

# BELIEVE

## Magee Rehabilitation Hospital

### What's New in Sports-Related Concussions?

#### In This Issue

[Concussion in the News](#)

#### The Latest Concussion Research

#### [Sleep or Study? How should we treat concussions?](#)

Science Daily  
June 19, 2018

One treatment approach for concussion is complete inactivity and rest. This includes cognitive rest. Concussed athletes are cut off from physical, social, and mental activity to allow the brain to recover from the energy-intensive trauma. This seclusion may play a part in the common post-concussion symptoms of depression and anxiety. A new study is questioning the validity of this practice from a physical standpoint in addition to the mental health perspective.

Researchers at Southern Methodist University in Dallas, TX, are looking at the effects of simple problem-solving tasks on concussed athletes. The researchers have been giving concussed athletes a cognitive test between 3 and 4 days post-injury and measuring the effects. The study suggests that a simple cognitive task, as early as four days after a brain injury, activates the parasympathetic nervous system without provoking any increase in concussion symptoms. Since this system regulates automatic responses, (such as heart rate when the body is at rest), is associated with better memory function, and also helps to regulate stress, depression and anxiety, (which are very common symptoms after a concussion), activating the parasympathetic system is a good thing. This study may cause clinicians to rethink standard concussion treatment.

#### [You've had a concussion so be sure to protect your ... legs?](#)

HealthDay News  
June 19, 2018

Preliminary results of a new study show that protecting the head may not be enough to prevent injuries to

With summer in full swing, many are spending time outdoors for activities and sports, and football practice and sports camps will begin soon. Those of us working at [The Philadelphia Concussion Center](#) at Magee Rehabilitation would like to bring you up-to-date on the latest concussion research and news. Below you will find links to articles about developments in concussion-related diagnosis, prevention and testing.

The more we know about concussion, the more we can do to protect our athletes from long-term head injury. We hope you will continue to turn to [The Philadelphia Concussion Center at Magee Rehabilitation](#) to keep you informed. Please feel free to contact us for any of your concussion needs.

#### Concussion in the News

#### [It's In Your Blood: Concussion Diagnosis](#)

CNN  
February 14, 2018

New research has revealed that when the brain is injured, such as in a concussion, two specific proteins are released. These proteins pass through the blood-brain barrier and are detectable in the blood. The FDA has just approved a blood test to detect these proteins in adults. This is the first FDA approved blood test for concussions. The test, developed by Banyan Biomarkers, can be used anywhere from 15-20 minutes to 12 hours post-injury. Results are complete within 3-4 hours of the test.

This new blood test is 97.5% as effective as a CT scan in diagnosing TBI, and 99.6% as effective in ruling out concussion. Although initially the test will only be available in hospitals, Hank Nordhoff, the CEO of Banyan Biomarkers, hopes that there will be a handheld sideline device commercially available in the near future.

This groundbreaking test has the potential to significantly reduce medical costs and radiation exposure for some patients with suspected concussions. A CT scan can cost anywhere between \$800-\$1500 dollars, and over 90% of CT scans for concussion are negative, even when a concussion has occurred. The blood test would likely cost about \$150, saving patients up to \$1350. With this blood test, patients with suspected concussion can potentially avoid the high dose of radiation and the costs of a CT scan. Banyan plans to study the effectiveness of the blood test for children in the future.

#### [Massive Study on Concussions in College Athletics](#)

Milwaukee Journal Sentinel  
May 30, 2018

In 2014, researchers began a study of concussions in NCAA college athletes in collaboration with the Department of Defense. Now, over 40,000 student athletes across sports in multiple universities and military academies are participating in the study. Data from over 3000 concussions has been recorded. This already ambitious study plans to follow its patients for decades, including those who were never diagnosed with a concussion. Even as recently as 10 years ago, athletes with suspected concussions were allowed to re-enter games. Now athletes are removed from play, and they follow a protocol of gradually increasing activity that allows them to safely return to play. More recent research has shown that it is generally safe for athletes to begin rehabilitation and exercise after a day or two of rest as

an athlete post-concussion. The study, presented at the annual meeting of the American Medical Society for Sports Medicine, has found a correlation between concussions and leg injuries in athletes.

The study included soccer players of both sexes from 52 US high schools. According to the researcher, Dr. Alison Brooks, athletes who had had a concussion at any time in their life were 85% more likely to injure their leg in a soccer season than athletes who had never had a concussion. The results of her study are consistent with other studies on professional and college athletics. Dr. Brooks believes that this could be due to underlying neuromuscular and neurocognitive issues lingering long after a concussion.

opposed to several days of complete inactivity, which had been the practice for a number of years.

This study expects to confirm the current clinical practices surrounding concussions, but also to go far beyond that. Researchers hope to discover more about why some people sustain concussions after seemingly minor contact, while others do not, even following brutal hits. They are seeking to identify genetic predispositions to concussions, additional blood biomarkers, and other biological signs that can help prevent or detect concussions. Additionally, they seek to determine the effects of repeated contact on the brain, even in the absence of concussion.

## Learn More

If we can be of service for post-concussion assessment, baseline testing, or educational presentations, please contact [The Philadelphia Concussion Center at Magee Rehabilitation](#) at 855-587-BRAIN (2724).

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