NEW STUDY LOOKS AT CHANGES IN THE BRAINS OF FEMALE SOCCER PLAYERS OVER THE COURSE OF A SEASON

THE RESEARCH SUGGESTS THE Q-COLLAR HELPS PROTECT ATHLETES FROM THE EFFECTS OF REPETITIVE HEAD IMPACTS

WESTPORT, CONN., OCT. 15, 2018 – A new study shows that female high school soccer players are at a significant risk of white-matter changes in the brain due to repetitive head impacts over the course of a season. The research also supports previous studies that demonstrate that an investigational device from Q30 Innovations, called the Q-Collar, can help protect athletes from effects of repetitive head impacts.

The research studied 46 female high school soccer players. Twenty-four of them wore a Q-Collar. All 46 students underwent neuroimaging at three points in time during the nine-month soccer season. Head impacts were tracked using accelerometers—a computer chip-placed behind the right ear during practice and games.

The findings of the study, conducted by Cincinnati Children's Hospital Medical Center and published today in the British Journal of Sports Medicine, suggests the collar helps preserve white-matter integrity in female athletes during a competitive soccer season. Neuroimaging analysis revealed significant white-matter changes from pre- to post-season in those who did not wear the collar. No significant changes were found in those who did wear the collar, despite a similar number and magnitude of head impacts.

"The specialised neck collar that provided jugular vein compression during head impact exposure appears to have helped to preserve WM [white matter] integrity in these female athletes during their competitive season," the British Journal of Sports Medicine article states.

One unique aspect of the study is its focus on sub-concussive impacts or smaller blows to the head which in soccer come from heading the ball, collisions with other players and hard falls. "In sports, there's a heavy focus on single big blows to the head. We really wanted to look at the cumulative effect, athletes who tend to absorb and tolerate many head impacts during the season," says Greg Myer, PhD, director of sports medicine research at Cincinnati Children's and lead author of the study. "Our data shows this is potentially more dangerous than that one single blow."

The Q-Collar is designed to press gently on an athlete's jugular veins to slow blood outflow, increasing the brain's blood volume. The resulting effect helps the brain fit tighter within the skull cavity, reducing the energy absorbed by the brain during collisions.

"This could be a paradigm shift in how we study the brain and protect the brain from head impact exposure," adds Dr. Myer. "We need to continue to do larger studies and as we move forward with more research we will know more."

Hundreds of athletes, including several professionals, have worn the Q-Collar for entire seasons as part of studies with no adverse events reported. Q30 has been working with the FDA for roughly four years and has submitted the results of several previous laboratory and clinical studies. The company continues to work closely with the FDA to obtain clearance to sell the Q-Collar in the US. Q30 plans to launch the Q-Collar in Canada, where it is approved for sale, in Q1 2019.

ABOUT Q30

A global company based in Westport, Conn., and New York City, Q30 Innovations, LLC, uses independent scientific research and innovative thinking to design products intended to reduce traumatic brain injury in athletes, soldiers, and industry workers. Dr. Myer consults for Q30 Innovations on regulatory matters but has no financial interest in commercialization of the Q-Collar. Products using Q30 technology, including the Q-Collar, have not yet received regulatory approval in the United States and are not available for purchase here.

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