

**Keynote Presentation**

***Bringing Research to Practice, Returning to Our Roots: A Case for Required  
Physical Education in Higher Education***

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Because of their new independent status as young adults, undergraduate college students are at a crucial point in the development of significant health behaviors, especially as related to physical activity. Unfortunately, in the United States, there is clear evidence that the lifestyle choices college students make are not always healthy ones (Li et al., 2012). For example, an estimated 20% of college students are completely sedentary, while an additional 40% are insufficiently active (Irwin, 2004). Moreover, physical activity levels decline from high school to college and beyond. For example, Cullen et al. (1999) reported a 62.5% reduction in physical activity levels between high school and college and, unfortunately, the drop is generally greater in the post-college years (Sparling & Snow, 2002). Some scholars have suggested that college-level physical education curricula are the last major opportunity to provide information and behavior change skills that can enable healthy lifestyle habits throughout college and life (Sparling, 2003).

### **Purpose**

In this presentation I will:

- 1) Briefly review the history of required physical education in American higher education.
- 2) Provide an update on the status of the physical activity education requirement and its rationale in the context of general education reform, the National Physical Activity Plan, and other related initiatives.
- 3) Provoke discussion about the need for Physical Education (Kinesiology) and Health Departments to re-prioritize physical activity education as being a

central feature of their academic units, especially given the context of an increasingly sedentary society.

- 4) Articulate the appropriate placement of physical activity education within the General Education curriculum of colleges and universities.

### ***Required physical education in higher education in America***

In 1859 Amherst College, Amherst, Massachusetts, U.S.A., began construction of Barrett Gymnasium, named for Benjamin Barrett, M.D., a Northampton, Massachusetts's physician, who provided the single largest donation to the project. In its first year of operation John W. Hooker, M.D., served as Director and Professor of the newly established Department of Physical Culture; however, the department didn't begin to thrive until Edward Hitchcock, Jr., M.D. – a Harvard trained physician and the first person to serve as President of the Association for the Advancement of Physical Education, known today as the American Alliance for Health, Physical Education, Recreation and Dance – was appointed Professor of Physical Education and Hygiene in 1861 (Hitchcock, 1878).

Although Hitchcock's appointment corresponded with the start of the Civil War, the department's purpose was not for military drill, nor the development of sportsman. Rather, it was for the beneficence of every Amherst student for whom the Rev. William Augustus Stearns, D.D., Amherst's fourth President, and Nathan Allen, M.D., a Trustee of the College from 1857-1889, were especially concerned.

At his inauguration Stearns (1855) said, "*Of one thing I am certain, the highest intellectual efficiency can never be reached, the noblest characters will never be formed, till a greater soundness of physical constitution is attained*" (p. 87). In his first Trustees report Stearns

noted, “*No one thing has demanded more of my anxious attention than the health of the students*” (Allen, 1865, p. 3).

Stearn’s conviction resulted in what would ultimately become known nationally and internationally (e.g., Japan) as the “Amherst plan” – a required program of physical education, 4 days per week for 30 minutes per day over the course of the undergraduate degree program experience at Amherst (Hitchcock, 1878). Classes began with uniform exercises lasting 15-20 minutes, with the balance of time devoted to individually selected activities. Lectures on various health topics and human anatomy and physiology were also given to the students, and the students were systematically measured and monitored, documenting its efficacy and spawning the anthropometrics scientific movement (Lee & Bennett, 1985).

This was the early beginning of mandatory physical education in America’s colleges and universities. Similar programs eventually followed at other elite, private institutions (e.g., Bryn Mawr, Harvard, Oberlin, Wellesley, Vassar; Lumpkin, 2011). At the close of the 19<sup>th</sup> century Sargent (1900) convincingly articulated the rationale for institutionalizing the requirement nationally, and by the late 1920s and early 1930s, 97% of America’s private and public colleges and universities had some form of physical education requirement, though the percentage of institutions with a requirement dropped to 89% by the late 1930s (McCristal & Miller, 1939). With only one observed exception, the percentage of institutions with a physical education requirement ranged from 84%-87% through the 1960s (Lumpkin & Jenkins, 1993). However, in the decades since, the percentage of institutions with a requirement appears to have steadily dropped (Hensley, 2000) and it is presently at an all-time low (Cardinal, Sorensen, & Cardinal, In press); yet, American society and its people – including college and university students – are living increasingly sedentary lifestyles. Furthermore, and quite unfortunately, there has been a

serious lack of research attention devoted to college and university students' physical activity behavior (Keating, Guan, Piñero, & Bridges, 2005).

Rather, the field has become increasingly focused on scientific knowledge production within the subdisciplines, with less attention devoted to its roots as an applied and professional-based field of study and the integration of scholarly knowledge (Cardinal & Lee, In press). In part this was due to its need to justify itself as a legitimate academic discipline, develop and codify its "Body of Knowledge," and improve the quality of its graduate programs. Many of these developments occurred post World War II, with Franklin Henry's seminal paper published in 1964 having an especially large influence. However, as Henry (1964) himself said, "*Academic vs. professional . . . are not mutually exclusive*" (p. 6). In fact, the University of California-Berkeley's Physical Education Department, where Henry served as a Professor, *emphasized*, "integrated knowledge," "cross-disciplinary," and broader perspective approaches "reflecting liberal education at its best" (Park, 2009). Increasingly, though, we see a widening divide between the discipline and the profession (and/or applied and professional programs; Corbin, 1993).

***Physical education and scientific knowledge production: The sub-disciplines and professions***

The scholarly growth of our field has certainly been impressive over the years, with exponential growth in scientific knowledge production and output occurring in some areas since the 1970s. However, the overall impact of our scholarship on improving the physical activity and health-related behavior of society as a whole has been far from fully realized. For example, between 1955-2005, Americans have become *less* physically active! Leisure-time physical activity has remained relatively stable, with physical activity in work, transportation, and everyday life showing decreases, in part due to an increased reliance on labor saving devices

(Cardinal, 2010). Furthermore, as a society we are spending more and more time sitting or otherwise sedentary (36.8% vs. 39.9% of the day, in 2000 vs. 2005; cf., Cardinal & Jelinek, 2012).

***What, if anything, can Physical Education (Kinesiology) do to alter this situation?***

One place we can start is through a renaissance of physical activity education as general education in institutions of higher learning. Increasingly, faculty believe it is part of their job to “enhance students’ self-understanding” (71.8% vs. 58.4%; a 13.1% increase over 3 years). This links well with what can be accomplished in a physical activity education class in terms of holistic human development. As the noted higher education leader and reformer Ernest Boyer said, “*Wellness must be a prerequisite to all else. Students cannot be intellectually proficient if they are physically and psychologically unwell.*” This extends beyond the purely philosophical, however.

Appropriately designed college curriculum may facilitate the development of positive physical activity and wellness-related behaviors on a large-scale basis (Corbin & Cardinal, 2008; Darracott, 2000). For example, Hager, George, LeCheminant, Bailey, and Vincent (2012) evaluated the effects one such course had on 2,971 undergraduate university level student’s dietary and physical activity behaviors, including whether the face-to-face versus online version of the course was more or less effective. In support of the course, the students in the face-to-face version of the class improved their physical activity behavior during the 15-week semester by 13.7%, whereas those in the online course improved theirs by 9.8%. Fruit and vegetable, whole grain, and brown rice/wheat consumption increased 6.3%, 11.1%, and 14.8%, respectively, for those in the face-to-face version of the course, whereas those in the online course did not report changes their fruit and vegetable consumption, but did report improvements in their whole grain

(3.7%) and brown rice/wheat (3.4%) consumption. Over 94% of the students expressed a desire to maintain the improvements they had made in their health behavior as a result of taking this university-required class.

Sadly, however, in 2009-2010, only 39.55% of 4-year colleges and universities in American required some type of physical activity education experience to earn a baccalaureate degree (Cardinal et al., In press). This is entirely inconsistent with society's increased emphasis on physical activity and health, the National Physical Activity Plan (2010), and other proclamations and position papers that call for institutionalizing – not diminishing or eliminating – such requirements in America's colleges and universities (Cardinal & Cardinal, 2007; Casebolt, 2009; National Association for Sport and Physical Education, 2007). Moreover, the scope of the requirement is nothing close to the original Amherst Plan. Finally, the negative impact of *eliminating* the requirement from the college or university curriculum is quite tangible, with one university observing negative trends in students' nutrition and exercise patterns 3 years after dropping their requirement (Ansuini, 2001).

American's are inactive and this has a negative impact on the quality and quantity of their lives. College and university students are not immune to this situation. As observed by, Kupchella (2009), who served as President of the University of North Dakota from 1999-2008: “...*health-courses are now absent from the general education programs in many schools...Surely health is still near the top of the list of things the ‘whole-person’ needs to know about and appreciate*” (p. 185). Kupchella went on to say: “*Intercollegiate athletics, while fine for athletes, serves only to prepare most of our grads for a lifetime as spectators and ‘couch potatoes.’ All students, not just scholarship athletes, should be encouraged and enabled to participate in physical activity*” (p. 186).

Stearns (1855) observed and expressed similar concerns more than 150 years ago! Moreover, Stearns took action by introducing a required program of physical activity education to the students at Amherst College. His approach was bold, innovative, and visionary. It may very well serve as a model of a not so modern technology and innovation aimed at enhancing human performance, health and quality of life for our field still today!

### ***Conclusion***

With their physical education requirement implemented in 1860 and their infirmary – the Pratt Health Cottage – not coming into existence until 1897, the leaders of Amherst College knew 150 years ago that prevention came before cure. Physicians – the early leaders of the American physical education movement – helped establish and institutionalize physical education programs and requirements on American college and university campuses. Today all those interested in the nation's health – educators, government officials, health care providers, among others – are being asked to step up their efforts once again. College and university students need health and physical activity education as much now as ever before!

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