

# Brain study hopes to help boxers deal with safety issues

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Some days are better than others for Leon Spinks. At 58, he has dementia, difficulty maintaining balance and short-term memory impairment, says wife Brenda.

Muhammad Ali, who Spinks stunned in 1978 to claim the heavyweight championship in Las Vegas, has his own well-documented medical issues. At 70, and without complaint or public regret, Ali wages a courageous fight against Parkinson's disease, a neurological-based disorder.

Their unsteady paths will cross Saturday in the same neon-splashed city at a benefit to help raise funds and awareness in support of [brain health](#). Spinks and Ali fought into their 40s.

Perhaps both would have quit fighting sooner if they had the benefit of today's MRI [scanning technology](#), which might have revealed damage from repeated concussive blows. The subject of athletes and concussions is in vogue, particularly in the [National Football League](#). As a public health crisis, an estimated 10 percent of all [athletic injuries](#) - between 1.6 and 3.8 million head traumas per year - lead to concussions.

"We might be missing the boat a little on the concussion issue (in all sports)," said Charles Bernick, lead physician of a four-year brain study of fighters conducted by the Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas. "It is made to seem like you either have a concussion or you do not - black or white. It may be that blows to the

head that are not quite enough to give you a concussion may not be good for you, either. I think we need to broaden our idea of [head trauma](#)."

Spinks fought professionally for 18 years before retiring at age 42 in 1995 after 46 pro bouts. The former Olympic gold medalist was knocked out, or halted, eight times. Known for his friendly demeanor and toothless grin, the fighter nicknamed "Neon Leon" quickly burned out as a fighter as he burned through his purse earnings.

Ali, after an extensive amateur career that began when he was 12 in Louisville, rumbled in the ring for 21 years, accumulating 61 pro fights while absorbing countless blows to the cranium. Ali suffered a terrible beating in his final fight, a defeat to Trevor Berbick in 1981, one month before his 40th birthday.

Saturday's "Power of Love" gala at the MGM Grand will raise funds to help support the Ruvo Center and the Muhammad Ali Center. Ali's belated birthday bash will include several former boxing greats and celebrities such as Stevie Wonder, Samuel L. Jackson and Snoop Dogg.

The Ruvo Center study began 10 months ago. Doctors have enrolled 148 fighters with a goal of more than 500. The original plan was to follow active fighters but former boxers now will be included. The study will measure changes in brain volume, blood flow and scarring. Doctors will try to determine whether testing can uncover subtle changes in the brain that correlate with impaired thinking.

This week, Spinks underwent an MRI at the Ruvo Center and began physical therapy. At this point, he is not part of the study.

"I'm excited," said Brenda Spinks. "I have high hopes they will help improve his life."

Regarding the study, Bernick's goal is to utilize MRI scans to detect the earliest and most-subtle changes in the brain and function of the organ resulting from trauma. The study seeks to determine which changes might predict future development of dementia, depression or other debilitating effects.

"We know that those disorders take years to develop," Bernick said. "The earlier you can identify who may be on their way downward, the better it is. No one has done this before (in a long-term study). By following these fighters in real time, we can hopefully identify markers to show us if somebody is developing these chronic brain disorders."

The center is working in conjunction with the Nevada State Athletic Commission, Top Rank Boxing, Golden Boy Promotions and Ultimate Fighting Championships.

Boxers and mixed martial artists in the study get free baseline MRIs, which can cost up to \$1,000 and are required anyway to obtain a license to fight in the state.

"It's a wonderful thing," said Top Rank promoter Bob Arum. "We are encouraging all of our young fighters to participate. It's a win-win for them and the sport."

Two such fighters are brothers Diego Magdaleno, 25, and Jesse, 20. They have entered the study, which is free and confidential, but have noticed some others have been reluctant.

"This is beneficial. I am a firm believer in maintaining your health - in and out of the ring," Diego said. "The main fear (for others) is that they might get their (boxing) license revoked (if the results show deterioration). They are a little leery."

The study is funded from a foundation established by billionaire hotelier Kirk Kerkorian, who boxed as an amateur.

Researchers are hopeful that the study eventually will develop more effective methods of preventing permanent brain injury, and that the findings can be used to produce better protective equipment in all sports.

Preliminary research indicates that those who had the longest careers have the worst cognitive outcomes, including exhibiting less self-control. Additionally, a threshold may occur: No drop in cognitive skills may appear for years.

"After that point, perhaps nine years, they really start to drop and we can measure it," Bernick said. "There may be a point of no return."

Previous studies have indicated that 20 percent-50 percent of professional fighters might develop Alzheimer's, Parkinson's disease and other serious neurological maladies. Research has demonstrated that 20 percent of fighters are at risk for early-onset dementia.

Trainer Freddie Roach fought 53 times as a pro. As his skills perceptively eroded, he was encouraged to retire by his trainer, the late Eddie Futch. Roach lost five of his last six fights before quitting in 1986. He later developed Parkinson's, leaving him with tremors and speech problems.

"This can do nothing but help the sport," said Roach, 51, from his Wild Card Boxing Club in Hollywood, Calif. "Fighters are not dumb people - we can be educated. But fighters are athletes and their attitude is, 'It never will happen to me.' "

As a fighter, Spinks was best known for his shocking upset of Ali via 15-round decision in only his eighth professional bout. Spinks lost the

title by decision in their rematch seven months later in New Orleans. He finished his career with a record of 26-17-3.

Spinks married last fall and moved to Henderson, Nev., a Las Vegas suburb. The couple had been living in Nebraska, where Spinks worked as a janitor at the YMCA, followed by a job at McDonald's and a stint as a school bus monitor. Until recently, he was earning money by signing autographs for a memorabilia dealer.

"When I met Leon, he had nothing to do," Brenda Spinks said. "I helped him get regular jobs. People thought that was terrible, but he needed to do something (stimulating and productive) besides sit home and watch TV. The other option was heading out to the bar."

Instead, Spinks plans to visit regularly the Ruvo Center to seek a better life in the desert, far from the tough streets of East St. Louis, Mo., where he was raised.

"I hope," he says, "they can help me."

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