

TOP STORIES

**NEWSDAY
NEWS 12**

**SPECIAL
REPORT**



Rocky Point players bring down a Harborfields running back last year.
■ Watch a Virginia Tech researcher explain helmet ratings: newsday.com/helmets

A high school football player takes **650 hits** to the head per season, on average

At Long Island high schools, there were **364 concussions** reported during practices or games last season

At LI high schools, **9.3% of 9,502 helmets** are rated 'low performers' in reducing concussion risks by Virginia Tech researchers

TACKLING HELMET SAFETY



Riddell VSR4
Safety rating: ★



Schutt Vengeance VTD II
Safety rating: ★★★★★

HUNDREDS OF 'LOW PERFORMERS'
AT REDUCING CONCUSSION RISK
REMAIN IN LI HIGH SCHOOL INVENTORIES

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Football helmets, the iconic piece of equipment in America's most popular sport, are at the center of the debate over concussions that is roiling the way the game is played at all levels.

On Long Island, there are nearly 10,000 student-athletes playing football on 239 varsity, junior varsity and freshman teams at 116 high schools.

Experts say the helmet is the last line of defense against head injuries. But how well a helmet can help prevent a concussion is a source of controversy among neurologists, medical researchers, helmet manufacturers and football coaches.

A typical high school football player receives about 650 hits to the head per season, according to researchers at Purdue University and the University of Michigan. The impacts of those hits are the equivalent of what a seat-belted passenger experiences in car accidents ranging from 15-to-35 mph, according to University of Nebraska Professor Timothy Gay, author of "The Physics of Football."

There are many factors that contribute to concussions: speed, acceleration, the angle of a tackle and a player's physical size among them. Players are bigger and stronger than

ever before, which presents enormous challenges to the efforts to protect them from head injuries. Neurologists also don't know why some hits cause concussions in certain players and not in others.

A seven-month Newsday examination into head safety in high school football on Long Island — which included analyzing concussion reports from 104 of the 116 schools and helmet inventories from 108 schools, and interviews with more than 80 neurologists, researchers, helmet manufacturers, state athletic officials, superintendents, athletic directors, coaches, players and parents — found:

- Entering this football season there were 885 football helmets in circulation that are classified as "low performers" at reducing the risk of concussion, according to safety ratings that Virginia Tech researchers have been publishing since 2011. The testing grades helmets on their ability to reduce head acceleration within the helmet on impact. A five-star helmet is the best at reducing the risk of concussion. A one-star helmet is the least effective. The study's lead author, Stefan Duma, is surprised these 885 one- and two-star helmets remain in circulation. "Four years later these should have definitely been phased out," he said.
- There are 60 schools with

one- or two-star helmets in inventories obtained by Newsday. In response to Newsday's inquiries, 18 schools said they either removed those helmets from their inventories or did not issue them to athletes this season.

- New Hyde Park, in the Sewanhaka school district, has the most, with 71 one-star helmets in its inventory. District Superintendent Ralph Ferrie said in July he was comfortable with players still wearing one-star helmets because they meet the safety standards set by the National Operating Committee on Standards for Athletic Equipment (NOCSAE), which oversees helmet use in football on all levels. Despite Ferrie's previous comments, the district purchased 160 five-star helmets on Tuesday for \$38,400 and said it plans to swap out all of the one- and two-star helmets currently being worn when the helmets arrive Friday, a district spokeswoman said.

- Of the 9,502 helmets in circulation at 108 of the 116 high schools that responded to Newsday's request, there were 2,898 five-star (30.5 percent) and 4,576 four-star (48.2 percent) helmets. Another 408 (4.3 percent) have no rating because they are more than 5 years old and were no longer being made when Virginia Tech released its first ratings in 2011.

- There were 364 reported concussions during practices or games last season at districts covering 88 public high schools and two private schools.

- There were 14 high schools that said they had no football players suffer concussions on any of their teams, including varsity, junior varsity and freshman.

- Six players on Long Island were not cleared to return to athletic activities for more than four months because of lingering concussion symptoms. The longest time missed was 202 days.

'Brain was rebooting'

Yusuf Young doesn't remember much about the final plays of his high school football career.

The former Roosevelt High School linebacker was playing in last year's Long Island championship game against Shoreham-Wading River when a swarm of blockers came his way during a third-quarter running play. He stepped into the path of the oncoming bodies and took the brunt of a blocker's helmet-to-helmet hit.

On the next play, Young was knocked to the ground, and, according to the school's concussion incident report, hit his head on the ground.

"At first I didn't think I was hurt that bad," Young said. "I

See **HELMETS** on A4

MORE ON:
NEWS 12
LONG ISLAND

- A three-part series by News 12 Long Island sports director Kevin Maher and reporter Jamie Stuart will air daily starting at 8 a.m.

TODAY

- A look at concussion rates among high school football players and what is being done to prevent them.

TOMORROW

- How helmets are rated, which schools do and don't believe in the ratings, and how helmets are tested for safety.

FRIDAY

- Oyster Bay's new helmet inventory with sensors that record the impact of a big hit on a player.