

# Football is back. So are concussions. In Florida, high-tech helmets are scarce | Commentary

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The interior padding in the new Riddell helmet system is complete with sensor to send alerts if a player sustains a hard helmet collision. (CHRIS SHIPLEY/THE MORNING CALL /)

We've all seen the hits.

The ones that make you wince or instantly silence a raucous crowd.

For as long as football has been around, hard hits have been part of the game.

That's why a growing number of high school players will be strapping

on more than just pads when they take the field this season. They're also wearing computer sensors inside their helmets that tell coaches and sideline staff when players get hit and how hard.

It's technology aimed at preventing brain damage. And all over America, this high-tech tool is making headlines.

In Nebraska ("[A phenomenal tool: High-tech football helmets get positive reception at area high schools](#)"), North Carolina ("[Smart helmet used by NC football players alerts sideline to impacts that may result in concussion](#)"), Michigan ("[Head games: How football is striving to make the sport safer](#)") to Pennsylvania ("[Stroudsburg invests in football safety](#)").

There are even some helmet-sensor programs in Florida — including an established one in Flagler County and a developing one in Seminole.

But for the most part, Florida schools have said no thanks to this technology.

That includes Orange, Osceola and Lake counties. An Orange spokesman said a committee of athletic trainers studied the issue "and came to the conclusion that there still isn't enough evidence to support this technology."

Other teams and health experts disagree.

"You can't solve this issue entirely with equipment," said Dr. [James Clugston](#), director of the Sports Concussion Center at the University of Florida Student Health Care Center. "But sensors are a way to quantify

the impacts. There's no doubt about that."

Clugston should know. As a researcher and team physician for the Gators, he spent five years studying sensor data collected from players.

His takeaway: While the technology is still evolving, sensors provide objective information — something more reliable than asking a still-dazed player how he feels.

"If you go to an emergency room, you get labs and EKGs," Clugston said. "We don't have as accurate of tools for the gridiron, but sensors are a way to get unbiased information."

And that's sorely needed. Because the debate over whether football can damage the brain has been settled. It does.

A [Boston University study](#) found signs of chronic traumatic encephalopathy (CTE) — the degenerative condition linked to memory loss, dementia, mood swings and suicide — in the brains of all but one of the 111 NFL players it studied.

And a recent [Carnegie Mellon University](#) study of college players found the majority of players "experienced a decrease in the structural integrity of their brain."

It's easy to understand why. A hard hit in football can produce [10 times the G-force experienced on a fighter-jet barrel roll](#). Much briefer. But much more intense and more often.

Originally, sensors were viewed primarily as a way to tell coaches when

to pull players from a game, so a battered brain doesn't get battered any further. A hard hit sends a wireless alert to the coaching staff.

But Clugston learned sensors were also valuable in teaching coaches which drills do the most damage. "We learned that if you modified practice — to decrease just a few minutes of the highest-risk drills — you could decrease college career impacts by 1,000 for lineman and 300 for skilled players," he said.

That's a lot less brain damage.

The sensors also let coaching personnel know which players get hit hardest most often and where, so they can work with them on proper tackling techniques.

Most local districts have made strides along those lines. They stress safer play, do baseline testing before the season, invest in better equipment and train coaches to spot concussions. The state athletic association put limits on practices.

But none of that provides objective, real-time data about what's actually *happening* to these kids' brains.

Two years ago, after Flagler Palm Coast High School started using the sensors, the [school's athletic director told me](#) he viewed the technology as "another set of eyes on the field."

Everyone sees the high-impact hits during games, he said. But the sensors catch the smaller hits they often miss, especially during practice.

So why don't more schools have them?

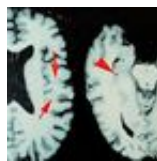
Tradition. Machismo. Cost. High-tech helmets can cost \$400. Schools have reported spending anywhere from \$5,000 to \$15,000 to fully equip a team.

But most schools can find the money — *if* they want to. At Oviedo's Hagerty High, athletic director [Jay Getty recently described](#) his school's purchase of sensors in simple terms: "We spend about \$9,000 a year to ensure the safety of student athletes."

In many places, parents, booster clubs, nonprofit foundations and even individual donors have stepped up. Why? Because when a school comes forward and says: "We'd like to protect our kids' brains," people usually help.

The sport itself needs help. Player participation is [on the decline](#). Parents are worried about safety. Coaches can't recruit as easily as they used to.

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Clugston understands the concern.

"There are so many positive things about football," he said. But when parents ask him if he believes the sport is safe, he says he is candid. "I think parents need to be realistic that their kids could have a concussion."

So it seems smart to do anything teams can to lessen that risk ... as many schools around the country have already concluded.

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Scott Maxwell is the Sentinel's "Taking Names" columnist. He's fascinated by people and politics -- and likes giving readers information they won't get elsewhere. Scott came to the Sentinel in 1998 and has penned a column since 2002. He's a married father of two and graduate of UNC-Chapel Hill who likes travel, exercise and trashy scary movies.

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