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Children's Health

Docs, Coaches Need Heads-Up on Concussions

by [Tom Goldman](#)

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Part I of the Report



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[*Concussions Give the NFL a Major Headache*](#)

[*Morning Edition*](#), March 20, 2007 · *In football, pain is often part of the game. But some of the most dangerous injuries aren't broken legs or sprained ankles — they're concussions. And the brain injury isn't limited to the NFL: Millions of American children suffer sports concussions each year.*

Football players have a name for a violent — yet often legal — hit on a player who doesn't see it coming. The word is "earholed," referring to the earhole on the side of the helmet where the unwitting player gets blasted.

In early September of 2005, it happened to a high school player in Pittsburgh, Pa., named Billy Hagberg.

"I did a somersault, basically," Hagberg says. "I was on the ground [and] my face felt like I was asleep: pins and needles and tingly and everything."

The Hit

Hagberg, then 14, landed on the ground with a concussion. The jarring hit shook his brain inside the skull, the way an egg yolk would move inside its shell. Hagberg didn't pass out. Instead, he got up and ran to the end of the play on the field.

Then, feeling a bit dazed, he jogged to the sideline, where the attending athletic trainer was waiting. He had watched Hagberg go down.

"The trainer came up and asked me if I was alright," Hagberg says. "I was like, 'Yeah, yeah, I'm fine. Don't worry about me.'"

Kids learn early to "tough it out" in football. But there was another reason Hagberg didn't want to be fussed over. He was a freshman linebacker playing on the varsity team at Pittsburgh's Fox Chapel High School. It was a big deal. And the big hit left him feeling humiliated.

"I just didn't want anyone to just like come up to me and like, 'Oh, you got hurt now, too?' I mean," Hagberg says, "I just didn't want anything else piled onto the fact that I just got embarrassed in front of the entire team."

So the teenager shooed away the trainer and played the rest of the game with a headache. It continued through the night, and got worse the next day.

Even so, Hagberg suited up and played again in a junior-varsity game. Near the end of that game, Hagberg was dizzy and having trouble remembering plays. Afterwards, he said to his coach, "I think I have a concussion."

"I told the coach what happened," Hagberg says. "He said, 'Well just tell the trainer on Monday. Just take it easy for the rest of the weekend.'"

It seemed like good advice. Hagberg's dad, Bill, once was knocked unconscious in a high school football game. Bill threw up and had a headache for a couple of days. Then he got better. Bill Hagberg, who is an orthopedic surgeon, assumed that his son would recover, too. He told his physician wife, Margaret, not to worry.

"He didn't think it was a big deal. And neither of us, really, thought it was serious in any way," Margaret Hagberg says.

But the Hagbergs' family pediatrician did. She advised Margaret to get help — quickly. The Hagbergs went to the Sports Concussion Program at the University of Pittsburgh Medical Center. The assistant director there, Dr. Mickey Collins, examined Billy and performed a computerized test called an IMPACT

Test. It measures things such as reaction time, memory and the ability to scan visually.

Collins diagnosed a severe concussion — severe, in part, because Billy kept playing after the initial brain injury.

"There are two things you don't want to do when you're recovering from a concussion," Collins says. "Number one is [to] take even minimal blows to the head. And number two is [to] increase the metabolic activity in the brain. Going back to a j.v. football game, you're doing both of those things."

It took 10 months for Billy Hagberg to fully recover. The first few months were hellish. He missed a lot of school — trying to concentrate in class put too much stress on his brain and increased the concussion symptoms. At home, walking up and down stairs made him nauseous and dizzy and made his constant headache worse.

"I pretty much just slept and sat around," Billy says. "Every 20 minutes or so, I'd try to pick up a book to read... I'd just throw it. I couldn't do anything."

His mom, Margaret, adds, "It was as if there was some barrier between himself and myself, and he couldn't really even understand the questions I was asking him. And that's really scary as a parent."

In many ways, Billy Hagberg was lucky. His school, in a well-to-do part of Pittsburgh, had a Certified Athletic Trainer for football games. Not all states require them. And Fox Chapel was one of more than a thousand schools nationwide that has the IMPACT Test, a valuable, objective tool for measuring concussions.

Still, smart, well-meaning people made mistakes. And Billy admits it started with him — right after he got earholed.

"I blame myself a little bit," he says. "I mean, I probably should've just told the trainer what was up."

No one has blamed the trainer, but one concussion expert says that after seeing the violent hit, the trainer could've gone beyond "Are you OK?" to determine if Billy had a concussion.

The signs include headaches, dizziness, and sensitivity to light and noise. To assess a player's mental status, a trainer could ask the athlete to list the days of the week backwards, or to repeat a string of random digits.

Margaret Hagberg says that she regrets that she and her husband didn't know more.

"All of our friends, practically, are physicians," she says, "and except for our pediatrician, nobody knew anything about concussions. Our kids are similar ages, so you know [they're] involved in sports and things. And it's just amazing that this information's out there, but nobody really is aware of it."

Indeed, many coaches, teachers and doctors are not aware. Billy Hagberg is one of the estimated 1.4 million to 3.8 million kids in the United States who suffer a sports concussion each year. And confusion over evaluating and treating concussions is common.

But concussion experts are trying to get the word out. Dr. Collins, of the University of Pittsburgh program, co-wrote an informational toolkit that the Centers for Disease Control is sending to physicians nationwide starting in May. The toolkit has the latest information on how to manage sports concussion, both in the critical early stages on the field and in the long-term.

Collins says he believes that the estimated millions of youth sports concussions are only going to increase, as young athletes get faster and bigger.

The Comeback

Billy Hagberg is now 16. He was cleared to play football last August, and he and his teammates have been lifting weights and doing drills as part of their current spring workouts. Hagberg says the decision to go back wasn't hard.

"I just really love the game way too much to just walk away," he says. "To be honest, it's going to take a lot more than a concussion to keep me off."

Billy says he's not worried. But anytime he has an injury, even if it seems small, he says he'll go straight to the medical staff. It's a crystal-clear lesson he learned in a foggy and frightening world.

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