It runs alongside the federally-funded Boston University study into living players.

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PUBLISHED: 12:11 EDT, 22 March 2018 | UPDATED: 16:54 EDT, 22 March 2018

Four former NFL players have joined the largest study to date into the football-linked brain disease CTE that could lead to a test for athletes during their lifetime.

The program, launched today, is the passion project of another former player Jim Joyce, who played for the Denver Broncos before founding biotech firm Exosome Sciences to investigate the diseases that afflict thousands of players in later life.

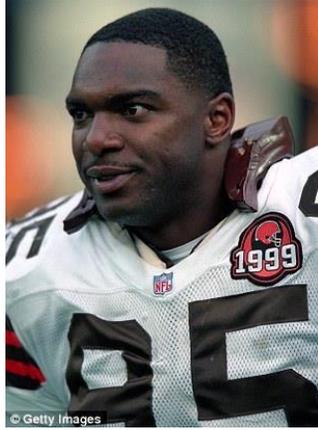
In a world-first, researchers will monitor the biggest ever cohort of living current and former players - around 200 - for years to identify biomarkers associated with chronic traumatic encephalopathy (CTE), the disease linked to hard head-hits which causes dementia, aggression and suicidal thoughts.

Among others, it will include 53-year-old Solomon Wilcots, former Cincinnati Bengal and NFL broadcaster, 57-year-old Steve Jordan, former Minnesota Viking, and 44-year-old Jamir Miller, former Arizona Cardinal and Cleveland Brown - as well as Joyce himself.

While the players will have no idea of the findings or results, the ambitious investigation could lead scientists to a test for CTE during life. Currently, the neurodegenerative condition can only be diagnosed in an autopsy.



Former Bengals player and current sports anchor Solomon Wilcots, 53, has joined the largest ever cohort study on living players to assess biomarkers to find a cure for the disease CTE



Tight end Steve Jordan, now 53, and linebacker Jamir Miller, now 44, (pictured left and right, respectively, during their times at the Minnesota Vikings and the Browns) have also joined.



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The announcement on Thursday morning comes just days after ex-con former player OJ Simpson, 70, said he fears he has CTE as he is forgetting names and numbers and people, but will never know for certain since there is no test.

He is hardly the only player to speak out.

Simpson's words followed a slew of players' agonizing accounts of mental decline, not to mention the scores of players' deaths from suicide.

Brain degradation from repeated head hits is not a newly discovered phenomenon - it has been recorded in boxers since the early 1900s.

But in the last few years, we have seen an unprecedented surge in awareness as the 1960s generation - the first who used helmets, and therefore could hit their heads harder - reach their twilight years and share harrowing accounts of their symptoms.

That is one of the biggest wake-up calls for former players, Miller said at the launch for the Exosome study on Thursday.

'I've lost friends,' he said bleakly.

'That's it, I've lost friends - who, really, could still be contributing to society in a positive way. But [they're gone] because of a debilitating condition that can't even be diagnosed until you're dead.

'Until we can figure that bit out, the mystery, we can't figure out a treatment plan.'

Miller, who is also the president of the NFL retired players association in Phoenix, said on Thursday that he hopes to involve as many living players as possible.

'I really understand that being at the age I am now, I'm understanding my mortality.

'There's this mystery that surrounds CTE. That's why I'm here to support to give them all the resources to the chapter in Phoenix.'

Steve Jordan, 57, a former Minnesota Viking player, concurred.

'It's simply personal,' he said. 'As former athletes we have a lot of friends that have gone down as a result of CTE.'

But, he added, 'it affects a lot of people, not just athletes'.

'Even a subset of youth sports come into play,' he said, 'and a lot of people don't talk about the military, they're subject to head trauma.'

'Information will be the key to subjects like this to bring on some treatments and provide some solutions.'

The Exosome study, running 'in parallel' with Boston University's federally-funded CTE research program, is an attempt to confirm their belief: that they have found a biomarker which could be isolated in a blood sample to diagnose CTE.

The first sign of this possible biomarker, dubbed TauSome, was described in a scientific paper published in a journal in 2015.

Now, Exosome needs to reach full enrollment - aiming for 200 players over the age of 20 with years of experience playing the game - to assess whether this biomarker can work in practice to match players' symptoms to brain changes.

'Until CTE can be diagnosed in the living it is very unlikely that a treatment could emerge,' Joyce said on Thursday.

The study is one of a handful of highly-anticipated research programs all racing towards the pot of gold at the end of the rainbow.

The neuroscience and pharmaceutical industry is well aware that a during-life test, and even preventative medicines, would be as lucrative (and beneficial for people) as an Alzheimer's cure.

Money aside, it has immense support from players and fans - and as the wait for a cure or test drags on, the rate of kids taking up tackle football is steadily declining.

This support has swelled as players share their emotional accounts - largely in a bid to tear down the NFL's roadblocks to getting compensation.

Mark Gastineau, 64, wept live on the radio last week, telling host Pete McCarthy football had ruined his life. Diagnosed with Alzheimer's, dementia, Parkinson's and probable CTE, the former New York Jets star said he can no longer do simple tasks like tending the yard, and relies on his wife to be his primary caregiver.

Last month, Emily Kelly, wife of former New Orleans Saints player Rob Kelly, 43, wrote a searing op-ed for the New York Times, describing her husband as a paranoid, aggressive 'ghost' who regularly muses about suicide, forgets to eat for days on end, and lashes out uncontrollably.

Larry Johnson, 38, who played for the Kansas City Chiefs, said he is convinced he has CTE after 'demons in his head' almost drove him to 'jump off a roof'.

Nick Buoniconti, 77, who played for the Dolphins, also wept as he pledged his brain to CTE research, having been diagnosed with dementia, likely CTE, and atrophy in his right frontal cortex which affects his balance.

Aaron Hernandez, Junior Seau, and Dave Duerson, among others, were diagnosed with CTE after taking their own lives following illustrious careers in football.

More than 3,000 former NFL players, boxers, and military veterans have pledged to donate their brains to the Concussion Legacy Foundation for CTE research.

Boston University has made huge headway in investigating chronic traumatic encephalopathy (or, CTE), the Alzheimer's-like disease which has been linked to repeated blows to the head from contact sports.

Researchers are still unclear on how CTE affects behavior, but a growing swell of studies is offering some answers.

CTE sufferers have clumps of tau protein built up in the frontal lobe, which controls emotional expression and judgment (similar to dementia).

This interrupts normal functioning and blood flow in the brain, disrupting and killing nerve cells.

By stage 3 - i.e. Aaron Hernandez's stage - the tau deposits expand from the frontal lobe (at the top) to the temporal lobe (on the sides). This affects the amygdala and the hippocampus, which controls emotion and memory.

One of Boston University's papers published in 2017 found those who start playing football from before the age of 12 - as most professional players do - have a much higher risk of mood, behavioral and neurological problems in later life compared to those who start later. They attributed this to the damage of repeated hits to the head at such a critical time of brain development.

Another showed 110 of the 111 former players brains they had in their lab, donated from families after death, had signs of CTE, showing that it's not a trivial number of people that get the crippling disease.

Perhaps most importantly, last month Boston published a groundbreaking study to demolish the obsession with concussions.

Concussions, they found, are the red herring: it is not a 'big hit' in football that causes CTE or makes it more likely. Rather, it is the experience of repeated subconcussive hits over time that increases the likelihood of brain disease. In a nutshell: any tackle in an NFL game - or even practice - increases the risk of a player transforming into the 'ghost' of a human, according to Dr Stern.

This year, the team has published a slew of research papers showing links between football and brain injury.

While there is still no way to diagnose the disease during life, the evidence bridging the gap between head hits and neurodegenerative diseases is strengthening at an unprecedented rate.

'I don't know of any other area of scientific investigation that has had such a large and pure impact on awareness in lay culture and attention within the scientific community,' Dr Robert Stern, head of Boston's CTE research unit, told Daily Mail Online this week.

'This has been a landmark year for media coverage and cultural awareness of CTE and long-term consequences of playing football.

'We still have a tremendous amount of work ahead of us to be able to answer some very important questions about CTE, but we should have a test to diagnose in life within the next five to 10 years - and that's being conservative.'

<http://www.dailymail.co.uk/health/article-5532227/Four-ex-NFL-players-unite-launch-largest-CTEstudy.html>