

# No increase in brain health problems in middle age for men who played football in high school

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Decades after their days on the gridiron, middle-aged men who played football in high school are not experiencing greater problems with concentration, memory, or depression compared to men who did not play football, reports a study in *Clinical Journal of Sport Medicine*. The journal is published in the Lippincott portfolio by Wolters Kluwer.

"Men who played [high-school](#) football did not report worse brain health compared with those who played other contact sports, noncontact sports, or did not participate in sports during high school," according to the new research, led by Grant L. Iverson, Ph.D., of Harvard Medical School. The study offers reassurance that playing high-school football is not, in itself, a risk factor for cognitive or [mood disorders](#) or other problems that have been linked to a history of repeated concussions in [professional football players](#).

**No increase in cognitive, mood, or pain**

## problems in high-school football players

The researchers analyzed responses to an online survey completed by 407 men aged 35 to 55 years. Of these, 123 reported playing football in high school. The study excluded men with recent concussions or those who played semi-professional football.

Rates of a wide range of brain health problems were assessed for the ex-football players, compared to men who played other contact sports, non-contact sports, or no sports. Men who played contact sports, especially football, had more concussions than the other two groups: more than 80 percent of men who played high-school football reported at least one concussion.

Overall, the former football players were no more likely to have problems with brain health in their mid-thirties to mid-fifties. High-school sports experience was unrelated to problems with depression, anxiety, or anger; concentration or memory problems; or headaches, migraines, neck or back pain, or chronic pain. For football and other [contact sports](#), rates of brain health problems were unrelated to years playing sports.

There were a few significant differences between groups. Men who played high-school football were more likely to report sleep problems: 39 percent, compared to about 20 to 30 percent of the other groups. Ex-football players were also more likely to be prescribed medications for headaches or chronic pain.

The study identified several factors that predicted an increased rate of memory problems, including sleep difficulties, anxiety, history of concussions, and feeling depressed. Although some of these factors were more common among former football

players, playing football itself was not a significant predictor.

Reports of long-term neurological abnormalities among former National Football League (NFL) players have raised concerns over the brain health of men who played football at the high-school level. Previous studies have found no increase in mental health, cognitive, or mood problems in former high-school football players. The new research—partly supported by the NFL—is the first to focus on [middle-aged men](#).

Dr. Iverson and colleagues emphasize that, "without question," some men who played high-school football will develop problems with psychological [health](#) and cognitive function later in life. However, these risks "do not seem to be greater than the rates in men who did not play [football](#)."

The researchers note that there are strong associations between depression and anxiety, headaches and migraine, chronic pain, and memory problems, which commonly occur together and are "mutually amplifying." Dr. Iverson and colleagues conclude, "[E]vidence-based treatment and rehabilitation for these problems can substantially reduce symptoms and improve functioning and quality of life."

**More information:** Iverson, Grant L et al. High-School Football and Midlife Brain Health Problems, *Clinical Journal of Sport Medicine* April 12, 2021  
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