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# College Football Star Sports Next-Gen Shoe Tech

By [Kyle Stack](#) ✉ December 8, 2010 | 2:55 pm | Categories: [Equipment](#), [Research](#)



If Auburn quarterback Cam Newton wins the Heisman Trophy this weekend, he might have his feet to thank for the award as much as his arm. The 6-foot-6, 250-pound junior has spent his past five games with his ankles secured by a new shoe technology.

[Under Armour](#), the athletic shoe and apparel company which outfits Auburn, has provided Newton with its yet-to-be-released Nitro CompFit cleats since his October 30 game against Ole Miss.

The cleats incorporate a neoprene compression sleeve which surrounds the ankle to give protect the athlete from twisting or spraining the joint. UA's director of on-field footwear, Josh Rattet, told Wired.com that the cleat's goal is to maximize ankle protection while minimizing its weight: "How do we give the athlete an advantage of the security of a mid-cut but in a low-top solution?"

Indeed, the shoe is a low-top, a style that lacks ankle protection and is typically avoided by athletes who play sports involving quick, cutting movements. According to the University of Illinois' McKinley Health Center, 85 percent of all ankle injuries are [lateral sprains](#), usually caused by the foot rolling inward. The Nitro CompFit decreases the odds of that happening by working with the cleat's shoelace system to form a tight fit up to just above the ankle.

While just about every football player wears ankle tape underneath his socks, Rattet said some players also wear [spat](#), otherwise known as athletic tape over the shoes. It offers security, but also added

weight. Spat also provides so much rigidity around the ankle that the athlete winds up with too much stress on the knees when making quick movements. Rattet said that's a factor with mid- and high-top shoes, which led to the emphasis of adding lightweight protection to the ankle. "The mobility and range of motion was the overriding thought process in what this shoe is for," Rattet said.

Rattet worked on the CompFit system for over a year by using focus groups comprised of high school and college athletes to test reliability. He considered both spandex and UA's licensed [HeatGear](#) yet ultimately passed over them for [neoprene](#), which adds less than half an ounce to the shoe's 10.5-ounce weight: "We came to a solution where we felt like neoprene was the ultimate in terms of support and minimizing weight and allowing it to breathe."



And Newton, who leads top-ranked Auburn with 28 passing touchdowns and 20 rushing touchdowns, isn't the only player to wear the CompFits. Rattet said that high school players and "a few" NFL players are sporting the cleats, which will be introduced to the public by next summer. He also said that the cleats are built for skill-position players. So while linemen may be able to wear them in the future, more protection would have to be added to account for those players' increased weight, which adds more stress on their ankles.

Rattet also expects the neoprene sleeve to extend beyond football. Basketball shoes with the Nitro CompFit system will be released in the second half of 2011. Under Armour released a line of basketball shoes in October in the company's effort to focus more on the sport, but as the technology evolves, more sports will be position to utilize the advances.