

# Rugby union could face NFL-style lawsuit on concussion – neuroscientist

- Ex-NFL players settled for \$765m for brain injuries this year
- Neuroscientist warns rugby could be open to legal action

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Helmeted sports, such as NFL, above, lead to a different type of impact but Dr Michael Grey, a leading neuroscientist, says concussion remains a problem in rugby union. Photograph: Frederick Breedon/Getty Images

[Rugby union](#) faces the prospect of an [NFL](#)-style lawsuit due to the long-term impact of concussions, according to one of Britain's leading experts in motor neuroscience.

Nearly two months ago more than 4,500 former American football players agreed a [\\$765m \(£476m\) settlement for concussion-related brain injuries](#).

Some were suffering from dementia, depression or Alzheimer's disease that they blamed on blows to the head sustained in gridiron.

The International Rugby Board has been [accused by its former medical advisor, Dr Barry O'Driscoll, in an interview with the BBC of failing to place sufficient importance on treating concussion](#), a claim the governing body denies.

Dr Michael Grey, a reader in motor neuroscience at the University of Birmingham's School of Sport, Exercise and Rehabilitation Sciences, has begun a fresh study into concussion in sport. Grey warns rugby is one of several sports that is open to legal action.

"There's the damage not only to the individual – and that has to be at the forefront of the mind – but we must also consider the sport itself," Dr Grey said.

"I believe we're not too far off from coaches and sporting organisations being held accountable for the damage and we're seeing that with the big lawsuit in the NFL.

"Absolutely a sport like rugby union could face something similar in the future. I wouldn't be surprised at all if something like that happens. If we do nothing when we know there's a problem, then I could see that type of lawsuit occurring.

"We know this is a problem and it's very clear that the information is not getting out correctly to coaches and particularly to kids when we have an obligation to inform them of the dangers."

The Rugby Football Union's head of medicine, Dr Simon Kemp, insists there is no proven association between head trauma and dementia but Grey disagrees.

"Rubbish. We have very good evidence of the link between concussion and dementia," Dr Grey said. "'Scientifically proven': that was the phrase used to deny the link between cigarettes and cancer. It's an easy thing to say.

"Have we scientifically proved it? There is very good evidence now that multiple concussions can lead to premature ageing and neurodegenerative diseases such as Parkinson's. That danger is very real."

One of the reasons given why rugby will avoid the concussion-related problems suffered in American football and ice hockey is that helmeted sports lead to a different type of impact.

Grey, whose study will focus on second impact syndrome, views the distinction as irrelevant. "The collisions are different but it doesn't take very much impact to shake the brain and cause a concussion. It doesn't take a huge hit," he said.

While Grey agrees with the RFU's position that children should be encouraged to play sport, including rugby, to combat the "growing obesity epidemic in this country", he cites an urgent need for greater education over concussion across all levels of the game.

Successive concussions have the potential to cause the greatest damage and his two-year study, which will examine athletes across a variety of sports, hopes to establish biomarkers to inform better when it is healthy to return to play.

"Second-concussion syndrome is a concept where a player gets a concussion within a certain period of time when the brain is in a state of hyperactivity," Dr Grey said.

"If the player gets another concussion while that activity is going on, the symptoms or result of that second concussion can be as severe as a very, very severe blow to the head and can lead to death.

"We're not educating coaches well enough as to how much players are at risk if they play with a concussion."