

NIH, NFL team up to take on concussion research

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The goal: Understanding long-term effects of head injuries and improving diagnosis.

(HealthDay)—The U.S. National Institutes of Health is teaming up with the National Football League on research into the long-term effects of repeated head injuries and improving concussion diagnosis.

The projects will be supported largely through a \$30 million donation made last year to the Foundation for the National Institutes of Health by the NFL, which is wrestling with the issue of concussions and their impact on current and former players.

There's growing concern about the potential long-term effects of repeated concussions, particularly among those most at risk, including football players and other athletes and members of the military.

Current tests can't reliably diagnosis concussion. And there's no way to predict which patients will recover quickly, suffer long-term symptoms or develop a progressive brain disease called chronic traumatic encephalopathy (CTE), according to an NIH press statement released Monday.

"We need to be able to predict which patterns of injury are rapidly reversible and which are not. This program will help researchers get closer to answering some of the important questions about concussion for our youth who play sports and their parents," Story Landis, director of the National Institute of Neurological Disorders and Stroke (NINDS), said in the news release.

Two of the projects will receive \$6 million each and will focus on determining the extent of long-term changes that occur in the brain years after a head injury or after numerous concussions. They will involve researchers from NINDS, the National Institute of Child Health and Human Development and academic medical centers.

One of the projects will attempt to define a clear set of criteria for various stages of CTE. It will also seek to distinguish it from Alzheimer's disease, [amyotrophic lateral sclerosis](#) (Lou Gehrig's disease) and other [degenerative brain diseases](#) that as of now can only be determined in brain tissue samples collected after death. The objective is to find medical signs of CTE that might eventually be used to diagnose the illness in living people.

The other project will seek to identify the long-term effects of mild, moderate and severe traumatic [brain injury](#) (TBI) and compare them with features of CTE. The goal is to identify signs that could be used to diagnose brain degeneration linked to traumatic brain injury in patients.

While the two projects focus on different aspects of traumatic brain

injury, "their combined results promise to answer critical questions about the chronic effects of single versus repetitive injuries on the brain, how repetitive TBI ([traumatic brain injury](#)) might lead to CTE, how commonly these changes occur in an adult population, and how CTE relates to neurodegenerative disorders like Alzheimer's disease," Landis said.

Six other pilot projects will receive a total of just over \$2 million and last up to two years. They will concentrate on improving the diagnosis of concussions and identifying potential medical signs that can be used to assess a patient's recovery. If the early results are promising, these projects may form the basis of more extensive research, the news release said.

More information: The American Academy of Family Physicians has more about [concussions](#).

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