Some teams add extra padding to football helmets to make them safer

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CHICAGO — The National Football League on Sept. 5 settled a lawsuit accusing it of not doing enough to prevent brain injuries. But there is still much confusion over those injuries, known as concussions (https://www.newsela.com/?tag=concussions). To get an idea, consider the Guardian.

It’s a padded fabric shell that is strapped around the outside of a football helmet to reduce the impact of collisions. It has been on the market for two years, and while it doesn’t promise to prevent concussions, Elmhurst College players who wear the shell during practice say it has made a big difference.

“It gets rid of those little small hits you get in practice that kind of turn your eyes green a little bit,” said defensive end Nick Spracklen, 20. “It keeps your head fresh, keeps those headaches away. You leave practice without a headache, your whole day is better.”

Head over to nearby Addison Trail High School, though, and you’ll get a different story.
Experts Split Over Add-On Helmet Pads

The school recently looked into buying the shells for its players. But when the company that makes Addison Trail's football helmets declined to give its blessing, school officials dropped the idea. They feared that using the Guardian could void the helmet-maker’s warranty and expose the school district to a lawsuit.

As football season begins, safety questions that have hung over the sport for years remain unresolved. Scientists, companies and lawyers continue to argue over the best way to protect players from head injuries.

Much of the wrangling is now focused on the helmet. The former players who settled with the NFL are still suing Riddell, maker of the league’s official helmet, claiming the company sold an unsafe product.

Into this storm have stepped a few small companies that sell add-on helmet pads, saying they’re a way to increase protection. So far independent experts are split: Some believe that extra padding makes sense and others say stricter testing is needed.

“If a company wants to innovate, more power to them,” said Mike Oliver of the National Operating Committee on Standards for Athletic Equipment, or NOCSAE. “But prove to me, prove to the scientific community, that your product does what you say it does.”

How To Calculate Concussion Odds?

For years, football helmets have had to meet a simple standard. Companies strap one to a dummy head equipped with sensors and slam it into a post at varying speeds. If the impacts produce values beneath 1200 GSI — a level that equates to a small chance of sustaining a fractured skull — the helmet passes.

While the test is a good predictor of a helmet’s power to prevent catastrophic damage to the head, it doesn’t say much about the probability of getting a concussion. No one has figured out how to calculate those odds, a reflection of the injury’s complexity and the many factors that might be involved, including genetics and prior blows to the head.

The uncertainty has created an opportunity for companies that say they have found new ways to give athletes better protection.

The Guardian is made by Georgia-based POC Ventures. Lee Hanson, inventor of the Guardian, said the company’s testing has shown that it reduces the impact of a hit by 33 percent. And because it is attached to the helmet by straps, he said, it floats slightly during a collision. This blunts the rotational forces many scientists believe contribute to the severity of a concussion.

Like other makers of add-on pads, Hanson is careful to say that the Guardian can’t prevent concussions. More research on his product is underway, but in the meantime, he said, “common sense” dictates that more padding will help players.
Theory Behind Add-On Pads Called Sound

Rob Vito is taking a different approach. His Pennsylvania-based company, Unequal Technologies, sells Kevlar-fortified pads meant to be added to a helmet's inner cushioning, which he derides as “couch foam.” He said his products act like a trampoline: It disperses the energy of a blow across a wide surface area and reduces the severity of the impact.

“The smart minds are saying if you can lower the energy levels to the head, that's a good thing,” he said.

John Thorne, coach of the football team at North Central College in Naperville, said some of his players started using the Unequal pads this year, but it’s too soon to gauge their effectiveness.

“I’ve been coaching football for 45 years, and I’m always looking for a way to make the game safer,” he said. “Concussions are a big issue now so we’re hoping this is a good technology. It seems to make some sense.”

Steven Rowson, a Virginia Tech biomedical engineer who has helped to develop a safety rating system for football helmets, said the theory behind the new products is sound.

“In general, adding padding is going to reduce acceleration to the head,” he said. “When you reduce acceleration to the head, you're going to reduce the risk of concussion.”

Helmet Makers Don't Want Add-Ons Attached

Theory, though, isn’t good enough for NOCSAE, which in early August said that manufacturers can void their helmets' safety certification if another product is attached. Some, including Riddell and Schutt, have said they will do just that.

Schutt spokesman Glenn Beckmann said his company can’t accept liability for a helmet that is altered.

Hanson said several hundred teams use his product, and he was confident most will want to continue. Elmhurst College is one of them.

Coach Joe Adam said he planned to keep Guardians on his players' helmets unless school officials tell him to stop. He said the shells have proven their worth.

“I can just go by results,” he said. “In 21 practices, we’ve had one concussion. I would think that's on the lower side for teams in our area.”
Quiz

1. Read this sentence from the article.

   While the test is a good predictor of a helmet’s power to prevent catastrophic damage to the head, it doesn’t say much about the probability of getting a concussion.

   What is the meaning for the word ‘catastrophic’ as mentioned in the sentence above?
   (A) insignificant
   (B) maximum
   (C) minimal
   (D) tremendous

2. Read this sentence from the article.

   Into this storm have stepped a few small companies that sell add-on helmet pads, saying they’re a way to increase protection.

   What does the phrase ‘stepping into the storm’ mean?
   (A) taking a chance
   (B) joining the fight
   (C) boosting helmet sales
   (D) offering much protection

3. Select a paragraph from "Experts Split Over Add-On Helmet Pads" that contains an idiomatic phrase that means 'not going to support something.'

4. Read the sentence from the article.

   "If a company wants to innovate, more power to them," said Mike Oliver of the National Operating Committee on Standards for Athletic Equipment, or NOCSAE.

   What type of figurative language is the phrase 'more power to them'?
   (A) idiom
   (B) paradox
   (C) personification
   (D) simile
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