

Q-Collar, developed by Westport firm, may give football players additional protection from concussions

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1 of 2 — Carolina Panthers linebacker Luke Kuechly in a December 2012 game against the Oakland Raiders. Kuechly was among the athletes to test the Q-Collar, developed by Westport, Conn.-based Q30 Innovations to signal the

possibility of an athlete incurring a concussion. Photo: Bob Leverone / Associated Press



2 of 2 — Soccer players with Seton High School in Cincinnati wear the Q-Collar in warmups for a 2018 match, with the concussion alert device developed by Q30 Innovations of Westport, CT (Screenshot via YouTube).

Football players and other athletes in high-contact sports may soon have additional protection from concussions, thanks to a Westport company called Q30.

Developed originally by Cincinnati Children's Hospital and Medical Center researcher David Smith who took inspiration from the physiology of woodpeckers, the Q-Collar is designed in a horseshoe shape to be worn around the neck. The device compresses jugular veins to reduce the flow of blood slightly from the cranial cavity, creating an extra "cushion" of blood to reduce jostling from impacts that can damage brain tissue.

In field tests involving nearly 300 high school football players who had imaging scans before and after their sports seasons, Q30 reported that 77 percent of teen athletes who tested the Q-Collar had what it described as "no significant changes" in their deep brain tissue, versus only 27 percent of those not using the device.

The Food & Drug Administration approved the device last week.

Q30 raised \$10 million in funding the past few years from outside investors. The company was created in 2012 by co-CEOs Bruce Angus and Tom Hoey, who previously ran MoGo Sports that sells flavored mouth guards for athletes.

“The real genius behind Dr. Dave’s thinking which led to development of the collar was that he looked inside the body for the solution, rather than outside,” Hoey said Tuesday. “What he determined was that the best helmet technology ... was important for preventing skull fractures and lacerations, but it can’t get at the root cause of the problem, which is the brain sloshing and moving inside the head.”

Q-Collar hits the U.S. market after years of heightened awareness on the long-term effects of concussions, spurred by a 2013 “Frontline” documentary on NFL players and reinforced by the 2015 feature film “Concussion” starring Will Smith.

Former Carolina Panthers star Luke Kuechly was a prominent volunteer for Q-Collar product testing, at the tail end of a career cut short by repeat concussions, with several other NFL players having used it.

Q30 is not the only Connecticut startup to have tackled the problem of concussions in the past decade. Norwalk-based i1 Biometrics created the Vector MouthGuard to alert coaches when athletes sustain jarring hits. The company was acquired in 2014, with the device sold today by Kirkland, Wash.-based Athlete Intelligence.

Since 2010, the Connecticut General Assembly has passed a succession of laws intended to cut down on concussions, most notably that coaches receive annual training on how to spot symptoms of concussions. In response to a query, the executive director of the Connecticut Interscholastic Athletic Conference Glenn Lungarini said that CIAC maintains a sports medicine advisory committee that is open to reviewing innovative new preventative products at the request of member schools.

“Our standards currently exceed what the [Centers for Disease Control & Prevention] asks for,” Lungarini told a Connecticut General Assembly committee in 2019. “I think that we’re ahead of the game as far as that goes.”

The Q-Collar will sell initially for \$199, with discount rates for bulk purchases by leagues or schools. Hoey said the company will not sell the Q-Collar in retail stores, in order to ensure parents and athletic directors get the correct information as they weigh having children use the devices.

“From athlete to athlete it’s a little bit different, but there is a little bit of a break-in period,” Hoey said. “I would equate it [to] the first time you are wearing a mouth guard where it takes a period of time to get used to it, and then once you get use to it, you forget you are wearing it – that’s what almost all of the athletes have told us.”

The FDA’s Canadian counterpart was the first to approve use of the Q-Collar, with Q30 licensing the technology initially to the parent company of hockey equipment giant Bauer which sold it briefly under the NeuroShield brand. After the company filed for bankruptcy in 2016, Q30 reacquired the rights to sell the device in Canada.

Hoey said that Q30 has less than 10 employees today between Westport and New York City, but anticipates hiring up over the next few years for as many as 50 as sales get under way. He added the company’s preference is to keep its main office in Westport.

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