

Professionalization of Exercise Physiology^{online}

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The Neglected Students of the Exercise “Applied” Sciences

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“The ideas and visions we now produce could be the butterflies of the [near future]. It is up to each of us to flap our wings – and to make use of the chaos of our times to launch our bifurcating societies along the humanistic path.”

-- E. Laszlo [1]

Just about every academic exercise physiologist is said to be short of time, especially those pinched between doing teaching and research. In truth, even a cursory survey of the state of academia shows that college teachers have enough time to do what they think is important. They have more time to think and play with ideas than the non-PhD exercise physiologists who are anxious about their future. College students are the first in the history of college graduates with such high college debt. The financial responsibilities of getting an education are big, pervasive, and troubling. Students need better counseling from their teachers and advisors. College teachers must stop neglecting their students and the serious problems they face as students of the exercise “applied” sciences. Students are not getting the help necessary to keep them from financial failure driven by a confusing blur of tuition loans.

In neglecting our students we neglect the profession of exercise physiology.

The Motivation to Write

I am writing this piece after reviewing what seems to be an almost endless number of research abstracts presented at the 2012 Southeast Chapter of the *American College of*

Sports Medicine (http://www.seacsm.org/2012_SEACSM_program.pdf). The problem is not with research per se. Everybody understands why research is important, but so is the topic of professionalism, professional development, and career opportunities. Academic exercise physiologists must get serious about professionalism, and they must get serious about laying the groundwork for real career opportunities for their students. Yet, from 100s of presentations and abstracts by predominately college teachers and some students, not one person talked about professionalism in exercise physiology.

If Ralph Waldo Emerson is right, “Life consists of what a man is thinking about all day...” then, academic exercise physiologists are not thinking about exercise physiology as a profession. Instead of harnessing new ideas and evolving along with the other healthcare professionals, academic exercise physiologists act as though research is the only thing that is important. This is very disappointing. Those who embrace professionalism as a lifestyle know the relationship between their sense of who they are and what they are thinking. They know that to change from physical education to kinesiology to exercise science to exercise physiology, they must change their thinking. It is pastime to stop performing today based on yesterday’s rhetoric. What college teachers think today will determine what exercise physiology is tomorrow.

So, once again, I shake my head in recognition of the lost opportunities and the disappointing ways that academic exercise physiologists continue to dance with time. While they have a rich history of research, recognition, and promotion opportunities, their recent college graduates can be found completing another application for a different academic major for even a higher tuition debt. Students cannot win until their professors get the message and importance of “profession-specific” thinking. John C. Maxwell [2] said it best. “If you are willing to change your thinking, you can change your feelings. If you change your feelings, you can change your actions. And changing you actions – based on good thinking – can change your life.” My point is this: Thousands of exercise “applied” science students want to change their lives for the better. To think backwards in terms of Maxwell’s comment, that means the academic exercise physiologists must start changing their actions with good thinking. How, by

A man is literally what he thinks...

-- James Allen

feeling (living) the disappointment their students experience months and years after graduation. That way the college teachers can become a willing partner in the change process.

Why the ASEP Organization?

The growing impact and visible effects of continuing unchanged is the primary reason the *American Society of Exercise Physiologists* was founded in 1997. It is the path of new actions, new thinking, and new opportunities where students of exercise physiology and the exercise “applied” sciences can graduate and locate credible careers. The opportunities are driven not by greed but rather by a realistic competitive edge that members of other healthcare professions understand. Increasingly, physical therapists get that the increasingly over-burdened and fragile states of mind and body can be healed with a properly designed exercise prescription. They understand the power of exercise to heal, and they get that this is why physical therapists, occupational therapists, nurses, and other recognized healthcare professionals support their own profession-specific organizations. Medical doctors, lawyers, and others who understand the difference between an occupation and a profession get this point, too.

Hence, it can't be healthy or safe for a client who searches the Internet for an exercise physiologist to find out later (perhaps, after an injury) that the person isn't an exercise physiologist. It is likely that the so-called exercise physiologist has an

A man's mind may be likened to a garden, which may be intelligently cultivated or allowed to run wild...

-- James Allen

undergraduate degree in exercise science or movement sciences. While many educators would have us believe that it is okay for students to earn a degree in exercise science and later call themselves exercise physiologists, it is wrong. It is

delusional behavior and reason enough for college teachers to learn how to think well if they are going to help their students achieve their dreams and reach their potential. The public doesn't need more unqualified fitness instructors and personal trainers with weekend warrior certifications.

In *As a Man Thinketh*, James Allen [3], a British philosophical writer known for his inspirational books and poetry wrote, “Good thoughts and actions can never produce bad results; bad thoughts and actions can never produce good results.” Hence, the reason why exercise physiologists are dragging their feet on this issue is without question because they aren’t thinking good thoughts and actions. I can’t help but feel that it is a combination of being too comfortable with yesterday’s thinking, the failure to stop and consider the seriousness of the problem, and the failure to think like a healthcare professional. The students (who are victims of the failed sports medicine rhetoric) cannot help but feel that everything is fine (especially while in school). Then, moments after graduating and finding themselves on the dawn of a new period of surviving, they stop in their tracks frozen by the financial squeeze of impending loans and other bills that must be paid. I have witnessed the emotional breakdown along with its supplemental prayers and/or meditations on how their faith (and family) will pull them through.

As such, for most graduates, a college education means finding a great job and making it financially. This is not the case with exercise physiology look-alike students, which is a serious academic problem. The antidote to this problem begins with exercise

The heart of the entrepreneurial pillar is “small is beautiful.”

-- Thomas J. Peters and Robert H. Waterman, Jr.

physiologists who understand the importance of thinking about professionalism in exercise physiology rather than starting another research project. Unlike the past way of thinking, the smart thing to do is to start thinking as a healthcare professional thinks. Oddly enough, it begins with thinking like other healthcare professionals think. For certain, as Albert Einstein observed, “The problems we face today cannot be solved on the same level of thinking we were at when we created them.” The world is different today than it was in the 60s and 70s. The good news is thinking right about exercise physiology can make a difference. It may also begin with whispering a prayer, “God be with us as we start today to work on behalf of our students and their future as healthcare professionals.”

Exercise Physiologists as Change Agents

The key point to recognize is that it means moving away from the sports medicine pattern of association. In short, it means thinking like an exercise physiologist, growing as an exercise physiologist, and learning how to think as a healthcare professional. Unfortunately, the professors of the exercise “applied” sciences are not taking the time to think much less read this article or listen to the ASEP voice of change. They aren’t likely to see the need to work on themselves. After all, as Novelist Leo Tolstoy said, “Everyone thinks of changing the world, but no one thinks of changing himself.” Many college teachers will retire without realizing what part they could have played in the professionalization of exercise physiology. They may have suspected that something was wrong or that circumstances should have been different for their students. Unless they see the problem or take time to invest in the concerns of others, they are not likely to take responsibility to change how they think.

Thankfully, there are individuals who think well and who understand the importance of professionalism in exercise physiology. Mr. Shane Paulson, the ASEP President, who is a Board Certified Exercise Physiologist and CEO of PhysioLogic

*The wise does at once what
the fool does at last.*

*-- Baltasar Gracian
(1601-1658)*

Human Performance Systems [4], believes being Board Certified is both evolutionarily and critical to financial stability. By monitoring the process of development and maintenance of exercise physiologists, the emergence of a new healthcare professional with the expertise in “exercise as medicine” will capture the world’s attention in unprecedented ways. Choosing to think this way requires engaging in the process of professionalization of exercise physiology. Maybe, more than other exercise physiologist, his beliefs have helped to give shape, as Laszlo [5] said, “...to this sacred dance of being and becoming.”

In other words, today more than ever before, Shane Paulson would say, “Every college graduate who wants to be an exercise physiologist must first earn an academic degree in exercise physiology and, then, sit for the ASEP Board Certification. It is the only way to break from the grip of sports medicine that keeps exercise physiologists from converging and integrating as members of the exercise physiology profession.” I

can still see the determination in his face, and his identity as an exercise physiologist. Early on he was willing to put in the effort to be successful as an entrepreneur and has the faith to believe that it is possible to succeed. Stated somewhat differently, perhaps, he believes that the new ASEP perspective can help students to stop drifting on the currents of past thinking. Now, they can begin to think, learn, and plan in terms of sustainable career options in healthcare.

Dr. Frank Wyatt of Midwestern State University in Texas would agree with the questions: Why have we waited so long to listen to the voice of change? Why aren't we allowing ourselves the opportunity to explore our future in healthcare and learn from the chaos of transformation that gives way to new possibilities? Why do we strain so hard to hear the non-exercise physiologist and yet, fail to understand their role in destabilizing the efforts of the ASEP perspective? Why can't we learn to listen to our students? We need answers to these questions but, equally important, we need exercise physiologists who are willing to believe that they can succeed beyond the reach of sports medicine. As Nelson Boswell said, "The first and most important step toward success is the expectation that we can succeed."

Clearly, we "the people" have learned and adapted to all kinds of things, whether it is living on the North Pole or under the sea. It is time to learn certain basic capacities, to develop and practice certain thinking, and manifest the willingness to work on behalf of the students of the exercise "applied" sciences.

Chivalry is knowing what to do in a given situation and then having the courage to act without regard to the outcome.

-- Rex Page

It simply is "resistance without a cause" to intentionally keep on turning a blind eye to the students, saying in a reflex fashion: Your degree will help you to get into graduate school? You can hear the faculty members saying to themselves, "Go away. Leave me to myself. I need time to edit my grant so I can get funding." The teachers haven't changed their minds at all. They are still exactly where they were decades ago. It's not okay, and they must be held accountable. Far too many students never reach their target. That is why the teachers must change their thinking. Otherwise, what luck

for members of other healthcare professions that exercise physiologists do not think, right!

Fortunately for members of the ASEP organization, Dr. Wyatt understands the importance of research, but he also understands that exercise physiologists should graduate from an accredited exercise physiology academic degree. This isn't a small victory in the evolutionary appreciation of "why parents send their children to college," but one that we cannot forget since it is also in the spirit of responsible seeking of a credible partnership with society. Those who develop the process of good thinking realize they are in charge, regardless of the challenges. The responsibility of the academic exercise physiologists is to embrace Dr. Wyatt's example and allow for new thinking to drive the change process. This challenge is real. To ignore it is to continue messing up for decades. To accept it is to do what is necessary to clarify and deal with the ambiguity and uncertainty of change.

It is okay to give shape to our thoughts, to think differently from our colleagues, and to write about professionalism and exercise physiology. It is okay to believe in the certainty of coping with uncertainty, regardless of the emphasis on past thinking. Becoming the leaders we must be in our field is not a quest of foolish arrogance as some might believe. It is not about berating others or non-exercise physiology

Step out in faith.

-- *Johann Sebastian Bach*

(1685-1750)

organizations. Sports medicine has its place in society, but it is not exercise physiology. Exercise science is a failed academic major. It doesn't work. It never did. For better or for worse, find people like Shane Paulson and Frank Wyatt. Ask them what they think. They know when an idea is good or bad. They will tell you why it is important that exercise physiologists must start thinking and support their own professional organization. They will tell you why exercise physiologists must hitch their wagon to a reliable ASEP compass for the future. The skeptic may disagree, but the truth is ASEP is "the difference that makes the difference" [5].

Just as most people do not worry about their mind-body health until they have lost it, academic exercise physiologists and many non-doctorate exercise physiologists feel

that everything is just fine. They don't have the slightest hint that exercise physiology is little more than personal training in the eyes of sports medicine and exercise science. Exercise physiologists throughout the United States would do well to listen to Dr. Lance Tarr of West Liberty University [6] and Dr. David Spierer of Long Island University [7]. Indeed, their work is making the difference in the lives of their college students. Not too long ago, they reached out to the ASEP organization to accredit their academic exercise physiology programs. While their work may not be obvious to the academic exercise physiology community, it is simply a matter of time that their work will be recognized as 21st century leaders in exercise physiology. The magnitude of their personal commitment will be recognized for decades to come. Their professional beliefs and energy give hope to the students of the respective academic institutions. The students of West Liberty University and Long Island University understand that they are graduating as "exercise physiologists."

Academic Integrity

When graduating from an academic institution, it is never a small thing. Finding a job and paying bills are universal, and yet it does not have to be exhaustingly disappointing. It can be life at its best, especially when academic institutions are ethically grounded to do the right thing for the right reason. The integrity of the academic degree must become a counter-revolution to the professors' comfort in doing research at the expense of abandoning students and their future. Careful attention must be given to updating the exercise "applied" science degrees [8] to exercise physiology. If exercise physiologists do not make the conversion in a timely fashion, then, it is true that "We have met the enemy and it is us." No one achieves greatness by failing to focus on a clear target, taking into account academic and professional priorities, and defining reality.

There is a true glory and a true honor; the glory of duty done – the honor of the integrity of principle.

*-- Robert E. Lee
(1807-1870)*

The chief responsibility of the professor is to marshal resources and personnel with the same passion for change. This means supporting the ASEP initiatives,

particularly the exercise physiologists' code of ethics, accreditation, board certification, and standards of professional practice [9]. This is what Dr. Paula Papanek [10] has done with the conversion of the Marquette University exercise science program to an exercise physiology degree. Failure is not an option for Dr. Papanek. Today, the Marquette exercise physiology degree is an excellent example of change that involved getting close to the students' problems to do something about them. There is nothing like taking the time to correct the worst-case scenario. Such thinking is strategic, and it is all about being realistic. It is doing what has to be done today so that the future of the students will be less uncertain. Dr. Papanek's decision to seek accreditation was directly related to her purpose to intelligently upgrade the degree program. In agreement, James Allen [11] said, "Until thought is linked with purpose there is no intelligent accomplishment."

Theoretically, just as the continued existence of every exercise physiology "look alike" degree program diminishes the work of the ASEP leaders – it is a central tenet of the ASEP leadership that professional development requires the celebration and

*Tis strange but true; for truth
is always strange – stranger
than fiction.*

-- Lord Byron
(1788-1824)

nurturing of the "actual" degree title. Despite the well-known work of other healthcare professionals, not all exercise physiologists get this point. But, without question, "title" does matter. Nothing so concentrates the mind of the would-be physical therapy student, except the realization that he/she has been accepted into a

physical therapy program. Notice that the student applied to a "physical therapy" program – not to a program by some title other than physical therapy. Simple as this thinking is, it appears that the professor of exercise physiology with a deaf ear isn't interested in correcting the 40 or more undergraduate degree titles that are not exercise physiology (and yet, students are led to believe they are exercise physiologists). After all, a profession is only as strong as its members and the quality of their thinking.

What is Exercise Physiology?

The bottom line is this: it is pastime to deal with the two distinct points of view as to “what is exercise physiology.” The traditional view is that exercise physiology is the “...identification of acute and chronic adaptations to regular exercise.” Imagine trying to build a healthcare profession around that definition. It would be a waste of time. That is exactly why the ASEP leaders created the first-ever professional definition of exercise physiology. They believe that anything is possible when you fully embrace, engage, and commit to possibility thinking. Yes, anything is possible if you believe in yourself and go to work to make it happen. It is as simple as Henry Ford said, “If you believe you can or can’t, you are right.” The ASEP leaders believe that their definition of exercise physiology is driven by the right mindset. It is big thinking that refuses to accept the status quo. They refuse to believe that sports medicine has the right to exercise physiology, even if it is going against popular thinking.

“Exercise Physiology is the identification of physiological mechanisms underlying physical activity, the comprehensive delivery of treatment services concerned with the analysis, improvement, and maintenance of health and fitness, rehabilitation of heart disease and other diseases and/or disabilities, and the professional guidance and counsel of athletes and others interested in athletics, sports training, and human adaptability to acute and chronic exercise.”

The ramifications of the ASEP definition are staggering. Exercise physiologists can change from just being “academic-types” to healthcare professionals. But, this thinking goes against popular thinking. After all, popular thinking is always the easier path. If

Nonsense is nonsense whether it rhymes or not, just as bad half-pennies are good for nothing whether they jingle or lie quiet.

-- Charles H. Spurgeon
(1834-1892)

most exercise physiology faculty members accept that exercise science is exercise physiology, they must be right! No. Popular thinking does not make it right. It was popular thinking that said athletes must cheat (by taking steroids) to win, yet we know that such thinking is wrong. It is popular thinking

that personal training is a profession, but of course it is essentially a physical education major without the activity courses. It is popular thinking that an exercise science major can simply adopt the title exercise physiologist, yet it is not true. It is popular thinking that an exercise physiologist can refer to him- or herself as a physiologist, yet it makes no sense to do so. Often, it is less than obvious that popular thinking is driven by the safety and the security in not taking up unpopular thinking. Hence, before simply following the old path of sports medicine for fear of rejection, try thinking as an ASEP member would (however unpopular).

Supporting and Promoting the Truth

It is as Steve Jungbauer [12], the 2004 ASEP President said, “It is never too late to begin something worth doing.” Exercise physiologists are in a predicament, a mess, a situation of the worse kind. As a consequence of the shift from physical education to kinesiology to exercise science to be rendered to mistaken ideas of dozens of degree titles and, ultimately, the point of diminishing returns, it is pastime to try a new way of thinking. This is the truth: Exercise physiologists who teach exercise physiology in an exercise science department are victims of the failed physical education/sports medicine rhetoric. With respect to matters of professional credibility, the exercise physiologist’s primary obligation is to support and promote the truth about the profession of exercise physiology rather than to engage in personal advancement at the expense of their students. When properly understood, the essential ideas that comprise professional development represent the future knowledge, values, and creativity of exercise physiologists (regardless of being uncomfortable).

Understandably, then, as Confucius noted: “The essence of knowledge is, once you’ve got it, apply it.” It is hard for students who were convinced of finding life and meaning in a non-exercise physiology degree to end up on the short end of the stick. Yet, unfortunately, the world is full of misinformation. The right words early on would have helped so much with facing humanity after college. This is a good point to remind the reader that ASEP exists on behalf of the profession of exercise

Genuine simplicity of heart is a healing and cementing principle.

*-- Edmund Burke
(1729-1797)*

physiology. Remember: the ASEP definition of exercise physiology is a healthcare definition based on the scientific and professional ideals. It is not only the profession that is poised to write exercise prescriptions, but it is *the* profession of exercise medicine.

This different way of looking at the reality of exercise physiology may very well be overwhelming to many academics. It may also be humbling, even a bit unsettling at first. The fact that professions build their worlds upon a specific language means that exercise physiologists can understand both the truth and responsibility of prescribing exercise safely. Without the ASEP definition [13] of exercise physiology we would continue to grope helplessly towards the sports medicine misinformation. However, by emphasizing the ASEP perspective [14], we do not deny that exercise physiologists within sports medicine helped to place exercise physiology on the academic map through their research. However, without question, there is something central to every evolving profession, and it is the profession-specific organization. It can be (and must be) strongly argued that the cost of the students' education must match the likelihood of financial success after college.

The world needs to realize that the decades of failure of the academic exercise physiologists to boldly confront the administration and the faculty of kinesiology and exercise science departments has allowed for the erosion of credible healthcare jobs for their students. More than ever before, it is painfully true that there is a problem with failing to correct the exercise "applied" sciences mentality. At this point, there cannot be any question that a college degree has many levels of meaning. Reality resides in the idea that aside from getting a college degree, the degree itself must make it possible to locate a credible job with financial stability and healthcare benefits. When it does, the degree solves the problem of young adults who are forced to live at home rather than becoming independent, responsible adults.

To be wise, one must take time to deliberate. But when the time for action has arrived, one must stop deliberating and boldly act.

*-- Napoleon Bonaparte
(1769-1821)*

What path, then, is necessary to get past the tomfoolery of where we are today? We have gone down the path of the exercise

“applied” sciences to find ourselves solving nothing. Exercise science and similar degree programs exist only to feed primarily the physical therapy profession. The leaders of physical therapy, occupational therapy, and athletic training understand where the “promised land” is located. They get that their students cannot enter into the work force without a profession-specific degree. Yet, academic exercise physiologists continue to lead their students down dead end paths. They are not asking the most basic question of all. What does it mean to get a college degree? Exercise physiologists have done all of this research and they are deep into the science of movement, health, and athletics, but what they have not dealt with is the simple questions: “Who are we?” “What does it mean to live and work as an exercise physiologist?”

The New Millennium and Exercise Physiology

As I reflect on the needs of the profession in this new millennium, it is obvious that academic exercise physiologists should look at the big picture of how to nurture exercise physiology. This means that they must start seeing exercise physiology from the exercise physiologist’s perspective and not from the sports medicine view. This means stepping back as they have never done before to document what has happened and what needs changing. Without question, our research is great, and it will continue to influence the world in matters of health and athletics. But, what we need today is

If you tell the truth you don’t have to remember anything.

-- Mark Twain
(1835-1910)

hard work spent on matters of professionalism and developing collaborative support groups within the profession. The lack of knowledge about “what is exercise physiology” in the community is our fault.

Too many exercise physiologists are uninformed. We must start supporting each other, investing in those things that help our students, particularly as it relates to

efforts that inform the healthcare community about our professional services and, perhaps, most critical of all, we must start using the science we have generated.

As an exercise physiologist, academic or otherwise, have you taken the time to read the ASEP Standards of Professional Practice? Do you understand that it defines the “practice” of exercise physiologists and, therefore, the impact of profession of

exercise physiology on health, fitness, and athletics? It is understood that professional competence is guided by “professional standards” that are linked to a profession’s body of knowledge and skills, which are also linked to serving the needs of the public. While this idea isn’t widely accepted among academic exercise physiologists, the ASEP’s emphasis on developing the profession of exercise physiology is radically different from the notion of being a fitness instructor, exercise specialist, or a personal trainer.

The distinction I have in mind is both logical and supported by other professions with an interest in healthcare. Why this view has taken so long to evolve is an indication of the depth of the problem; one that has destroyed the self-esteem and self-confidence of countless young college-age adults. Simply stated, a college education should help a person feel valuable, important, secure, and confident, not worthless. No one should have faith in a college education (or a degree such as the exercise “applied” sciences, otherwise known as exercise science, kinesiology, sports science, human performance, human movement, and dozens of other similar titles) if they are not designed to match a credible career-specific job in the public. Spending \$30,000 to \$100,000 in tuition loans to find a job in Bob’s Gym as a fitness instructor or trainer cannot be considered a good idea.

There must be some evidence to the fact that exercise science, for example, will provide a credible career just as an accounting degree does or a nursing degree; otherwise students are just hoping that everything will be fine. The thing is if the students would just read the college catalogue they would learn that the degree is little more than a hopeful transition to graduate school. But, what if a student isn’t interested in graduate school and larger tuition loans, what then? Well, long story short, the student has just wasted time and money. You may say, can we not see something as valuable, important, and worthwhile without having to think about getting a job? My response to such a statement is “Get real or better yet...Okay, then, you can pay for my tuition loans, credit cards, apartment, car, and food.”

*Innocence prolonged ignores
experience; knowledge denied
becomes a stone in the head.*

-- Andrew Nelson Lytle
(1902-1995)

While this thinking is oblivious to many academic exercise physiologists, it is simply ignored by others to keep it on the back burner. If you were to ask them to reconsider their thinking, they would say: “Nothing needs fixing. Everything is just fine as it is.” The problem is that the expression “If it ain’t broke” is a false rationale. It is nothing more than an excuse not to do anything. It is a form of laziness or smugness. It is always important to “fix the problem,” but reality is such too many exercise physiologists look to justify their existence. Thus, in the end, if the academic exercise physiologists have no idea where they should be going, it is clear they will continue to find themselves doing the wrong things. That means that the academic mess that has been described will continue and so will the students’ problems.

There Is Hope!

There is always hope, especially when people start thinking. But if students and their parents expect or hope for a great job after college and yet, they aren’t worrying about it while in college, there is good reason to believe that “somebody” isn’t thinking. The problem can be tackled. It can be corrected, but to achieve professionalism in exercise physiology, academic exercise

The oppression of the people is a terrible sin; but the depression of the people is far worse.

-- G.K. Chesterton
(1874-1936)

physiologists must reprogram their brains to think as healthcare professionals and not just as researchers. The odds are high that eventually they will change their ways. It happened to me. When I accepted the Chair position at The College of St. Scholastica in 1993-94, I immediately understood the need to liberate myself from the faulty assumption that sports medicine owns exercise physiology. The irony is that it took 20 years of college teaching to reach that conclusion! Even then, after a paradigm shift gets underway, progress is often problematic and slow. Perceptions are fragile and unsubstantial when it comes to deciphering the meaning and expectations. It is always inherently easier to avoid new ideas.

A transformation in how we think is hard work full of uncertainty and frustration. Putting it all together isn’t easy. Many events occurring during the change are often

artfully camouflaged by unknown motivations and social behavioral defenses. To stay healthy, the mind initiates ways to find some way to resolve the differences and the waves of expectancy. What has always been obvious to the ASEP leaders is that our future as exercise physiologists lies in the direction of exercise physiology as a healthcare profession. It is a way of thinking that exercise physiologists have not engaged for fear of dealing with sports medicine's restrictive powers and influence. However, what brings together these new ideas and possibilities is the inner message and understanding that our minds are ready for change. It is our responsibility to bring forth what is within us to stay the course and to resist the imminent stress of failing. Understandably, there is always the problematic reality of thinking only what we want to think and hear only what we want to hear.

It is reasonable that the change process elicits periods of worry and the knowledge of messing up from time to time. The failure to think straight all the time is also reasonable. The net effect of planting and growing new ideas at times is even tragic (such as when friends go their different ways). The anxiety about a diminished relationship is compounded by the sheer frustration of not being able to get everyone see the big picture [15]. This inbuilding of purpose and coming to terms with anxieties, frustrations, and uncomfortable feelings are all part of the educational process and

To be genuinely wise, one must make haste slowly.

*-- Benjamin Franklin
(1706-1790)*

challenge that is largely a reflection of our personal and professional needs. It is akin to a new inner language that is important in keeping new ideas adaptive as we deal with the creation process. As it turns out, that is why it is okay to encourage exercise physiologists to think for themselves, especially if they are to effectively counter inertia and conformity. It acknowledges the need for the ASEP leaders to promote multifunctional problem solving and implementation efforts. Members must be themselves and ask questions, however difficult if they are to find the strength to overcome the resistance to what their colleagues are not ready to do.

The good news that drives the ASEP change process is the feeling that you are doing something to help students, providing for their needs and anticipating their wants. Deep down inside, you know it is the right thing. Not only is it entrepreneurial in its

approach and thinking, the autonomy is also important for all Board Certified exercise physiologists. It is as if the collective unconscious of the ASEP leaders and the EPCs are working to champion the powers of persistence and courage to stay the course. They understand that persistence is all powerful and that there will be challenges, however innovative they are, and they understand that staying the course is a “home-run” mentality. The passion for professionalism strikes at the heart of their work regardless of the chaos and the failures. After all, it is hardly possible to create a new profession unless exercise physiologists are willing to accept mistakes and tolerate failures.

Have Faith and Trust the Process

Also, while it may seem strange to talk about, it is okay to be a small organization. Often times, smallness is requisite to efficiency and adaptability. The willingness to accept the change process is consistent with 1 Corinthians 14:40, “Let all things be done decently and in order.” This thinking is the equivalent of “What is faith?” Remember the New Testament story of the rich young ruler (Mk 10:17-22). The young ruler approached Jesus and asked what he could do to inherit eternal life. Among other things Jesus said, “Go, sell what you have, and give to the poor, and you will have treasure in heaven; and come, follow me.” Well, clearly, the idea of selling everything and following Jesus got the best of the young man.

To see what is right and not to do it is cowardice. It is never a question of who is right but what is right.

*-- John Buchan
(1875-1940)*

Yet, that is the one thing of great importance. Jesus was saying, “Trust me.”

In a similar way of thinking, should the academic exercise physiologists give up their connections to sports medicine? It would be the essence of turning away from their hard-earned

achievements and throwing themselves on the mercy of others. Clearly, many exercise physiologists cling to their past way of thinking, unable to think differently, if not, paralyzed with fear should they even try. The need for a new beginning is why the ASEP organization exists. Why not rethink what you are doing? Why not join ASEP?

Why not give every support possible to your students, and you will be part of the success that results from professionalism in exercise physiology.

For Board Certified exercise physiologists to survive in healthcare, they must see the entrepreneurial spirit and initiative as critical to building the profession and to growing as healthcare professionals. Nothing else will give us the edge we need. Another certification is not likely to do it. We either come together on this point or we will continue along the same path that is defined by the lack of an interest in what is important to exercise physiology. Even with the help of ASEP, students of exercise physiology (by association with the exercise “applied” sciences) are likely to find themselves in personal training (which is not sufficient to enjoy the standard of living that college graduates deserve). Also, why not ask the exercise physiologists who work in cardiac rehabilitation if they are given the same status, recognition, and pay as physical therapists and nurses?

They will tell you that the typical “exercise physiology” position is often made problematic with less than full time pay and healthcare benefits.

If only I knew then what I know now, I not have majored in exercise science. I can promise you that.

-- Bill Brock

Part of the problem is the huge mix of exercise “applied” degrees from which the students frequently refer to themselves as exercise physiologists. It is no wonder that the “established” healthcare professionals hold these degree programs in question. Licensure is not the answer, since it isn’t a prerequisite for entrepreneurship. Instead, there must be more academic emphasis placed on a “one-degree” major along with new and creative courses that teach innovative entrepreneurial ways to capturing “exercise as medicine.” This point was well supported by Dr. Gary F. Gordon who wrote in 2007, “As a profession, we are poised to lead the war against diseases caused by inactivity and mindless eating. We are primary vendors for health promotion and disease prevention. Our strengths are exercise, diet, and behavioral change. There are no professions currently on the horizon that can do this as well. Exercise physiology is in a position to empower the 78 million baby boomers to pursue responsible aging. We are also the ones who should be addressing the childhood obesity epidemic.”

This means instead of working in a job that does not allow the exercise physiologist to earn the money to live the life of a college graduate with the financial means to pay the tuition loans and live comfortably as well, exercise physiologists should have the same career opportunities as the following college graduates' annual "average" pay [16]: software engineer (\$80,500), financial advisor (\$122,500), human resources manager (\$73,500), physician assistant (\$75,000), market research analyst (\$82,500), and computer/IT analyst (\$83,500). But, instead, as a personal trainer (\$42,204), group fitness instructor (\$31,963), and fitness director (\$41,921), the average annual pay is significantly lower [17]. Perhaps, the most obvious statement of disappointment is the finding by ACE that "...69% of the fitness professionals are paid hourly."

Conversely, the strength of the Board Certified exercise physiologists is that their salaries are higher. Those working for one to 4 years earn \$60,000 per year, while 10-year exercise physiologists may earn \$70,000 or more [18]. Operating from within their own healthcare businesses [19], this means measuring, recording, and applying individualized exercise prescriptions driven by client-specific physiological outcomes that can be used to describe and educate the client about health, fitness, and athletic performance. It means that exercise physiologists will become healthcare entrepreneurs (not trainers), both in business and exercise physiology.

Otherwise, forget about the scientific training and hands-on laboratory skills. All the studying in the world will not correct the past problems if exercise physiologists do not use what they are taught.

Some people look at the ASEP. Some join it, and some lead it.

Exercise as Medicine is Power

The exercise physiologist's "prescription" is a physiological statement that sets out the particular knowledge and skills required to exercise safely. It has more to do with measurable criteria that guide the appropriateness of the exercise sessions, responses, and actions than rolling around on a big blue ball. The prescription criteria may include exercise safety, heart rate intensity, exercise economy, lifestyle management, and even spiritual counseling. The act of establishing a safe and educationally sound direction

for regular exercise is the act of prescribing exactly why and how to exercise safely to realize the psycho-physiological benefits of regular exercise. This focus on executing a well-planned and deliberately designed exercise program is part of the exercise physiologist's oral and written directives. Thus, when viewed in this manner, the exercise prescription takes on a legal importance. That is why the instructions, preparations, and provisions for exercise must be defined by Board Certified exercise physiologists who are responsible to a code of ethics [20] and standards of practice.

Literally speaking, the prescription is the "recipe for success" when an exercise physiologist develops it. Contrary to popular belief, therefore, it has nothing directly to do with the prescription that a medical doctor writes. Instead, it is the professional act of directing the client's exercise to ensure that it is safe and beneficial by using an individualized heart rate range, explaining and acknowledging indications and/or contraindications for exercising safely, and following up with regards to cardiovascular, musculoskeletal, and mental and/or emotional benefits and/or concerns. As an example, a brief overview of an "exercise-only" prescription for a client who is pregnant might constitute the following criteria and directives.

Evaluate the client's cardiovascular capacity using a metabolic analyzer and related hemodynamic equipment. Determine the client's exercise history, including personal and family risk factors for disease and disability. Develop an individualized

Nobody cares what you know until they know that you care.

-- *Author Unknown*

low-impact/low-intensity exercise prescription defined by heart rate intensity, exercise frequency (usually, 3 times per week on non-consecutive days) and duration (20 to 30 minutes/day), such as 40 to 50% of VO_2 max.

Identify the mode of exercise such as walking, cycling, swimming, and stair-climbing. Follow-up consultations with the client for further cardiovascular and behavior lifestyle evaluations, mental health assessments, along with discussions and advice to prompt increased adherence. Where deemed necessary, the client is supervised and instructed in specific exercises, including muscle strength, endurance, and range of motion exercises.

Today, as an academic exercise physiologist, I wonder why exercise physiologists are not doing more to protect their investment in EXERCISE since it is critical to who

they are and what they do. Perhaps, more so than other healthcare professions, exercise physiologists should understand the power in exercise [21]. It is a potent stimulant in caring for the body and mind. After all, we are not a body without a head. When the body gets into trouble from dysfunction or disease, the associated anxiety and stress can and often does complicate daily living. Exercise is a potent physiologic agent and an effective nonpharmacologic intervention when administered by exercise physiologists.

The basis of good leadership is not only character and selfless service. It is also about conveying a strong understanding of the future; a vision that clarifies their healthcare direction and purpose is imperative. It encourages trust and confidence in the members of the organization by addressing and directing the profession. While research is important, the research tail has been wagging the dog far too long. There is too much emphasis on research and publishing scientific papers and little to no emphasis on the professionalization of exercise physiology. This must change. We must start thinking as healthcare professionals if we are to fulfill our mandate.

I knew that my teacher cared, so I did too.

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