



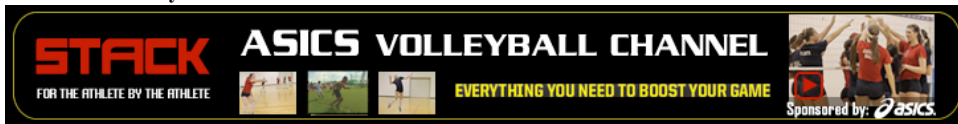
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ArmourBite Mouthpiece Helps Pitchers Increase Velocity

By: Kyle Stack | June 17, 2011 | Posted in: [Equipment](#), [Featured](#), [Performance Gear](#) | Tags: [mouthguard](#), [pitch velocity](#), [pitchers](#), [Tom House](#), [under armour armourbite](#), | [Leave a Comment](#)



University of Southern California pitching coach Tom House suspected that Under Armour's ArmourBite mouthpiece might help pitchers increase their velocity. But he needed to put it to the test, which is precisely what he did this past fall and winter with 10 pitchers—eight minor leaguers and two collegians. Neither of the college players attends USC, but two of the eight pros attended the university prior to the study.

The study sample was small, statistically insignificant enough for critics to dismiss, but the results were unmistakable. The study, held at the Rod Dedeaux Research and Baseball Institute on USC's campus, began last September with approximately 10 weeks of conditioning work and continued into early January through mid-February with the actual experiment.

During the study, pitchers gained an average of two mph of velocity on their fastballs when wearing the ArmourBite.

House's study protocol involved each pitcher wearing an ArmourBite while performing his normal warm-up exercises, then throwing three to five fastballs with six different weighted balls, for a total of 18 to 30 pitches. The baseballs weighed two ounces, four ounces, five ounces [the normal weight of a baseball], six ounces, one pound and two pounds. Each pitcher then repeated the same routine, including the warm-up, without the ArmourBite.

House pointed out that the one- and two-pound baseballs were larger than a normal ball, but it didn't affect the study. He says, "The size of the ball didn't influence one way or another what the velocity of the pitches would be."

The inspiration for the study was House's awareness of how stress affects the temporomandibular joint [TMJ] in the jaw. A person's natural reaction under emotional or physical duress is to grind his teeth or clench his jaw, which compresses the TMJ. A hormone called cortisol, which produces stress and fatigue in the body, is released when physical pressure is applied to the jaw. ArmourBite was designed to prevent teeth from clenching and to pivot the jaw forward to reduce pressure on the TMJ.

While conceding that he's not a medical expert, House, who holds a master's degree in performance psychology and a doctorate based in psychology from USC, simply wanted to see if ArmourBite made a difference. He says, "We were...looking for a process that would give [athletes] an edge when they got into spring training or when they played baseball in a college environment."

After the study, House concluded that each player's game preparation could be made more efficient—and more effective—if he wore the ArmourBite. Several hurlers gained three to four mph in pitch velocity, and all study participants still wear ArmourBite during training and in games, according to House.

When asked if Little Leaguers could potentially benefit from wearing ArmourBite, House hesitated, stating his concern about the lack of physical maturity of players in that age group. The same goes for high school players. House says, "I would have to be certain that [a younger athlete's] stability, mobility and flexibility was there, that he had enough strength to give me maximum effort with the number of throws to test the ArmourBite."

For now, it appears that collegiate and professional baseball pitchers are the main beneficiaries of the ArmourBite.

Kyle Stack is a New York-based writer/reporter who covers health, technology, business and media in sports. He also writes for SLAM, Wired and ESPN. His work can be found at kylestack.com.

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