

Tackling goes high-tech at Dartmouth with new dummies

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On the Ivy League campus of Dartmouth College, even the football tackling dummies are smart.

The team introduced a new MVP as the first practice of the season got underway Wednesday. Not a most valuable player, but a "Mobile Virtual Player"—a padded, remote-controlled figure designed to allow players to make full contact while minimizing head and neck injuries.

The project started two years ago when coach Buddy Teevens asked Dartmouth's engineering school to create a safer way for players to practice tackling. Students, some of them athletes themselves, came up with a motorized system encased in foam that simulates a real football player in size, weight, agility and speed. While other teams use dummies that remain stationery or run along tracks, Dartmouth officials say their dummy's maneuverability and nimbleness sets it apart.

"This not only cuts out injury risk during practice because you have less player-to-player contact, but you're also allowing players to practice realistic form in an in-game scenario, which they don't get without live play," said former engineering student Quinn Connell, who helped design the MVP. "We were able to come up with a solution that's a mobile, free-standing, self-righting tackling dummy that's also able to be re-set and be completely autonomous."

The dummy's debut comes amid growing concerns about concussions, fueled by cases of former professional players who suffer long-term

impairment after repeated blows to the head. The NFL expects about 6,000 former players to develop Alzheimer's disease or moderate dementia in the coming decades, and under the terms of a settlement currently under appeal, would pay \$1 billion to about 20,000 players. The league also donated \$2.5 million to help launch an institute focused on the prevention of treatment of concussions and other sports-related injuries at the University of Washington.

"The only time my guys tackle is 10 times a year in games," said Teevens. "So this will allow them to be more proficient and more successful, and I think injury reduction and concussive injury reduction is going to be huge for us."

Dartmouth's dummies cost about \$3,500 to manufacture. Researchers have a patent pending and are developing a business plan to market it to pro, college, high school and youth teams. Future models will be programmable with various drills and will more closely resemble the human form. Dartmouth hasn't named its MVPs, though one sported a green No. 52 team jersey during practice.

Players who got their first look at the prototype Wednesday cheered as their teammates took turns tackling the dummies, which wobbled and bounced back up, ready for the next player.

"It's going to totally change the game for us," said linebacker and team captain Will McNamara. "We're big on making sure we protect each other, so being able to hit a pad as opposed to a player is huge."

Teevens described his own experience with the dummy as realistic, though not entirely successful.

"I bounced off it," he joked.

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