Parkinson's disease in American football player

- Neurodegenerative Disease and Association Football (NDAF): Systematic Review and Meta-Analysis
- Unprecedented Combination of Rare Degenerative Pathologies in an Octogenarian Ex-Football Player
- The Correlations Between Concussions and Chronic Traumatic Encephalopathy (CTE) in the National Football League: Why Does Society Keep Promoting Sports With High CTE Rates?
- Active elite rugby participation is associated with altered precentral cortical thickness
- American Football Play and Parkinson Disease Among Men
- Neurodegenerative disease among male elite football (soccer) players in Sweden: a cohort study
- Healthspan and chronic disease burden among young adult and middle-aged male former American-style professional football players
- A systematic review on the risk of neurodegenerative diseases and neurocognitive disorders in professional and varsity athletes

Former American football players are at risk for chronic traumatic encephalopathy (CTE) which may have parkinsonism as a clinical feature.

Former football players were prospectively assessed for parkinsonism.

120 former professional football players, 58 former college football players, and 60 same-age asymptomatic men without repetitive head impacts, 45-74 years, were studied using the MDS-UPDRS to assess for parkinsonism, and the Timed Up and Go (TUG). Traumatic encephalopathy syndrome (TES), the clinical syndrome of CTE, was adjudicated and includes parkinsonism diagnosis. Fisher's Exact Test compared groups on parkinsonism due to small cell sizes; analysis of covariance or linear regressions controlling for age and body mass index were used otherwise.

Twenty-two (12.4%) football players (13.3% professional, 10.3% college) met parkinsonism criteria compared with two (3.3%) in the unexposed group. Parkinsonism was higher in professional ($p = 0.037$) but not college players ($p = 0.16$). There were no differences on the MDS-UPDRS Part III total scores. Scores on the individual MDS-UPDRS items were low. TUG times were longer in former professional but not college players compared with unexposed men (13.09 versus 11.35 s, $p < 0.01$). There were no associations between years of football, age of first exposure, position or level of play on motor outcomes. TES status was not associated with motor outcomes.

Parkinsonism rates in this sample of american football players was low and highest in the professional football players. The association between football and parkinsonism is inconclusive and depends on factors related to sample selection, comparison groups, and exposure characteristics [1)]

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Alosco ML, Adler CH, Dodick DW, Tripodis Y, Balcer LJ, Bernick C, Banks SJ, Barr WB, Wethe JV, Palmisano JN, Martin B, Hartlage K, Cantu RC, Geda YE, Katz DI, Mez J, Cummings JL, Shenton ME, Reiman EM, Stern RA; DIAGNOSE CTE Research Project. Examination of parkinsonism in former elite American football players. Parkinsonism Relat Disord. 2023 Nov 14:105903. doi: 10.1016/j.parkreldis.2023.105903. Epub ahead of print. PMID: 37981539.