

## Keeping current

Get updated with sports scores and standings

### Boys' basketball

**Record:** 6-13

**Last game:** Goose Creek -W-  
**Next game:** West Ashley [1/29]

"I feel that we are playing our best right now, which is what you want, since we are in the middle of region play," Head Coach Christopher Warzynski said. "[Our] goals... are to win the rest of our home games and to make the playoffs."

### Wrestling

**Record:** 20-10

**Last game:** Goose Creek -L-  
**Next game:** West Ashley [1/27]

"Our season has been filled with some ups and downs," Head Coach Adam Schneider said. "We have a lot of positive things happening with an experienced squad. We are looking to finish strong this week and make the playoffs."

### Girls' Basketball

**Record:** 11-7

**Last game:** Goose Creek -L-  
**Next game:** West Ashley [1/29]

"We are progressing smoothly right now," Head Coach Jeffrey Emory said. "We have had some big games this year.... Our goals are to finish with a conference championship and to host a playoff game."

### Upcoming Try-Outs

Listed below are the tryout-related dates in 2016 for all spring sports. Current physicals are required to be presented before, or during, tryouts.

**Baseball:** Tryouts begin Feb. 1.

**Softball:** Tryouts begin Feb. 2.

**Track and Field:**

Tryouts begin Feb. 1

**Boys' Soccer:** Tryouts begin Feb. 1

**Girls' Soccer:** Tryouts begin Feb. 1

**Boys' Tennis:** Tryouts begin Feb. 1

[Standings as of Jan. 26, when *Tribal Tribune* went to press]

--Compiled by Devon Lee

# The hard-hitter

## Controversy still swirls around concussions

Devon Lee

sports editor

**Y**"You got your bell rung!" A ball headed too hard. A poorly performed tackle. A tumble ending with a head on the court floor. Despite the athlete getting up unscathed, the damage has been done. Like a silent shadow, it clouds the surrounding world. Light, noise, speech. The most common aspects of the environment now turn into powerful adversaries: Screeching, blinding, aching.

"Concussion," the doctor says.

A word so simple, for something that has caused one of the largest controversies in professional football; for something that is now one of the leading injuries in many sports, and for something still so misunderstood by the general populace. So what's being done about the complex injury that no one can see? That's the controversy.

### Revealing the shadow

By broad definition, a concussion is a severe blow to the head, causing — most commonly — dizziness, nausea and headaches. To Wando athletics team physician Dr. Murry Thompson, it is much more.

"A concussion is a microscopic event that takes place in your brain, after your brain sustains significant trauma," Thompson said in a telephone interview. "[A concussion] is like a jarring, and it causes a bioelectric phenomenon, that's occurring inside of your head. And it has to do with deposition of certain proteins that occur during the acute injury."

Head Athletic Trainer Mark Buchman described a concussion as an impulse overload. "The brain becomes overloaded with impulses, and it kinda' shuts down when it happens," Buchman said. "If the violent blow is hard enough, it can cause bleeding on the brain. So, obviously that's where you'd rupture some capillaries, which is dangerous."

The reason for this bioelectric impulse overload is still not well understood and some people may be more susceptible than others, according to Thompson. The thing about concussions is that someone doesn't have to be "Johnny Football" to get them.

"It can happen heading a soccer ball. It can

happen to a cheerleader," Athletic Director Bob Hayes said. "It's not just a football injury... It's an inherent risk that you take with any physical activity."

Head-to-head contact, violent shaking of the head and a head hitting the ground are the most common ways Buchman said he's seen concussions occur.

Though football is nearly impossible to predict, with all other sports combined, Wando athletics has around 20 to 30 concussions a year, according to Buchman.

"I'm scared to say, there's probably more," he said.

Concussions are not always easily identified, Buchman said. This is for a few different reasons.

"Most of the time, [athletes] are pretty good about knowing, and letting us know," he said. "We see a violent blow on the field, we try to pull 'em aside, to evaluate them. But, there's some that we really gotta dig to try to figure out what's going on."

This can be because, sometimes, the symptoms of a concussion might not show up until the next day. But it can also be due to player negligence.

"[After the player sustains a concussion], they'll get in [the game] and keep going... you wanna tell everybody you're okay," Buchman said. "We've got a couple kids that have gone on for a couple more plays... Wait till tomorrow to tell me, Wait till Monday... One kid I caught one time, because he told his teacher he had a concussion..."

Buchman stressed the importance of notifying him or another athletic trainer if an athlete thinks he or she has a concussion, and that not doing so is the biggest mistake athletes make.

"If you think you have [a concussion], let me know," Buchman said. "...Or, let a medical person know, so that you can be evaluated. And don't try to do the crazy thing. I don't wanna have a kid die on my watch. That's what I always say."

If one decides to ignore a concussion, and continues to play, consequences — such as death — can be very real.

### Knowing the danger

There's a hard hit, a player gets knocked unconscious, the crowd reacts. Classic concussion? Wrong.

"[People] used to only think that you could only be knocked out to be considered to have a concussion. But, that is the least common symptom," Buchman said. "I tell my clients that, in my 26-27 years of working in high school athletics, I've only ever had one player get knocked out."

If symptoms such as lack of coordination, memory loss, nausea, ringing of the ears, sensitivity to light and other symptoms that cause one to "just not feel right" are ignored, the ramifications could be dire.

"[Concussions] are serious," Buchman said. "They need to be taken seriously... And not sitting out when you might have one, and getting another one, could be fatal."

This is known as Second Impact Syndrome.

To suffer Second Impact Syndrome, one does not have to sustain a hard blow to the head. It can be a very subtle — soft — blow,

according to Buchman. He added that Second Impact Syndrome is most common in people under 20 and has a 50 percent mortality rate. Every time a concussed player is rattled hard enough, he or she runs the risk of this syndrome.

"Your brain self-regulates its blood pressure. And you're dealing with a soft organ inside of a rigid box," Thompson said. "And if the brain is in the process of mending itself from its original concussion, and you receive a second blow to the head, your brain can acutely lose its ability to regulate its own blood pressure... The blood pressure inside of the head skyrockets... The brain stem then herniates from the bottom of your skull."

The results from this can be catastrophic. If a person experiences concussions, studies have revealed likely long-term effects as well. Chronic Traumatic Encephalopathy [C.T.E.] Is the most talked about, and — up until recently — is the most controversial possible long-term effect of concussions.

C.T.E. Is a progressive degenerative disease of the brain tissue, found in athletes with

a history of repetitive brain trauma, including concussive and asymptomatic hits to the head. The trauma triggers progressive degeneration of brain tissue.

Recent studies have shown positive correlation between concussions — and routine rattles of the body and hits to the head that normally occur in contact sports — to C.T.E.

To Thompson, the findings have shown that the conclusion that concussions cause C.T.E. is pretty well established.

"It's very sad and tragic," Thompson added.

The bottom line: Get the right treatment for a concussion, and to take it seriously when you get one, according to Buchman and Thompson.

"Even after your first [concussion]... you need to give some careful thought about, 'do you wanna put yourself at risk again,'" Thompson said. "... Any concussions are important, and I think after each one, there needs to be a serious talk with the family. How many are you gonna let yourself have? How important do you think your brain is gonna be for the rest of your life?"

### The solutions

"We've seen a rise in the number [of concussions]," Hayes said. "I couldn't give you a good reason why... But, the fact is: If that rise in numbers means that we're more alert to the symptoms, then that's a good thing... Safety is our number one priority."

Wando boasts the best sporting equipment currently on the market, according to Hayes, who said it is more of a matter of recognizing concussions, and administering the proper treatment for them, which is exactly what Wando aims to do, according to Buchman.

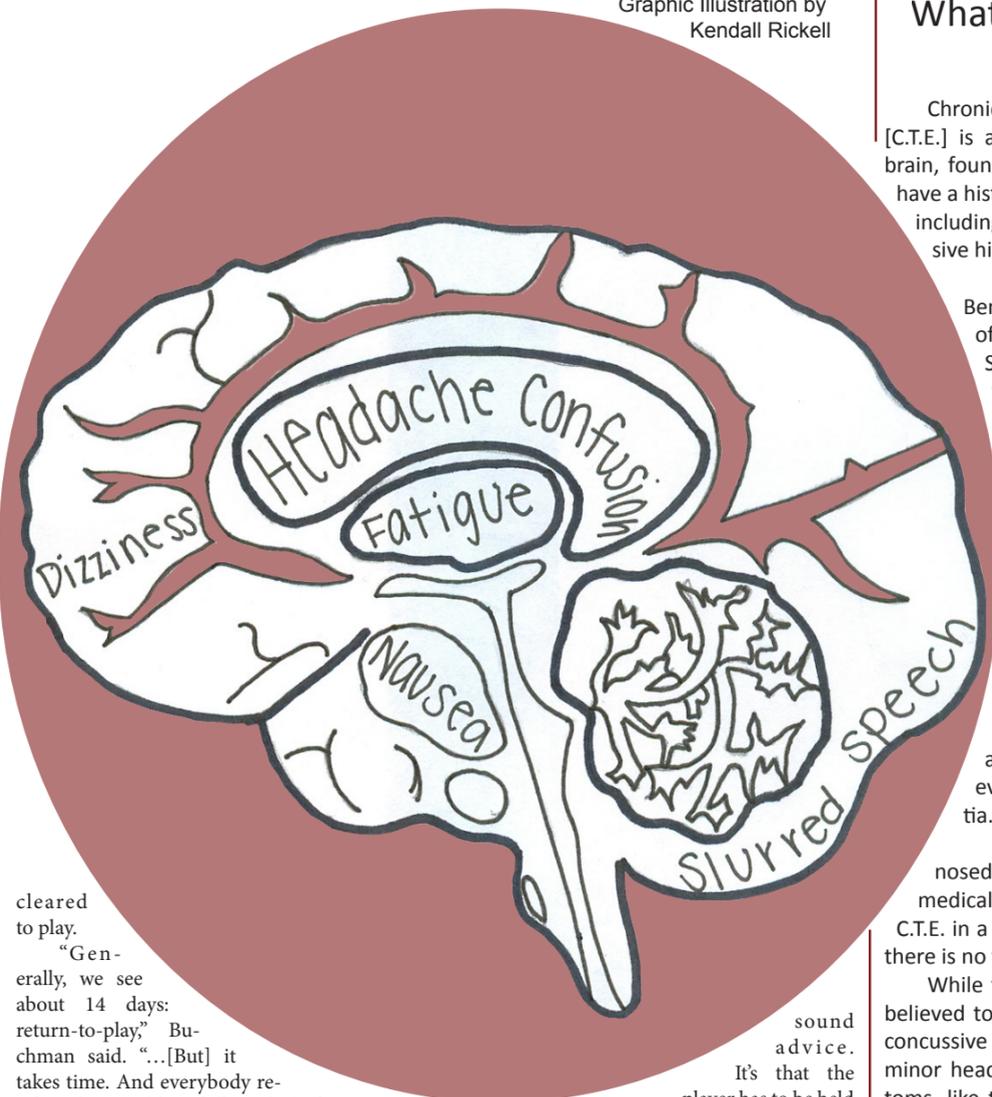
The athletic training department follows strict protocol when treating concussions, according to

Thompson, who explained the proper steps:

First, either coaches on the field will spot a hard hit, or a player will experience symptoms. Then, they are taken to the athletic trainer and are administered an evaluation test, which tests basic cognitive abilities and asks the patient to identify their symptoms. If their symptoms are not progressing over a period of time of hours to days, the patient is then observed at "brain rest."

During this period, it is important not to stimulate the brain, as it needs the energy to focus on dampening the neural circuits, or "cool down," as explained earlier.

Once the symptoms resolve [average 7-10 days], the patient is given a screening test, which tests to see if the brain is functioning normally again, through answering basic cognitive questions and through physical abilities, such as balance. If symptoms don't come back during the test, the player goes through a four-day return-to-play protocol, in which they are—if no symptoms are exhibited—slowly physically rehabilitated into playing full-speed sports. If they show no symptoms during the process, they are



Graphic Illustration by Kendall Rickell

cleared to play.

"Generally, we see about 14 days:

return-to-play," Bu-

chman said. "...[But] it

takes time. And everybody resolves their problem differently. We've

had some kids that are good to go in a couple of days, to a week. But I've had some kids that go on for three weeks [to a few months]. Everybody's different."

Wando's protocol follows the same guidelines of other high schools — and higher-level sports organizations -- for the prevention and correct treatment of concussive and sub-concussive head trauma, according to Buchman.

### How far we've come, how far we'll go

"The guessing game's not there anymore," Buchman said. "I can remember on a Friday, we would evaluate a kid for a concussion, and we would tell them, and the parents, and the coach, 'They'll be back next week.' Well that ain't the case anymore."

In recent years, the treatment of concussions, and the science of concussions has improved greatly, according to Thompson.

"In years past it was brushed off as a relatively minor event... If your symptoms cleared, you were free to go back in and continue playing," he said. "That is now known that, that is not

sound advice. It's that the player has to be held out."

The Wando athletic staff has been especially proactive about following protocol, according to Thompson.

Buchman believes the evaluation and rehabilitation of concussions will be better, but is unsure if there will ever be a 100 percent fool-proof way to spot, or treat concussions.

Thompson is optimistic that there will be a measurable way to see which people are at greater risks to sustain concussions, and that there will be a better way to better evaluate the risk of long-term consequences.

What everyone agrees on is that concussions are a serious injury that must be treated with the utmost care. They are no longer as mysterious as they once were, and will never again be "just another bell rung." They've been brought onto the center stage, and into the light.

"[Concussions] are always gonna happen," Hayes said. "What we can always do better is recognizing them. Recognizing them and not just saying, 'Oh, you got a little bump there, you'll be fine.' Recognizing the symptoms, and then doing the right things."

## What is C.T.E.?

Chronic Traumatic Encephalopathy [C.T.E.] is a degenerative disease of the brain, found in athletes and others, who have a history of repetitive brain trauma, including concussions and sub-concussive hits to the head.

In 2005, forensic pathologist Bennet Omalu lead the discovery of C.T.E. in former Pittsburgh Steeler Mike Webster. This was the first reported discovery in an NFL athlete. The recent box-office movie

Concussion is based on this event, and those that occurred after.

While symptoms may not begin until decades after athletic involvement, the tissue degeneration is associated with memory loss, confusion, impaired judgment, impulse control problems, aggression, depression, and, eventually, progressive dementia.

C.T.E. is currently only diagnosed post-mortem, as there is no medical procedure, which can identify C.T.E. in a living person. Consequentially, there is no treatment.

While there is no direct link, C.T.E. is believed to likely be caused by repetitive concussive hits to the head, and repetitive minor head trauma that cause no symptoms, like those that occur commonly in contact sports. The number, or type of hits to the head that trigger these degenerative changes, is unknown. Other factors, such as genetics, are likely to play a role in the development of C.T.E, as not all people with repetitive trauma develop C.T.E.

On Sept. 18, 2015, researchers with the Department of Veterans Affairs and Boston University released a study identifying C.T.E. in 79 percent of football players, who played in all levels of football, from pro to high school. Though, the results may be skewed as many brains donated were from people who believed they had the disease.

All levels of sports organizations have protocol, and are implementing protocol, for the prevention and correct treatment of concussive and sub-concussive head trauma.

Compiled by: Devon Lee

Sources: PBS Frontline, CBS Sports and Boston University CTE Center