



**NYCPM**  
New York College of Podiatric Medicine

## **NYCPM Joins Large-Scale Research Project/Boot Fit at West Point Following Cadets to Correlate Findings with Future Injuries and Changes in Feet**



*The NYCPM student volunteers posed in Washington Hall at West Point, site of the Boot Fit.*

Approximately 50 NYCPM student volunteers joined forces with volunteers from Temple University, the Hospital for Special Surgery (HSS) and Novel (a corporate partner from Germany) to conduct a large-scale data collection at the Boot Fit for the incoming 2019 Cadet Class at West Point. 1175 out of 1263 cadets consented to participate in the research study, which measured arch height, analyzed gait and foot structure function, and compiled a foot posture index of the cadets as they waited to be fitted for their boots.



*The NYCPM team T-shirt.*

Seven faculty members led the NYCPM team – Eileen D. Chusid, PhD, Associate Professor and Dean of Pre-Clinical Sciences, and Director of Institutional Research; Robert A. Eckles, DPM, Associate Professor of Orthopedic Sciences and Dean of Clinical Education and Graduate Medical Education; Johanna Godoy, DPM ('05), Assistant Professor of Surgical Sciences; Loretta M. Logan, DPM ('89), Associate Professor and Chair, Department of Orthopedics and Pediatrics; Susan M. Rice, DPM ('88), Associate Professor of Surgical Sciences; Michael J. Trepal, DPM ('81), FACFAS, VP of Academic Affairs and Dean; Russell G. Volpe, DPM ('83), Professor of Orthopedics and Pediatrics. Kurtis Bertram (2017) and Loretta Cacace (2016) were the student coordinators.



*NYCPM faculty led 50 student volunteers at West Point. They are, from left to right, Johanna Godoy, DPM; Robert A. Eckles, DPM; Michael J. Trepal, DPM, FACFAS; Loretta M. Logan, DPM; Susan M. Rice, DPM; Eileen D. Chusid, PhD; Russell G. Volpe, DPM.*

According to Becky Zifchock, PhD, investigator for West Point, "This provides information about both static and dynamic foot structure and function for this cadet class. The participants will be tracked throughout their four years at the U.S. Military Academy. This will provide data to support research questions such as the relationship between foot structure and susceptibility to overuse injury, and whether intense military training changes foot structure."

The principal investigators for the Boot Fit were Colonel Michael Neary, DPM, Director of Podiatric Services at the hospital at West Point; Michael J. Trepal, DPM ('81), VP of Academic Affairs and Dean at NYCPM; Howard J. Hillstrom, PhD, Director of the Motion Analysis Lab at HSS, and Jinsup Song, DPM, PhD, Temple University.

"What made this [Boot Fit] different was the huge research component," according to Dr. Chusid. While NYCPM has participated in the Boot Fit for years, she



Loretta M. Logan, DPM, left, and Robert A. Eckles, DPM, right, examine feet for the data collection at West Point.



said, this is only the second time that we've worked with HSS and West Point to collect data simultaneously. The first data collection was for the incoming cadet class of 2017 in the summer of 2013.

NYCPM had "rehearsed" for the data collection at West Point in February when six NYCPM podiatrists evaluated the foot structure of 30 volunteers and relayed their findings on the spot to student research assistants who worked one-on-one with the faculty as "scribes," utilizing custom-designed iPad data-entry applications.

Student researchers also measured for arch height index. The purpose of that inter/intra-rater reliability study, actually a sub-study, was to check for accuracy of measurements for the same rater more than once (intra) as well as different raters (inter). "We looked for the same values on all measurements," said Dr. Chusid, "and measurements had to be finished within about two to three minutes if we were to obtain data on a large study population. We successfully did that." Another goal was to collect supporting data for submission of an NIH grant application. The NIH grant would fund the four-year tracking study of the cadets who participated in the Boot Fit.

#### From West Point to NYCPM to the Boot Fit

Among the student volunteers was Jeffrey "Craig" Paruszewski (2018). He graduated from West Point in 2007 as a second lieutenant, and was stationed in Germany before deploying to Iraq as a field artillery officer. After six months, the dust in Iraq aggravated his asthma and he received a medical discharge. A stint in medical sales got him into the operating room and he decided that a medical career was for him -- he's looking forward to surgery. The Boot Fit was his first visit to the barracks at West Point since he graduated and his experience there echoed that of everyone on the trip: "we worked really hard but had a great time!"



Jeffrey "Craig" Paruszewski (2018), a 2007 West Point graduate and current NYCPM student, helped a cadet try on his new boots.



A NYCPM student measures a cadet's arch height.



All of the volunteers for the Boot Fit and data collection effort at West Point were treated to a Hudson River cruise after the first day. Maj. Gen. William F. Ward, Jr., A.U.S. (Ret.), Chairman of the NYCPM Board of Trustees, shared his knowledge of West Point and Hudson River history with all aboard. On the right is Howard J. Hillstrom, PhD, of the Hospital for Special Surgery.