

# **Are Wellness/Fitness Programs Benefiting Participants' Movement and Mobility in Daily Life?**

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Knowledge regarding the potential benefits of participation in fitness programs to individuals' quality of movement in daily living is limited. It is important to study this relationship and also consider the implications for professional preparation programs in kinesiology. A brief overview based on published reports and expert opinions focuses on current practices, identified needs, and future directions. Even though the number of fitness facilities and the variety of classes and services offered have increased substantially over the past decade, few field-based studies have been conducted. Applied scientists in our field have an excellent opportunity to initiate and collaborate in creative, multidisciplinary, translational research that can significantly extend our knowledge on how participation in fitness programs may enhance daily movement quality in healthy adults.

Even though several million Americans exercise in fitness centers and health clubs every day, researchers have given little thought to how these structured workouts in fitness facilities may or may not benefit a participant's movement and mobility in daily living. Among the kinesiology professoriate, our collective hunch undoubtedly would be that sensible exercise sessions as part of an ongoing total fitness program would be beneficial. But what is the evidence?

In terms of professional preparation, the topic of movement and mobility tasks in daily living is typically dealt with in coursework and practicums that focus on specific disabilities and diseases that limit motor control (e.g., adaptive physical education, athletic training, rehabilitation medicine, gerontology). However, few students who plan to work in the fitness industry as exercise specialists are being prepared to assess and/or counsel healthy clients who may have specific needs relative to diminishing capacity to perform routine physical activities of daily living.

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This paper is organized into four sections: (a) a description and context for the concept of “daily movement quality,” (b) an overview of wellness/fitness programs, (c) key points on trends and needs across such programs from published research and expert opinions, and (d) a set of resulting recommendations for research and professional preparation. All sections are considered relative to the implications for professionals in kinesiology.

### **Movement/Mobility in Daily Living**

The importance of movement and mobility in daily living often does not become evident until one’s ability to perform routine movements becomes impaired or begins to decline. The capacity and performance of everyday movement tasks can be conceptualized as a “daily movement quality” variable that spans a continuum from low quality to high quality. Perhaps the best example of daily movement quality is the ability to perform the activities of daily living (ADLs)—the physical movements related to personal care (e.g., bathing, dressing) and independent living (e.g., preparing meals, using a phone). In the clinical setting, the ADLs are typically assessed in elderly patients with declining physical capacities and in those younger patients with disabilities or diseases that impact motor control. The ability to perform ADLs is used as a practical measure of disability across many disorders.

Although limitation of physical activity is common in the old and very old, it is not uncommon among working-age adults. In the National Health Interview Survey, 6% of those 18 to 44 years of age, 13% of those 45 to 54, and 21% of those 55 to 64 reported limitation in everyday physical activity (Freid, Prager, MacKay, & Xia, 2003). Across the age groups, arthritis and other musculoskeletal conditions were the most frequently mentioned chronic conditions causing limitation of activity. When adjusting for differences in age, limitation of daily movement activity was about the same for men and women, and varied modestly with race/ethnicity (8% for Hispanic, 10% for White, 12% for Black). It is also important to note that the percentage of poor working-age adults reporting a limitation was three times that of adults with family incomes that were 200% or more of the poverty level.

### **Wellness/Fitness Programs**

Fitness programs refer to the combination of facilities and services provided in a multitude of different types of programs in a variety of settings. The majority of fitness programs are part of broader health promotion programs—typically known as wellness, lifestyle, or health management programs—that include services such as blood pressure screening, smoking cessation classes, nutritional counseling, and stress management training. The scope of this paper will be limited to the fitness and physical activity components of these programs for apparently healthy adults. The term adult is used to refer to persons over the age of 17, with younger adults being 18-30, middle-aged adults 30-60, and older adults over 60.

Fitness programs can be broadly categorized into two settings—the worksite or the community. Based on a 1999 National Worksite Health Promotion Survey, 46% of worksites (with 50 or more employees) offered employer-sponsored physical activity and fitness programs (Partnership for Prevention, 2001). Most are modest in facility size, the type and amount of equipment, and the number of classes offered (if any). In *Healthy People 2010* (USDHHS, 2000), the stated goal is to increase the

proportion of worksites offering employer-sponsored physical activity and fitness programs to 75%. Two key associations involved with the advancement of worksite health promotion are the National Business Group on Health ([www.wbgh.com](http://www.wbgh.com)) and Wellness Councils of America ([www.welcoa.org](http://www.welcoa.org)).

Fitness programs in the community setting can be organized into three main subcategories: the for-profit health clubs, the not-for-profit centers, and the hospital-affiliated centers. Residents in urban areas often have many programs from which to choose.

The largest of the three subcategories is the private, for-profit clubs such as Bally Fitness (over 400 in USA, [www.ballyfitness.com](http://www.ballyfitness.com)), Gold's Gym (over 300, [www.goldsgym.com](http://www.goldsgym.com)), and LA Fitness (over 200, [www.lafitness.com](http://www.lafitness.com)). The main trade group for health/fitness clubs is the International Health, Racquet, and Sportsclub Association ([www.ihrsa.org](http://www.ihrsa.org)). The IHRSA has a membership of over 2,200 clubs in the USA. It is estimated that the total number of private clubs nationally is between 5,000 and 10,000. (Surprisingly, few college faculty in physical education and kinesiology are knowledgeable about the private fitness club industry even though it is likely that more Americans work out in these clubs than all other fitness centers combined.)

A second community subcategory is the not-for-profit community center of which the YMCA ([www.ymca.net](http://www.ymca.net)) is the best known and most widespread example (e.g., ~2,500 YMCAs in the USA). There are also over 300 YWCAs ([www.ywca.org](http://www.ywca.org)) and over 300 Jewish Community Centers ([www.jcca.org](http://www.jcca.org)) nationally. Although all of these not-for-profit centers are known for their youth programs, significant health and fitness resources are generally available to adults too.

The third community subcategory is the hospital-affiliated wellness/fitness centers. There are approximately 5,000 community (nonfederal) hospitals throughout the country with about 45% located in rural areas (American Hospital Association, [www.aha.org](http://www.aha.org)). Over the past two decades, a large number of these hospitals have initiated or expanded fitness and physical activity programs as outreach to their communities. Similar to the worksite programs, the size of the fitness facility and breadth of services offered are highly variable from one hospital to another.

Including both worksite-based programs and community-based programs (for-profit health clubs, not-for-profit centers, and hospital-affiliated programs), the total number of fitness clubs/centers operating in the USA today is probably on the order of 20,000. Since 5 to 10% of young adults, 10 to 15% of middle-aged adults, and 15 to 25% of older adults have one or more limitations that restrict routine physical activities, it is logical to ask if wellness/fitness programs have any impact on improving or preserving daily movement quality in this segment of the population.

It is assumed that professional staff at fitness centers follow standard approaches to exercise prescription and physical activity counseling when working with clients. These approaches reflect well-known recommendations from professional associations such as the American College of Sports Medicine (1998a, 2000). A complete exercise plan generally includes specific training to develop or maintain desirable levels of strength, endurance and flexibility with consideration also given to energy expenditure as it relates to healthy weight. Yet, this model does not have any explicit links to improving daily movement quality.

### **Key Points From the Published Research**

As a point of reference, it is important to recognize that in the general population, the effectiveness of interventions—such as joining a health/fitness club—to modify exercise behaviors remains an open question. Although a few evidence-based strategies have been identified, in most cases, the overall effect of interventions to increase physical activity is small (Kahn et al., 2002; Holtzman et al., 2004). Large gaps remain in our understanding. For example, due to the diversity of studies (e.g., different settings, interventions, outcomes), clear conclusions cannot even be drawn about the effects of studies that use theory vs. those that do not. This is not to suggest that we abandon theory-based research but rather to highlight our limited knowledge base and the challenges that lie ahead.

More specifically, scant research has been conducted to assess the potential benefits of participating in fitness programs on the daily movement quality of healthy young and middle-aged adults. In contrast, there is substantial published research on exercise interventions to improve mobility/movement in patients with neuromuscular deficits associated with conditions such as chronic low-back pain, arthritis, or stroke. These studies are generally clinically-based and administered by rehabilitation specialists. Similarly, a sizable body of research exists on the effects of various exercise programs on functional capacity and independence (e.g., ADLs) in older adults.

Relevant research on healthy adults is limited for several reasons. A key difficulty centers on measurement issues. When there are no apparent deficits in one's ability to perform daily movement tasks, how is the quality of movement to be evaluated? Can better instruments and tests be developed that improve discrimination along a defined continuum of movement quality? A second factor is that the real-world settings of wellness/fitness programs are not conducive to conducting experimental research. Yet, in this context, must we rely upon randomized clinical trials as the *sine qua non*? Isn't it time to further extend other translational (Wandersman, 2003; Dziewaltowski, Estabrooks, & Glasgow, 2004) and evaluative approaches (e.g., incorporate elements of methodologies from case studies and site visits) to conduct research in the field (Brinkerhoff, 2003; Lawrenz, Keiser, & Lavoie, 2003)?

Research in two different areas—balance training and quality of life—may have bearing on fitness center practices. Among older adults, balance exercises are often included as the fourth component of a well-rounded exercise program (along with endurance, strength, and stretching exercises) due to improvements in postural stability and reduction in falls (ACSM 1998b; NIA, 2001; Wolf et al., 2003). Even though many balance-type exercises are embedded within certain types of strength and flexibly programs (e.g., Tai Chi), it may be time to be proactive in promoting balance training for all adults, not just the elderly.

The psychological construct known as quality of life may also have relevance for assessing the impact of fitness programs on daily movement quality (CDC, 2000; Brown et al., 2004; Lee, Mancuso, & Charlson, 2004). As an outcome measure, quality of life is of great interest and widely used in many types of experimental research (> 300 quality-of-life scales have been developed; Trine, 1999). A decline in daily movement quality, regardless of the cause, will generally result in a decline

in one's health-related quality of life. Using an appropriate quality of life assessment tool in fitness centers could provide an additional means to monitor an individual's program.

### **Expert Opinions From Fitness Professionals**

Since little directly-applicable research has been conducted on the primary topic of interest, a second phase of inquiry involved interviewing senior-level fitness professionals from different settings. The aim was to obtain a first-hand account of fitness program practices and associated opinions and to then correlate responses to see if relevant themes or insights could be uncovered. The stated purpose of the interview to the fitness professional was to gather information on recent changes, current practices, and future trends in the operation of their programs.

Five individuals—3 women and 2 men—were individually interviewed using a standard set of questions. Three were at worksite programs (1 corporate, 1 government, 1 university) and two at community-based programs (1 not-for-profit, 1 hospital-affiliated). Four of the programs were located in an urban area, while the fifth was in a small city/rural area. Several for-profit health/fitness clubs were visited, but multiple attempts to arrange an interview with an experienced professional were unsuccessful. All five fitness professionals were senior-level with respect to education, experience, and position. All had at least one advanced professional certification (including 2 ACSM Health/Fitness Directors) or licensure (e.g., athletic trainer, physical therapist). Four of the five had a masters degree in physical education, exercise science, or public health. Full-time work experience in the wellness/fitness field ranged from 25 to 33 years. Four of the five participants were directors of their respective programs. Each of the five fitness programs was part of a larger wellness/lifestyle/health management program.

All five fitness centers had designated areas for aerobic equipment, strength equipment, and at least one exercise/dance room for group classes. Four had indoor basketball-volleyball areas and racquetball courts, while three had lap swimming pools. The fitness centers were open either five or seven days per week (60-109 hr/wk) with multiple exercise classes (24 to 64 per week). The number of full-time staff varied: One program had less than 5, three programs had between 5 and 10, and one program had over 10. In addition, all programs relied heavily on part-time staff. Adult membership estimates among the five facilities ranged from about 1,000 to 5,000 with the number of average daily visits ranging from 200 to 500. Across all programs, it is estimated that 85 to 95% of members were between the ages of 20 and 65 with the majority being women (~55%) and minority membership at about 20%. (Among the for-profit clubs, IRSHA estimates that health club membership nationwide is 52% male and about 85% of all members are between the ages of 18 and 65, [www.ihrsa.org](http://www.ihrsa.org).)

An initial assessment was required at all fitness centers. Similar components across programs included a written informed consent (primarily for liability purposes), the Physical Activity Readiness Questionnaire (PAR-Q), a medical and family health history questionnaire, an exercise history, and measurement of resting blood pressure. In three programs, skinfolds were measured to estimate percent body fat, and a blood sample was drawn to assess blood lipids. All programs followed a risk stratification algorithm (ACSM, 1998a, 2000). Interestingly, in all

but one program, fitness testing (e.g., curl-up test, push-up test, treadmill test) was optional (unless required for medical clearance). A general observation among fitness professionals was that for many new members, fitness testing was viewed more as a barrier to joining than an incentive.

The fitness professionals were asked to comment on the most common reasons (intentions) new members give *for joining* their programs. The top reasons were the following: weight loss or control, stress release or management, improve general health, reduce risk for chronic disease such as heart disease, prepare for a specific event, excellent facility (with respect to size, equipment, cleanliness), excellent programs (e.g., variety of classes, personal training), professional staff, and convenience (especially worksite programs).

In contrast, when club members *who have become regular users* were asked what motivated them to continue, the fitness professionals reported two common reasons, both of which were not among the primary intentions for initially joining. One was a social connectedness with fellow exercisers, instructors, and staff—a sense of belonging, recognition, and/or camaraderie. The second was that they simply felt better when they regularly participated. This enhanced feeling of well being is likely due to a combination of factors associated with improvements in fitness, daily movement quality, self-efficacy, self-esteem, and social support.

### **Trends and Professional Issues**

Among the interviewed fitness professionals, several noted the same or similar trends. Eight observations that impact our profession are listed.

- The proportion of new members with musculoskeletal limitations has steadily increased in recent years. This trend is likely a reflection of the pervasiveness of both overweight/obesity and low-fitness in the general adult population.
- Mind-body classes (e.g., yoga, Tai Chi, Pilates) and classes that feature lower intensity activities (stretching, shaping, walking) will continue to increase in popularity as more emphasis is placed on participation and less on performance.
- Exercise equipment will continue to get fancier, “smarter” (computerized), and more customized regarding options for different types of training. Competition among manufacturers is keen as exercise equipment has a replacement cycle of two to four years.
- The demand for qualified personal trainers and exercise leaders continues to be high. Continued growth in these part-time positions is expected.
- A recognized shortcoming of most programs is the lack of a systematic system for follow-up with members (e.g., periodic reassessment, feedback).
- The need to provide clear, concise, and consistent health and fitness messages to members will remain a major challenge.
- The general public remains confused about the training and credentials of the fitness professional (i.e., exercise science degrees, professional certifications).
- The proportion of fitness professionals from under-served segments of our population remains extremely low. This hampers outreach to lower-paid workers and persons from lower socioeconomic neighborhoods.

## Recommendations

Among healthy adults, regular exercise participation contributes to or sustains higher-level functioning in daily movement and mobility tasks. Health and fitness professionals would overwhelmingly agree with this statement. It is an understandably strong belief that could be supported by a plethora of circumstantial evidence. Yet, the relationship between physical conditioning and daily movement quality has *not* been systematically studied in the healthy adult population.

Based on expert opinion from fitness professionals and findings from limited published research, a set of recommendations has been generated. These recommendations provide examples of where professional efforts—among faculty, researchers, students, and fitness practitioners—might be placed to advance understanding of the potential benefits that fitness programs may have on daily movement quality.

- Fitness program directors and their staffs should (a) consider adding balance and quality-of-life measurements to their initial assessment procedures, and (b) develop a systematic plan for periodic follow-up of all members that benefits both members (useful feedback) and staff (program evaluation).
- College faculty, graduate students, and fitness program directors should partner on research projects to develop (a) screening tests to detect early indications of difficulties performing ADLs (e.g., such as balance or grasping tasks) and (b) in-the-field assessment approaches that expeditiously identify promising intervention strategies.
- College faculty should insure that students preparing for careers as professionals in wellness/fitness programs are aware of the interactions among daily movement quality, physical activity demands of everyday living, and quality of life.
- More generally with respect to the wellness/fitness industry, faculty should (a) prepare students to deal with the issues of self-employment, fitness entrepreneurship, and professional credentialing; (b) develop and implement a plan to recruit and mentor minority students for careers in the fitness industry; and (c) investigate and report on the private for-profit health club industry and the job-placement potential for college-trained fitness professionals.

Clearly, movement and mobility in daily living is critical to independent living and to quality of life. Yet, current knowledge about how participation in fitness programs may impact daily movement quality in healthy adults is limited. Based on published research and expert opinion of senior fitness professionals, several research and professional preparation needs and recommendations were identified. As the percentage of Americans who are middle-aged and older continues to grow relative to the total population, understanding how to maximize and sustain a high level of daily movement quality will become increasingly important. This is an excellent opportunity for applied scientists in kinesiology to initiate and collaborate with health and fitness professionals in creative, multidisciplinary, translational research.

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