



September 30, 2009

Dementia Risk Seen in Players in N.F.L. Study

By [ALAN SCHWARZ](#)

A study commissioned by the [National Football League](#) reports that Alzheimer's disease or similar memory-related diseases appear to have been diagnosed in the league's former players vastly more often than in the national population — including a rate of 19 times the normal rate for men ages 30 through 49.

The N.F.L. has long denied the existence of reliable data about cognitive decline among its players. These numbers would become the league's first public affirmation of any connection, though the league pointed to limitations of this study.

The findings could ring loud at the youth and college levels, which often take cues from the N.F.L. on safety policies and whose players emulate the pros. Hundreds of on-field concussions are sustained at every level each week, with many going undiagnosed and untreated.

A detailed summary of the N.F.L. study, which was conducted by the [University of Michigan's Institute for Social Research](#), was distributed to league officials this month.

The study has not been peer-reviewed, but the findings fall into step with several recent independent studies regarding N.F.L. players and the effects of their occupational head injuries.

"This is a game-changer — the whole debate, the ball's now in the N.F.L.'s court," said Dr. Julian Bailes, the chairman of the department of neurosurgery at the [West Virginia University](#) School of Medicine, and a former team physician for the [Pittsburgh Steelers](#) whose research found similar links four years ago.

"They always say, 'We're going to do our own studies.' And now they have."

Sean Morey, an [Arizona Cardinals](#) player who has been vocal in supporting research in this area, said:

"This is about more than us — it's about the high school kid in 2011 who might not die on the field because he ignored the risks of concussions."

An N.F.L. spokesman, Greg Aiello, said in an e-mail message that the study did not formally diagnose dementia, that it was subject to shortcomings of telephone surveys and that "there are thousands of retired players who do not have memory problems."

"Memory disorders affect many people who never played football or other sports," Mr. Aiello said. "We are trying to understand it as it relates to our retired players."

As scrutiny of brain injuries in football players has escalated the past three years, with prominent professionals reporting cognitive problems and academic studies supporting a link more generally, the N.F.L. and its medical committee on concussions have steadfastly denied the existence of reliable data on the issue. The league pledged to pursue its own studies, including the one at the University of Michigan.

Dr. Ira Casson, a co-chairman of the concussions committee who has been the league's primary voice denying any evidence connecting N.F.L. football and dementia, said: "What I take from this report is there's a need for further studies to see whether or not this finding is going to pan out, if it's really there or not. I can see that the respondents believe they have been diagnosed. But the next step is to determine whether that is so."

The N.F.L. is conducting its own rigorous study of 120 retired players, with results expected within a few years. All neurological examinations are being conducted by Dr. Casson.

According to a 37-page synopsis of the study furnished to the league, the Michigan researchers conducted a phone survey in late 2008 in which 1,063 retired players — those who participated from an original random list of 1,625 — were asked questions on a variety of health topics. Players had to have played at least three or four seasons to qualify. Questions were derived from the standard [National Health Interview Survey](#) so rates could be compared with those previously collected from the general population, the report said.

Some health issues were reported by N.F.L. retirees at normal rates (kidney and prostate problems), while others were higher (sleep apnea and elevated cholesterol) and others lower (heart attacks and ulcers), the summary said.

The researchers also asked players — or a caregiver for those who could not answer — if they had ever been diagnosed with "dementia, Alzheimer's disease, or other memory-related disease."

The Michigan researchers found that 6.1 percent of players age 50 and above reported that they had received a dementia-related diagnosis, five times higher than the cited national average, 1.2 percent. Players ages 30 through 49 showed a rate of 1.9 percent, or 19 times that of the national average, 0.1 percent.

The paper itself questioned the reliability of using phone surveys to assess prevalence rates of diagnosed dementia, as did several experts in telephone interviews. For example, some of those affected may not be reachable; then again, N.F.L. players may have greater access to doctors to make the diagnosis. The lead researcher, David R. Weir, said in an interview that proxies might have been handled differently in past studies.

"This suggests something suspicious," said Dr. Amy Borenstein, professor of epidemiology at the University of South Florida. "But it's something that must be looked at with a more rigorous study."

Dr. Daniel P. Perl, the director of neuropathology at the [Mount Sinai School of Medicine](#) in New York, agreed with Dr. Borenstein but described the Michigan work as significant. "I think this complements

what others have found — there appears to be a problem with cognition in a group of N.F.L. football players at a relatively young age,” he said.

All rates appear small. But if they are accurate, they would have arresting real-life effects when applied across a population as large as living N.F.L. retirees. A normal rate of cognitive disease among N.F.L. retirees age 50 and above (of whom there are about 4,000) would result in 48 of them having the condition; the rate in the Michigan study would lead to 244. Among retirees ages 30 through 49 (of whom there are about 3,000), the normal rate cited by the Michigan researchers would yield about 3 men experiencing problems; the rate reported among N.F.L. retirees leads to an estimate of 57.

So the Michigan findings suggest that although 50 N.F.L. retirees would be expected to have dementia or memory-related disease, the actual number could be more like 300. This would not prove causation in any individual case, but it would support a connection between pro football careers and heightened prevalence of later-life cognitive decline that the league has long disputed.

After the [University of North Carolina’s Center for the Study of Retired Athletes](#) published survey-based papers in 2005 through 2007 that found a correlation between N.F.L. football and depression, dementia and other cognitive impairment, a member of the N.F.L. concussion committee called the findings “virtually worthless.”

After initiating a fund in 2007 that provides financial assistance to retirees receiving care for dementia, the league insisted that it was doing so only because the disease “affects many elderly people” well beyond N.F.L. players. And a pamphlet that the league gives every player about concussion risks states, “Research is currently under way to determine if there are any long-term effects of concussion in N.F.L. athletes.”

“It’s time to edit that brochure,” said [Kevin Mawae](#) of the [Tennessee Titans](#), the president of the N.F.L. Players Association. “Now it’s in their words and not just other people’s.”

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