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Commentary

A PERSPECTIVE ON EXERCISE PRESCRIPTION

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ABSTRACT

HERB WEBER A Perspective On Exercise Prescription JEPonline. 2001;4(2):1-5. This commentary raises concerns over the use of the term "exercise prescription". Explanation will be given for why a "prescription" of exercise is inappropriate on professional and clinical grounds, and other terms are introduced and recommended for use. In addition, comment is given on the professional status of exercise physiology/science, with reference to numerous organizations that serve the discipline and related professions. Final recommendations are based on what are clear needs of any profession; to ensure adequate credentials by academic program standards, certification, licensure, and professional accountability.

Key Words: Professionalism, Standards, Certification, Licensure

INTRODUCTION

For most of us, the meaning of a "prescription" is clear when our health is at stake. Adults usually seek, expect, and receive written directives from physicians for controlled pharmaceutical agents or services when their clinical assessments and diagnoses indicate that palliative, curative, rehabilitative, and/or protective outcomes are likely. Consumer confidence that these "traditional" prescriptions are efficacious, credible, and safe is grounded in the near certainty that competent licensed physicians, pharmacists, and other health care personnel are initiating and implementing appropriate therapies based on approved clinical trials.

Whether intended or not, the introduction of "Exercise Prescription" by the American College of Sports Medicine (ACSM) 25 years ago is likely perceived by today's lay public as consonant with that of a traditional prescription if for no other reason than both kinds of prescriptions have that ring of authenticity germane to ones health. The fact that the former employs exercise rather than drugs or other modalities to reach desired outcomes does not diminish its clinical rendering by consumers. By virtue of how we generically perceive the term "prescription", it is reasonable to assume that the public accepts and has as much confidence in the efficacy, safety, and credibility of exercise prescriptions as it does in traditional prescriptions.

It is the purpose of this commentary to reason that this confidence may be misplaced and that, in fact, the dissimilarities between traditional prescriptions and exercise prescriptions are so great that prescribed exercise for many recipients may very well lack safety, efficacy and/or credibility and could be counterproductive. Further, it is argued that “exercise prescription” sends the wrong message to a majority of adults who should be including appropriate exercise as part of their daily lives.

EXERCISE PRESCRIPTION EFFICACY AND SAFETY

Effective and safe exercise prescriptions depend on the training, experience, and ability of the provider to specify appropriate modes, intensities, durations, frequencies, precautions, and progressions of exercise and to assure their judicious implementation by recipients. There is a broad range of “competency” of personnel who are writing exercise prescriptions for apparently healthy adults as well as for low risk, higher risk, and diseased individuals. For example, personnel could be well-trained certified ACSM *Exercise Specialists* and *Program Directors* and recently credentialed (2000) American Society of Exercise Physiologists (ASEP) *Certified Exercise Physiologists*, to poorly trained unregulated self-proclaimed “exercise physiologists” or “personal trainers” with less than adequate credentials. Goals of the recently (1997) formed ASEP include the development of acceptable standards for the profession of exercise physiology, nationwide accreditation for undergraduate exercise physiology programs, and a national exam to endorse *Certified Exercise Physiologists*. ACSM and ASEP are not alone in credentialing skilled professionals. The American Physical Therapy Association, for example, beyond accrediting their academic programs that include entry-level competencies for fitness and cardiopulmonary rehabilitation, provide for a rigorous advanced specialty in the cardiopulmonary area. Nonetheless, there are a host of other widely available certifications that lack academic rigor. It would be naïve of us to believe, in the absence of legally mandated safeguards, that some self-serving or less competent exercise prescribers are not ill advising the public about physical activity. Hopefully, few of these individuals are responsible for higher risk patients, but we must be mindful of the fact that there are practitioners, in and out of the field of exercise science, who have not elected to obtain ACSM, ASEP, or any other certification to prescribe exercise. Thus, the potential for ineffective and/or unsafe exercise prescriptions is very real, and to whatever extent it exists, unacceptable.

THE PERCEPTION OF EXERCISE PRESCRIPTION

Although exercise prescription is a desirable and necessary therapeutic tool for patients whose well being and safety would be jeopardized in its absence, for diseased individuals with low risk and for apparently healthy adults, it may very well be unnecessary for efficacy or safety and disadvantageous because of its symbolism. The effectiveness of exercise prescriptions depends, in part, on the message its advocates send vis-à-vis traditional prescriptions. On the one hand, prescribed drugs and clinical modalities are not ends unto themselves but are means to ends, preferably short term, to cure, rehabilitate, and/or control health problems. They are not innately useful. Nor are they meant to be habit forming and self-fulfilling. Adults typically do not value unnecessary prescriptions. They prefer to be and remain healthy without them and avoid the risk of their debilitating side effects.

On the other hand, exercise is an end unto itself. It is meant to be practiced long-term and is innately useful. Exercise should be habit forming and is self-fulfilling. And we do value the very beneficial side effects of exercise. Thus, the imagery of a prescription in its traditional or clinical sense is diametrically opposed to its perception as a directive for exercise. To continue prescribing exercise for the apparently healthy and low risk adult population is to perpetuate a conflict of “having to” rather than “wanting to” engage in physical activity and can only lead to less effective compliance. Furthermore, “prescriptions” that should promote consumer confidence have a greater likelihood of having that confidence misplaced because of the current laxity of standards and accountability so pervasive in the field of exercise physiology.

EXERCISE PRESCRIPTION ALTERNATIVES

Rather than prescribing exercise for the apparently healthy adult and low risk patient we should revert to language that has historically served us well. Terms such as *exercise guidelines, principles, programs, procedures, strategies, and plans*, are examples of how we can effectively communicate to the consumer without the intimidation and/or clinical overtones that “prescriptions” are likely to produce.

We must allow the exercise consumer to develop an appreciation of physical activity’s inherent worth and allow these activities to become their own messenger of value and satisfaction. We can help accomplish this by allocating more of our resources to educating and motivating rather than prescribing. We can employ strategies for monitoring exercise intensity without requiring periodic heart rate checks. We can suggest participation in physical activities without referring to MET charts. We can heighten sensitivities to physical stress without referencing Borg’s scale of perceived exertion. We can alert the exercising public to symptoms without angina or dyspnea numerical scales. We can provide instructions for exercise precautions and progressions that avoid prescriptive jargon. We can, in short, enable the exercise consumer to appreciate and value the physical activity experience without the clinical nuances. To the extent we can achieve these objectives while preserving quality and safety, we will encourage rather than deter physical activity participation and adherence for all adults.

THE CREDIBILITY GAP

If exercise consumers expect physicians who write traditional prescriptions to be qualified and licensed, might there not be the same expectation of exercise “prescribers” as well? And if there is such an expectation, might it not be misplaced, and if not appropriately addressed, misrepresented? After all, traditional prescriptions written by physicians and formulated by pharmacists evoke a sense of consumer confidence that their health is not being compromised. These licensed professionals are educated and trained in accredited institutions whose curriculums and standards are subject to and reviewed by State and/or Federal agencies.

Conversely, exercise prescribers, aside from physicians, physical therapists, and nurses, are not licensed, need not be college graduates, may practice without certification, and, with few exceptions, are not subject to State and/or Federal review for adhering to professional standards. Consequently, it is possible, for example, to have college students with minimal exercise physiology exposure in a related health field present themselves as exercise science professionals ready to dispense prescriptions. Further, for college baccalaureate and master degree candidates, there are no agreed upon universal minimal curriculum standards within the exercise science profession. Each institution of higher learning creates its own requirements for what constitutes a degree in exercise physiology or exercise science, subject to internal and state review. Thus, students emerge from a variety of exercise science programs with significantly different competencies and experiences. If successfully implemented, ASEP’s accreditation of undergraduate exercise physiology programs would be a major step toward assuring uniform acceptable standards in the profession of exercise physiology.

ACSM seeks to create acceptable standards for exercise “prescribers” by certifying *Exercise Specialists* and *Program Directors*. ASEP has the same objective by credentialing *Certified Exercise Physiologists*. Although many *Exercise Specialists* and *Program Directors* have distinguished themselves in clinical and proprietary settings, a critical review of current ACSM written and practical certification examinations will demonstrate their failure to adequately challenge ACSM’s own published “Knowledge, Skills, and Abilities” criteria. This results in a failure to keep pace with the increasing need for evaluating competencies that are required to advise and monitor more complex and higher risk patients. Thus, the quality and effectiveness of the exercise prescription process is compromised. Furthermore, although minimum requirements for ACSM *Exercise Specialist* certification include a baccalaureate degree in a “allied health field” and 600 hours of “practical experience” in a clinical exercise program, the “health field” may have very little to do with competencies

needed for the *Exercise Specialist* certification and “practical experience” can mean anything from simply observing with few responsibilities to active participation with significant accountability. Hopefully, ASEP’s professional expectations for recently *Certified Exercise Physiologists* will be realized, but it is now too early to evaluate their competencies in the field.

It remains to be seen whether or not ACSM’s recently adopted *Clinical Exercise Physiology Registry* eligibility requirements and examinations will adequately address the problem of credibility. It is highly unlikely that any existing Exercise Science Masters Degree program can even minimally prepare candidates to meet expectations of ACSM’s own *Clinical Exercise Physiology Registry* “Knowledge, Skills, and Abilities” criteria. Also, the *Registry*’s education eligibility requirements as compared to those of the *Exercise Specialist* certification are illogical and need to be revisited.

The lack of credibility inherent in the exercise prescriptive process is also typified by the failure of most programs to have physicians co-sign the prescription when it is employed for the purposes of treating or alleviating disease or illness. How many programs fail in this regard is unknown, but we must question whether their numbers seriously impair the integrity and legality of the exercise prescriptive process.

Finally, the absence of licensure, accountability, and lack of uniform standards for program and personnel evaluation allow for the proliferation and continuation of whatever ineffective and unsafe practices exist. To improve the credibility of the exercise “prescription” provider and product, these issues must be addressed.

CONCLUSION

Because of how most lay people interpret the term “prescription”, its use as an exercise directive implies a high degree of confidence that it is efficacious, credible, and safe. Unfortunately, this confidence is undermined by a lack of appropriate uniform academic standards, mandatory certification requirements, accountability, and/or legal safeguards within the field of exercise physiology. This results in the increasing probability that some exercise personnel are either misusing or abusing the practice of exercise prescription for patients who clearly require its explicitness. The clinical use of exercise prescription by the ill prepared, therefore, becomes pretentious at the very least and dangerous at its very worst.

In the absence of serious disease or injury, exercise should not be “prescribed”. The use of physical activity as a prescriptive tool should only be necessary in the presence of those diseases and injuries where the risks associated with safety, cure, rehabilitation, and/or palliation significantly outweigh the benefits. To express exercise as a prescriptive activity for healthy and low risk individuals is to stress its clinical nature at the expense of its intrinsic value. We should avoid unnecessary exercise “prescription” paradigms and concentrate more on educating and motivating these adults to be active without the clinical implications. Rather than prescribing *for* them we should be guiding, motivating, planning, programming, or strategizing *with* them. We should invest our time, energy, and resources into developing an exercise culture where daily physical activity is appreciated and practiced for its own enjoyment, satisfaction, and rewards. Only then will exercise compliance improve as adults become self-motivated rather than directed to become physically active.

For higher risk and complex patients truly in need of exercise “prescriptions”, we must assure that the health care personnel who are writing them are competent, current, and are acting on the behalf of physicians who are knowledgeable about the patient’s history and clinical status. To accomplish this, we must assure that appropriate standards exist and are maintained for credentialing ACSM *Exercise Specialists* and *Program Directors*, or ASEP *Certified Exercise Physiologists* and we must include ever-changing competencies for the increasingly complex patient now being enrolled in rehabilitation programs. ACSM needs to critically evaluate and modify its *Clinical Exercise Physiology Registry* program to assure its uniqueness from other certifications

and affirm that its practitioners truly represent the high standards implicit in its published “Knowledge, Skills, and Abilities” criteria. For those among us who now advocate licensure for exercise physiologists to improve credibility, respect, and income, we must be cognizant of the fact that doing so would put the cart in front of the horse. To be worthy of licensure, we must first become worthy as a profession.

Finally, we must create and implement enforceable evaluation processes that hold health care facilities, exercise prescription personnel, and physicians accountable for creating and maintaining appropriate standards of rehabilitation, palliation, prevention, and or cure.

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