

REPORT

2008

Equipping you with the latest research and standards on athletic equipment

What's News?

- New Soccer Shinguard Standard for High School play takes effect starting in the fall of 2008.
- Circle System reconditioner questions and answers.
- NOCSAE research Grant Funding to increase.
- Status of Proposed Revisions to Football Helmet Standard.

Before discussing these and other issues, there is one important fact to keep in mind when reviewing any issues involving NOCSAE standards for any equipment. NOCSAE publishes voluntary

standards for many different kinds of equipment, including helmet and faceguard standards for football, baseball and softball, lacrosse, ice hockey, and polo, as well as shin guards for soccer, and safety baseballs and softballs. NOCSAE does not certify or approve any piece of equipment subject to its standards. That certification is done by the manufacturer in compliance with a license agreement with NOCSAE.

Because NOCSAE is a charitable organization under IRS reg 501 (c)(3), we operate on a limited budget with a goal of using license fee proceeds to support scientific and medical research in the area of sports injury. NOCSAE does not maintain an investigative or supervisory staff to independently verify the certifications of the manufacturer licensees.

Beginning in June of 2007, all licensees who certify products to our standards are required to annually submit verification by an accredited testing laboratory that the products they have certified in fact do meet the standard. NOCSAE feels this is a positive step towards protecting the integrity of the NOCSAE standards. ■

Football Helmet Standard Revision Status

With the support of the NFL and the work done by its MTBI Committee, and with the cooperation of helmet manufacturers, NOCSAE has drafted a proposed revision to the football helmet standard. This revision will attempt to address additional impact locations. To accomplish



these changes it was necessary to develop a linear impactor designed to allow helmets to be impacted in locations not accessible in the

traditional drop test configuration. The linear impactor is a powerful air actuated ram that can strike a helmet on a free-moving NOCSAE headform. It is believed that this will more closely imitate head impacts seen on reconstruction of hits that resulted in concussions during NFL games.

Five prototype impactors were built to NOCSAE specifications and are currently being tested at five different facilities to establish repeatability and validity among all five impactors. This process is taking longer than hoped, but it is absolutely necessary to make sure that each impactor generates valid data when testing. Without repeatability, the test results cannot be validated, and testing done under a new or revised standard would not be valid. So we are moving forward, carefully, but forward nonetheless. ■

New Staff Addition

To help us better respond to your inquiries and questions, and to help keep the website current, NOCSAE has added the services of an Administrative Assistant. Melinda Cook is in the office five days a week and though she's still learning some of the ropes, she will be able to answer many of your questions, or at least steer you to the person who can. We welcome Melinda to NOCSAE and look forward to her assistance.



Soccer Shinguard Standard Effective Date

NOCSAE published its Soccer Shinguard standard in June of 2007, after two years of comment and review. The purpose of the standard was to provide an increased level of impact protection and to address coverage of the lower leg by requiring sizing information to be placed directly on the guards. In coordination with the NCAA and the NFHS, the standard was given an effective date of June 2007 which was thought to be adequate time for manufacturers to make and distribute enough certified shinguards for both levels of play.

After consideration and discussion, the NFHS decided to postpone any rules changes mandating the new standard until the high school seasons begin in the fall of 2008. The NCAA retained its original effective date of the fall of 2007. This split in effective dates has caused some confusion, but now that the NOCSAE standard is the

rule of play for both governing bodies, that confusion should be ended.

All NOCSAE standards are voluntary, and until adopted by a rulemaking body such as the NCAA or the NFHS, NOCSAE has no authority to enforce or require compliance with its standard.

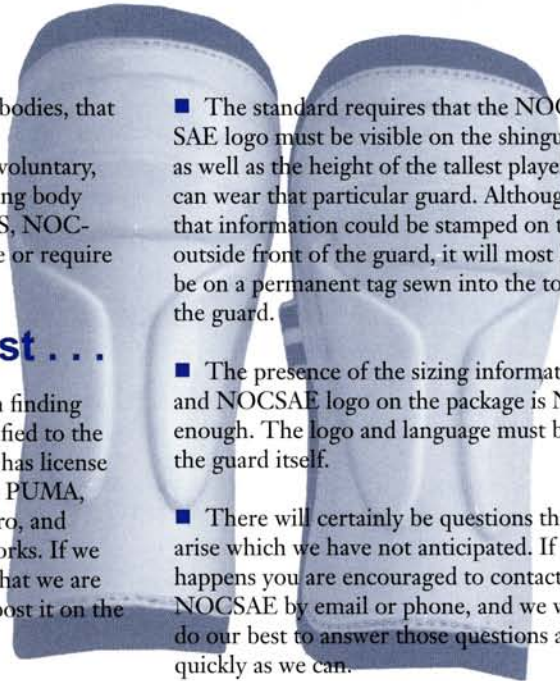
Points Of Interest . . .

■ There should be no problem finding soccer shin guards that are certified to the NOCSAE standard. NOCSAE has license agreements with NIKE, adidas, PUMA, Diadora, Brine, Cobra, Champro, and there are several other in the works. If we can get a list of manufacturers that we are 100% sure is accurate, we will post it on the NOCSAE website at www.nocsae.org

■ The standard requires that the NOCSAE logo must be visible on the shinguard, as well as the height of the tallest player that can wear that particular guard. Although that information could be stamped on the outside front of the guard, it will most likely be on a permanent tag sewn into the top of the guard.

■ The presence of the sizing information and NOCSAE logo on the package is NOT enough. The logo and language must be on the guard itself.

■ There will certainly be questions that arise which we have not anticipated. If that happens you are encouraged to contact NOCSAE by email or phone, and we will do our best to answer those questions as quickly as we can.



Circle System Reconditioners

In August of 2007 NOCSAE was made aware that lapses in the recertification testing protocols were found at Circle System in Easton, Pa. This disclosure was provided to NOCSAE as part of an unrelated investigation being conducted by the US Attorney's office in New Jersey. We have not been given any details as to the reasons for the initial investigation, nor do we yet know the all the specifics as to the testing lapses discovered. When we were notified as to the problems, we undertook to review all the data we had available to us regarding Circle System and their reconditioning and recertification process. NOCSAE collects recertification test data from all licensed reconditioners each year and analyzes that data for statistical purposes.

We determined that any lapses identified most likely occurred prior to 2006. In 2006, Circle System as did all NOCSAE licensees incorporated a new data acquisition program called HITS (Helmet Impact Test System) which automatically records test data directly from the sensors

in the headforms. The resulting data cannot be altered or modified, and test data can only be obtained if the computer determines that the test was valid. Our data from 2006 forward for Circle System does not show significant testing lapses, apart from occasional anomalies that are not unique to Circle.

We also determined from the investigators that they found no issues with the reconditioning procedures followed by Circle System. Original equipment replacement parts were used, appropriate paint was used, and the employees performing the reconditioning were experienced. We were able to verify this information. NOCSAE also determined from the data we received that more than 90% of the helmets recertified prior to 2006 had been properly recertified since that time, and in some cases twice recertified.

The question we then had to answer was whether the lapses had an impact on the total population of recertified helmets from other reconditioners.

The NOCSAE standards require that a statistically relevant sample of helmets be tested during the recertification process. Because it is both impossible and unnecessary to retest every reconditioned helmet, each reconditioner selects a representative sample to test both before and after reconditioning. Following published guidelines for making that determination, and relying on their own experience. In order to obtain an adequate statistical sample, the tests from all reconditioners are pooled into a single batch, which means that more than 30,000 helmet tests each year are analyzed and compared with the total number of helmets actually recertified.

With this information our counsel determined that the lapses, while a violation of our license agreement with Circle System, likely did not present a player safety issue. NOCSAE continues to investigate the matter, and we are examining the issue of statistical sampling in the reconditioning context. ■



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This newsletter is a publication of the National Operating Committee on Standards for Athletic Equipment (NOCSAE), a Non-Profit Corporation.

The mission of the National Operating Committee on Standards for Athletic Equipment (NOCSAE) is to commission research on and, where feasible, establish standards for protective athletic equipment. To this aim, the Committee fosters and encourages the dissemination of information on research findings on athletic equipment, injury data, and other closely related areas of inquiry through the organizations represented on the NOCSAE Board of Directors, and other entities in the fields of athletics and sports medicine.

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Board Members

NOCSAE consists of a Board of Directors who serve without pay, receiving only their expenses for meetings attended. The strength of NOCSAE is the quality and experience of the Directors, some of whom have served for more than 20 years. NOCSAE by-laws specify the number of directors and the sectors to be represented, and in general, one third of the directors represent the athletic equipment end user, such as coaches, athletic directors, equipment managers, certified athletic trainers, and team physicians; another third represent manufacturing and technology, which includes reconditioners and helmet manufacturers, and their associations; and the last third represent the science and medicine interests, which includes the American College Health Association, American Orthopaedic Society for Sports Medicine, American College of Sports Medicine, and the American Medical Society for Sports Medicine.

The full board membership is listed on the website at www.nocsae.org/about/board.html

New Board Members

Although listed on the website, there are two new directors which we introduce here. Representing the AOSSM, **John Ryan M.D.** from Detroit starts his second year on the board. Dr. Ryan is board certified through the American Board of Orthopedic Surgeons, and is a member of the Arthroscopy Association of North America and the American Orthopaedic Society for Sports Medicine. He is a fellow of the American Academy of Orthopaedic Surgeons. Dr. Ryan served 26 years in the United States Army and Directed the Military Sports Medicine Fellowship at West Point Military Academy, New York. He has cared for professional, college and recreational athletes and military personnel throughout his career. He specializes in Orthopedic Sports Medicine, and arthroscopic and reconstructive surgery of the knee and shoulder.

Grant Teaff replaces Doug Dickey as the representative of the American Football Coaches Association. Coach Dickey retired as Athletic Director for the University of Tennessee. Grant serves as the Executive Director of the American Football Coaches Association, and has done so for the past 15 years. Before AFCA, Coach Teaff was the head football coach at Baylor University for 21 years. He assumed the duty of athletics director at Baylor during his last season of coaching and would have remained in that position had he not accepted the AFCA post. His committee appointments have included serving as a member of the NCAA Gender Equity Task Force (1992-93) and the NCAA Football Rules Committee (1982-88). He is currently serving on the NCAA Committee on Sportsmanship and Ethical Conduct, the NCAA Football Issues Committee, the NCAA Future Football Coaches Commission, the NCAA Gambling Task Force, the NCAA Initial Eligibility Commission, the NCAA/NFL Intern Commission, the ARA Sportsmanship Awards Commission and the NCAA Division 11 Task Force. He also serves on the Executive Committee of NCAA Football and is on the Board of Directors for Football USA.

Both gentlemen bring a wealth of experience and remarkable reputations to the board and we are grateful for their service.

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Grants & Research Funding

Each year NOCSAE solicits grant applications from all areas of sports medicine and science. These grant applications are reviewed and graded by a panel of experts, and each January the NOCSAE Board of Directors selects for funding, those grants which it believes will likely result in an advancement of the basic science and medicine for the subjects chosen. This January the Board reviewed and approved funding in the total amount of \$927,786 for the 2008 grants, in addition to the continuation of second year grants from 2007 in the amount of \$88,000.

The 2008 grants approved are:

- 26-08** Barry J. Maron, MD, Minneapolis Heart Institute. Epidemiology of commotio cordis: Maintenance of the US National Registry. (\$65,760 for two years)
- 21-08** Andrew Lincoln, ScD, MS, MedStar Research Institute, Hyattsville, MD. Epidemiology of MTBI in boys and girls high school lacrosse players. (\$328,865 for two years)
- 5-08** R. Dawn Comstock, PhD, Ohio State University, High school sports injury surveillance: Monitoring rates and patterns of injury over time. (\$168,000 for two years)

14-08 Kevin M. Guskiewicz, PhD, University of North Carolina at Chapel Hill, Prospective evaluation of head impacts in youth ice hockey: Part II. (\$159,261 for two years)

10-08 Randall W. Dick, NCAA, Enhancing data quality, analysis, sample size and accessibility in the web-based NCAA injury surveillance system(ISS). (\$186,400 for two years)

28-08 Joseph T. Gwin, Simbex, L.L.C., An investigation of the proposed NOCSAE linear impactor test method based on in-vivo measures of head impact acceleration in ice hockey and football. (\$19,500 for one year)

NOCSAE continues to expand its role in underwriting research grants, and encourages all researchers to consider NOCSAE as a potential source for support.

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