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What Is Exercise Physiology?

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The majority of the college teachers who call themselves exercise physiologists tell students that “exercise physiology is a sub-discipline of kinesiology that addresses the short-term biological responses to the stress of physical activity and how the body adapts to repeated bouts of physical activity over time” (1). It is amazing such mis-information exists after the founding of the American Society of Exercise Physiologists in 1997 (2). The ASEP leadership understood the importance of defining Exercise Physiology, which they did: “...the identification of physiological mechanisms underlying physical activity and regular exercise, the comprehensive delivery of treatment services concerned with the analysis, improvement, and maintenance of physical and mental health and fitness, the rehabilitation of heart disease and other diseases and/or disabilities, and the professional guidance and counsel of athletes and others interested in athletics and sports training.” If you are a student with the expectation of locating a credible job when you graduate, which definition would you embrace? The first one or the ASEP definition!

A brief analysis of the two definitions indicates that the first definition is useless. It does not say anything that links the degree to a career after college. The second definition is linked to a healthcare career, given the statement: “...the comprehensive delivery of treatment services concerned with the analysis, improvement, and maintenance of physical and mental health and fitness, the rehabilitation of heart disease and other diseases and/or disabilities....” Board Certified Exercise Physiologists are healthcare professionals who have an academic degree in exercise physiology or an academic degree that is related to exercise physiology and has passed the ASEP Exercise Physiologist Certified (EPC exam) and, therefore, is certified by ASEP to practice exercise physiology. Establishing and implementing standards of practice are major functions of a professional organization. The purpose of the standards is to describe the responsibilities for which exercise physiologists are held accountable. The “Exercise Physiology Practice” promotes health and wellness,

prevents illness and disability, restores health and well-being, and helps athletes reach their potential in sports training and performance (2).

ASEP as the professional organization of exercise physiologists is important for many reasons, but one in particular is to promote the professional development of exercise physiology. Hence, implicit within the ASEP web pages is the notion that exercise physiology is a healthcare profession. It is not a personal trainer or fitness organization. Trainers and instructors have their own organizations. The bulk of the epidemiologic evidence and the scientific papers by exercise physiologists support the healthcare benefits of regular exercise and increased physical activity. Moreover, it is clear that an active lifestyle protects from many diseases. Now, with the ASEP Board Certification as the gold standard for exercise physiologists in the United States, the supervision, safety, and care of clients and patients are increasingly evident throughout the public sector.

A Certified Exercise Physiologist (EPC) is trained to: (a) administer exercise stress tests in healthy and unhealthy populations; (b) evaluate a person's overall health, with special attention to cardiovascular function and metabolism; (c) develop individualized exercise prescriptions to increase physical fitness, strength, endurance, and flexibility; and (d) design customized exercise programs to meet healthcare needs and athletic performance goals. According to ASEP, exercise is a medical treatment and, according to numerous scientific papers, exercise medicine is often equal to the prescription of medications. Scientific papers by Board Certified Exercise Physiologists support the health benefits of regular exercise. Moreover, it is clear that an active lifestyle protects from many diseases and disabilities. Increasingly medical doctors are referring their patients to Certified Exercise Physiologists because they understand that exercise is a type of medical treatment, just like surgery or prescription drugs. EPCs teach their clients how to benefit from a medically sound, personalized exercise program (3).

Exercise physiology is not "...simply the study of how the body responds to physical activity" (4). Such a statement misses the point of a college degree, which is to promote with minimal difficulty the transition from being a college student to employment in the public sector. Hello, wake up America is an expression most people have heard. How about this expression? Exercise physiologists are healthcare professionals, especially if they are Board Certified Exercise Physiologists! But instead of accepting the ASEP definition, the academic exercise physiologists are still walking the same worn out path of yesterday's thinking. As an example and equally troubling is the statement by Brown (5) who stated the following: "Exercise physiology is an important subdiscipline within the discipline of exercise science." The statement concludes that exercise physiology is not separate or distinct from exercise science, but rather a discipline or part of exercise science as though exercise science is this big, powerful, and well-designed degree that actually helps college students to find a real career when they graduate. Yet, the truth is they know 100% that exercise science is a meaningless academic degree for finding a real job after college so they tell their students to apply to physical therapy or nursing (6).

Board Certified Exercise Physiologists are healthcare providers who should be at the front line of the medical and preventative service professions (7). They examine and evaluate the extent of physical problems that require the exercise physiologist's intervention, and they treat patients who are suffering from physical injuries or disabilities by teaching them various exercise medicine activities that strengthen muscles, improve mobility, and relieve pain. Board Certified Exercise Physiologists are trained to move their clients and patients toward achieving the highest functional outcomes from chronic diseases and disabilities. Clients and patients include those who suffer from low back pain, osteoarthritis, heart disease, musculoskeletal problems, obesity, hypertension, and other middle-age and aging diseases and disabilities. The profession of exercise physiology is no different from physical therapy in that it also provides services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities.

Board Certified Exercise Physiologists are college educated, board certified healthcare professionals who can help clients and patients reduce pain and improve or restore cardiorespiratory function and musculoskeletal mobility. Exercise physiologists teach patients how to prevent or manage their acute or chronic disease or disabilities so that they will achieve an increase in the quality of their lifestyle. They examine each client and patient in order to develop an individualized health and fitness plan, using their scientific education and laboratory training to promote the client's or patient's ability to live and move with less pain and better musculoskeletal and physiologic function. In addition, exercise physiologists work with older and aging clients and patients to prevent their loss of mobility before it occurs by developing fitness- and wellness-oriented programs for healthier and more active lifestyles. They perform these healthcare functions in a variety of settings that include hospitals, private practices, outpatient health and fitness clinics, home health agencies, schools, sports and fitness facilities, work settings, and nursing homes (8).

Hopefully, it will eventually become clear to the sports medicine and exercise science personalities who embrace yesterday's thinking that exercise physiology is not exercise science or part of kinesiology or whatever is made popular by power, politics, and greed. Exercise physiology is a credible healthcare profession with Board Certified Exercise Physiologists who are scientifically education with engaging laboratory skills to correct and promote the health and well-being of their clients and patients via an individualized prescription of exercise medicine. Their professional work and practice are both held accountable to the ASEP Code of Ethics and Standards. Exercise physiology is new, but in time it will be recognized on the same level as physical therapy, nursing, occupational therapy, and athletic training, regardless of the college teachers' mentality towards their research with little to no consideration of promoting the development of the profession. Nonetheless, the profession of exercise physiology is here to stay. This point is clear in that the past cannot be allowed to hold and control the academic setting and the future career possibilities of students.

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