Official Research Journal of the American Society of Exercise Physiologists

ISSN 2378-4083

**Journal of Exercise Medicine online**

**June 2017**

**Volume 2 Number 2**



**JEMonline**

**ASEP Board Certified Exercise Physiologists Today and Tomorrow**

Tommy Boone

Board Certified Exercise Physiologists, Member of the Board of Directors, American Society of Exercise Physiologists, USA

##### ABSTRACT

**Boone T.** ASEP Board Certified Exercise Physiologists Today and Tomorrow. **JEMonline**2017;2(1):1-8. This paper presents exercise physiology as it is today and its future role in the prevention and management of chronic diseases. ASEP Board Certified Exercise Physiologists are the key healthcare professionals educated to prescribe exercise medicine. Since the economic impact of a successful exercise medicine clinic and practice is important to college graduates, they need to know the specifics of how to start and run an exercise medicine business. Board Certified Exercise Physiologists are educated in applied anatomy and cardiovascular physiology in addition to psychophysiology, sports biomechanics, sports nutrition, cardiac rehab, exercise testing and ECG, and biochemistry of exercise that allow for the development of a safe exercise prescription to prevent and treat cardiovascular diseases, overweight/obesity, type 2 diabetes, hypertension, dyslipidemia, insulin resistance, and various inflammations and dysfunctions. The exercise physiologists’ healthcare services provided to their clients and/or patients will be paid out-of-pocket. Adherence to the ASEP Code of Ethics is expected, and is based on the belief that exercise physiologists are self-regulated, critical thinkers who are accountable and responsible for their high quality competence in the practice and the delivery of exercise medicine concepts and services. To avoid high out-of-pocket expenses by clients, ASEP certified exercise physiologists are encouraged to provide services at a lower price to their clients and/or patients.

**Key Words:** Board Certified Exercise Physiologists, Ethical Thinking, Entrepreneur, Exercise Medicine, Healthcare Practice

**INTRODUCTION**

The prevention, management, and treatment of non-communicable diseases with exercise medicine represent a major part of the professional practice of ASEP Board Certified Exercise Physiologists. Increasingly, more healthcare professions in the United States recognized that exercise physiologists are academically prepared to assess and prescribe individualized services to individuals of all ages. But, while that is true, it is important to talk about the fact that exercise physiologist are not licensed, which is the case for other healthcare professionals. The question is this: “Does the lack of licensure diminish the role of exercise physiologists in healthcare?” To some extent it is true, but it isn’t the end of their involvement in healthcare. The ASEP “Exercise Physiologist Certified” exam exists to provide credibility and assurance of a specialized academic education and hands-on laboratory training that isn’t true for non-exercise physiologists.

What is considered a concern by individuals who pass the ASEP Board Certification (EPC) exam is that their healthcare practice is not covered by medically-funded services. However, disease prevention and health improvement services can be (and are being) paid by clients and patients just as they purchase other vital products and services. This means that in addition to exercise physiologists passing the EPC exam to attain credibility as a healthcare professional, they must learn the fundamentals of business and finance as most entrepreneurs do anyway.

The following thoughts about exercise physiologists as healthcare entrepreneurs were published in Wordpress.com (Exercise Physiologists: The 21st Century Healthcare Professional) with the title, Starting an Exercise Physiology Practice (1). The purpose in introducing the content (with some editorial changes) is to highlight questions that many academic exercise physiologists are not asking themselves, but should be on behalf of their students.

**Recent Graduates of Exercise Physiology**

“…as an exercise physiologist who owns his or her exercise medicine clinic, there is hope of financial success. The short answer is yes. I understand that opening your own practice is not a topic discussed while you were in college. Most college teachers are not even aware of the importance of doing so much less express concern about your future after college. Rather, they are interested in their status quo. That is the truth so what are you going to do? Go back to school because you can’t find a good paying job? Or, do you have what it takes to start your own exercise medicine practice? If it is the latter, you need to start thinking about a few things.

1. Where will your practice be located?
2. How large an office space do you need?
3. What kind of equipment do you need?
4. Is the clinic accessible?
5. Will the signage be visible from the streets?
6. Do you plan to run it on your own or will you have a partner?
7. What are the advantages of going solo or with a partner?
8. Will it be a cash-based exercise physiology practice?
9. Are your services what they should be to benefit the clients and/or patients?
10. What are the tax fees and implications for a small exercise medicine clinic in your city?
11. Are there a sufficient number of clients and/or patients to seek out your care?
12. How about referrals?
13. How many primary care physicians are willing to refer their patients to your practice?
14. Do other exercise physiology clinics already exist in your city and community?
15. What will be your primary practice services?
16. How will your practice assessment and services set your clinic apart from competitors?

Answers to these questions will help during the writing of your business plan for an independent and privately owned business (2). Additional concerns that need answers have to do with investing your own money or financing the business, your plans to hire another exercise physiologist either as an employee or as a partner, and future business goals. Regarding the latter, is the idea of achieving your business goals worth the changes that will take place in personal time and lifestyle? What if the business doesn’t make it? What then? Have you thought about backup plans?”

Understandably, the economic impact of a successful exercise medicine practice is important to the college graduate just as good health is important. But, unfortunately, the incredible suffering that goes on when college graduates cannot locate a job is a failure in their investment towards an academic degree. Similarly, society suffers when the healthcare system fails to promote their health and well-being. Yet, both can be averted simply by upgrading the degree program from, for example, an exercise science degree (or a kinesiology degree) to an accredited exercise physiology degree that prepares students to earn the ASEP Board Certification credential that qualifies them to deal with the physical and emotional burden of chronic diseases.

The ASEP Board Certified Exercise Physiologists are educated in functional anatomy and cardiovascular, respiratory, and metabolic physiology among other scientific courses (such as psychophysiology, sports biomechanics, nutrition, cardiac rehabilitation, exercise testing and electrocardiography, and biochemistry of exercise) that allow for the development of a safe exercise prescription to prevent or reverse the negative effects of cardiovascular diseases, overweight/obesity, type 2 diabetes, hypertension, dyslipidemia, insulin resistance, and various inflammations and dysfunctions (3-8). Hence, ultimately, exercise medicine improves the client’s or patient’s quality of life that helps to increase his or her life expectancy and well-being.

It is always important to acknowledge that both the individualized assessments and exercise prescriptions must be developed in accordance with an individual’s age, gender, functional, and disease-related limitations (9). Naturally, this is also true for other allied healthcare professionals that treat individuals afflicted with non-communicable diseases. The difference is the services of the physical therapists, dietitians, and psychologists, nurses, and physicians are that they are covered under medical insurance. Here again, although the services of exercise physiologists are not covered, the unprecedented increase in all non-communicable diseases that destroys health and well-being can best be treated by exercise medicine that is designed specifically by ASEP Board Certified Exercise Physiologists. They are qualified to intervene on behalf of their clients and patients to prevent and management the symptoms and diseases by prescribing a safe exercise medicine prescription.

By comparison, with regard to the professionalization of physical therapists, it was initiated in 1881 when the Sargent School in Boston instituted a formalized training program. It took more than 30 years (January 15, 1921) before the American Physical Therapy Association was founded. Then, it wasn’t until 1935 that the first Code of Ethics for Physical Therapy was published (10). There isn’t any question that physical therapy has evolved into a profession with powerful lobbying efforts and a commitment to the highest quality of healthcare (11). Similarly, from the ASEP perspective, exercise physiology is on track to do the same (12). Now, with the exercise medicine-based approach to healthcare, the practice of exercise physiology includes the use of equipment to enable Board Certified Exercise Physiologists to measure, examine, **analyze,** and**provide instruction** to evaluate the components of physical fitness. The purpose is to promote health and wellness, improve the components of physical fitness, to prevent disease and disability (via the identification of risk factors and behaviors that may impede mind-body functioning), and to rehabilitate clients to their optimal functional level following physical or mental illness.

The equipment used in the **practice of exercise physiology** may include the use of submaximal and maximal testing using treadmills and various cycle ergometers to evaluate and offer advice to clients and patients regarding, but not limited to, metabolic processes, the cardiorespiratory system (VO2 max tests), the musculoskeletal system (strength and power tests), and body composition (% body fat tests). The **measurement,** **examination,** **analysis**, and **instruction** are done for the purpose of research, counsel, and enhancement of athletic performance and the improvement of physical and/or emotional health and quality of life (13).

**Exercise Physiology Services and Payment**

Wagner (14) said that it has only been since 2010 that the United States Department of Labor has given exercise physiologists a unique occupational classification code that delineates them from physical therapists, athletic trainers, and fitness trainers (15). Although ASEP is primarily responsible for speaking directly with the Bureau of Labor in defining exercise physiologists as healthcare professionals, other steps taken by ASEP still remain incomplete. For example, the ASEP leadership developed a licensure bill that was reviewed by the Minnesota legislature. While the bill was unsuccessful, it is clear that the exercise physiologists’ healthcare services provided to their clients and/or patients are paid out-of-pocket. This isn’t a new concept or a new reality in the United States. The National Health Expenditure Accounts (16) estimated that out-of-pocket spending in the United States was $339.4 billion in 2013. Since the U.S. healthcare spending increased almost 6% in 2015, the $3.2 trillion or ~$10,000 per person could be helped by out-of-pocket spending that decreases the need for medical intervention and hospitalization (16).

It isn’t illogical to expect clients and/or patients to pay out-of-pocket for assessments by ASEP Board Certified Exercise Physiologists to mitigate the burden of physical inactivity and poor physical fitness. After all, they are in a professional position to implement exercise medicine prescriptions and healthcare strategies to improve cardiorespiratory and muscular fitness of sedentary and unfit clients and patients. For example, they can reduce the negative effects of a poor diet and excess adiposity and lack of exercise, which are recognized as important risk factors for chronic diseases. In fact, Sharon Horesh Bergquist, a physician, said in 2017 that among the U.S. adults more than 90% of the individuals with type 2 diabetes, 80% of coronary arterial disease, 70% of stroke, and 70% of colon cancer are all potentially preventable (17) with aerobic and resistance training exercises.

Regular exercise (i.e., exercise medicine) is vastly underutilized to lower the prevalence of mental and physical disability and the health risks associated with the failure to treat risk factors and chronic diseases. Hence, without question, a daily safe prescription of exercise medicine can help decrease the financial costs of healthcare while also decreasing the indirect costs due to lost income from work (18). But, in order for these outcomes to be realized, it is imperative that the healthcare community reaches out in faith and support of the ASEP Board Certified Exercise Physiologists that exercise medicine is the practice of exercise physiologists. Not only must they have complete faith in ASEP, its Code of Ethics (19) and the ethical practice of ASEP exercise physiologists, but also show support by displaying complete confidence in their duties as healthcare providers.

**Code of Conduct and Ethical Practice**

The significance of the Code of Ethics is that both students and professionals in the study and application of exercise physiology to health, fitness, exercise, preventive, and rehabilitative services can turn to it for guidance in professional conduct. Adherence to the Code is expected, and is based on the belief that exercise physiologists are self-regulated, critical thinkers who are accountable and responsible for their high quality competence in the practice and the delivery of exercise physiology concepts, ideas, and services.

1. Exercise physiologists should accurately communicate and provide health and fitness, educational, preventive, rehabilitative, and/or research services equitably to all individuals regardless of social or economic status, age, gender, race, ethnicity, national origin, religion, disability, diverse values, attitudes, or opinions.
2. Exercise physiologists should be responsible and accountable for individual non-medical judgments and decisions about health and fitness, preventive, rehabilitative, educational, and/or research services.
3. Exercise physiologists should maintain high quality professional competence through continued study of the latest laboratory techniques and research in preventive and rehabilitative services.
4. Exercise physiologists are expected to conduct health and fitness, preventive, rehabilitative, educational, research, and other scholarly activities in accordance with recognized legal, scientific, ethical, and professional standards.
5. Exercise physiologists should respect and protect the privacy, rights, and dignity of all individuals by not disclosing health and fitness, rehabilitative, and/or research information unless required by law or when confidentiality jeopardizes the health and safety of others.
6. Exercise physiologists are expected to call attention to unprofessional health and fitness, preventive, rehabilitative, educational, and/or research services that result from incompetent, unethical, or illegal professional behavior.
7. Exercise physiologists should contribute to the ongoing development and integrity of the profession by being responsive to, mutually supportive, and accurately communicating academic and other qualifications to colleagues and associates in the health and fitness, preventive, rehabilitative, educational and/or research services and programs.
8. Exercise physiologists should participate in the profession's efforts to establish high quality services by avoiding conflicts of interest and endorsement of products in the health and fitness, preventive, and/or rehabilitative services and programs.
9. Exercise physiologists should participate in and encourage critical discourse to reflect the collective knowledge and practice within the exercise physiology profession to protect the public from misinformation, incompetence, and unethical acts.
10. Exercise physiologists should provide health and fitness, preventive, rehabilitative, and/or educational interventions grounded in a theoretical framework supported by research that enables a healthy lifestyle through choice.

In brief, on behalf of the mental and physical health and well-being of their clients and patients, the ASEP Exercise Physiologists are expected to carry out the practice of exercise physiology with personal and professional integrity and objectivity. This means they must acknowledge the limits of the accredited exercise physiology education and hands-on laboratory training. At no time is a client or patient subjected to the risk of injury or disclosure of confidential information, given that confidentiality is protected.

**CONCLUSIONS**

With the escalating cost of healthcare and its influence on the cost of services specific to chronic diseases and disabilities driven by poor physical fitness and a sedentary lifestyle, the ASEP strategy is twofold. First, the ASEP leadership developed a professionally credible healthcare practitioner, which is the Board Certified Exercise Physiologist who is educated to safely prescribe exercise medicine. Second, to avoid high out-of-pocket expenses, ASEP certified exercise physiologists are encouraged to provide services at a lower price to their clients and/or patients. Regardless of whether or not exercise physiologists are licensed in the near future, the Board Certified Exercise Physiologists’ work environment is likely to involve an entrepreneurial approach, in which there will be an increased emphasis of the business aspect of healthcare via the exercise physiologists’ exercise medicine clinic and practice (2,9).

**Address for correspondence:** Tommy Boone, PhD, MPH, MAM, MBA, 104 Taylors Cove, Beaumont, TX 77705, Email: tbooneasep@gmail.com

**REFERENCES**

1. Boone T. Starting an exercise physiology practice. ***Exercise Physiologists: The 21st Century Healthcare Professional.***2016.(Online). https://exercisephysiologists.Word press.com/
2. Boone T. ***The Business of Exercise Physiology.*** Lewiston, NY: The Edwin Mellen Press.
3. Thompson PD, Buchner D, Pina IL, et al. Exercise and physical activity in the prevention and treatment of atherosclerotic cardiovascular disease: A statement from the council on clinical cardiology (Subcommittee on Exercise, Rehabilitation, and Prevention) and the Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity). ***Circulation.*** 2003;107(24):3109-3116.
4. Hu G, Lakka TA, Kilpelainen TO, et al. Epidemiological studies of exercise in diabetes prevention. ***Appl Physiol Nutr Metab.*** 2007;32(3):583-595.
5. Cornelissen VA, Fagard RH, Coeckelberghs E, et al. Impact of resistance training on blood pressure and other cardiovascular risk factors: A meta-analysis of randomized, controlled trials. ***Hypertension.*** 2011;58(5):950-958.
6. Escalante Y, Saavedra JM, Garcia-Hermoso A, et al. Improvement of the lipid profile with exercise in obese children: A systematic review. ***Prev Med.*** 2012;54(5):293-301.
7. Kasapis C, Thompson PD. The effects of physical activity on serum C-reactive protein and inflammatory markers: A systematic review. ***J Am Coll Cardiol.*** 2005;45(10):1563-1569.
8. Green DJ, Walsh JH, Maiorana A, et al. Exercise-induced improvement in endothelial dysfunction is not mediated by changes in CV risk factors: Pooled analysis of diverse patient populations. ***Am J Physiol Heart Circ Physiol.*** 2003;285(6):H2679-H2687.
9. Boone T. ***ASEP’s Exercise Medicine Text for Exercise Physiologists.*** Bentham Science Publishers.
10. Murphy W. ***Healing the Generations: A History of Physical Therapy and the American Physical Therapy Association.*** Alexandria, VA: American Physical Therapy Association, 1995.
11. Scarpaci J. Guest editorial: Musing on professionalism. ***J Phys Ther Educ*.** 2007;21(3) :3-5.
12. Boone T. Exercise physiology, professionalism, and healthcare. ***PEPonline.*** 2013;16(6): 1-16.
13. Boone T. A new healthcare profession: Exercise physiology. ***PEPonline.*** 2015;18(3):1-12.
14. Wagner DR. Exercise physiologists in the United States: A 2012 national survey. ***PEPonline.*** 2014;17(5):1-10.
15. ***United States Department of Labor.*** Bureau of Labor Statistics. Standard Occupational Classification for Exercise Physiologists. (Online) http://www.bls.gov/soc/2010/ soc2911 28.htm
16. ***U.S. Centers for Medicare & Medicaid Services.*** National Health Expenditures 2015 Highlights. (Online). https://www.cms.gov/Research-Statistics-Data-and-Systems/Statisti cs-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf
17. Bergquist SH. Personalized medicine may do more to treat rather than prevent chronic disease. ***Salon.*** (Online). http://www.salon.com/2017/02/21/personalized-medicine-may-do-more-to-treat-rather-than-prevent-chronic-diseases\_partner/
18. Cheema B, Robergs R, Askew C. Exercise physiologists emerge as allied healthcare professionals in the era of non-communicable disease pandemics: A report from Australia, 2006-2012. ***Sports Med.*** 2014;44(7):869-877.
19. ***American Society of Exercise Physiologists.*** Code of Ethics. (Online). https://www. asep.org/index.php/organization/code-ethics/

The opinions expressed in **JEPonline** are those of the authors and are not attributable to **JEPonline**, the editorial staff or the ASEP organization.