his colleagues on cognitive screening. I found the chapter on measurement of severity of illness interesting, as it presents a rallying cry for someone to develop appropriate instruments for determining illness severity in the different settings in which elders receive care. This will become more important in the era of managed care.

This book would have benefited by including an appendix giving the recommended scales. For completeness it also should have included a chapter on nutrition assessment discussing, at minimum, the Mini Nutritional Assessment (Guigoz, Vellas, & Carray, 1996), the Nutrition Screening Index (Lipschitz, Ham, & White, 1992) and the Subjective Global Assessment (Detsky et al., 1987), as well as a chapter on assessing balance and fall risk.

Chronic Illness and the Older Adult, edited by Elizabeth A. Swanson and Toni Tripp-Reimer, appeared to me to be a set of essays without a unifying theme. Of these I immensely enjoyed the chapter by Herr and Mobily on chronic pain in elderly adults. From their pithy quote at the beginning of the chapter, "Pain is most poorly managed in those most defenseless against it—the young and the elderly" (Liebeskind & Melzack, 1988, p. 131), through their careful documentation of the significant prevalence of inadequately treated pain and the difficulties of assessing pain in older individuals, this is an important chapter. Most of the other chapters consisted of a hodgepodge of opinions with a tendency to document only the author’s viewpoint. In the epilogue, Swanson claims that access to care is the key issue in providing adequate care for elders with chronic illness. I would argue that the development of high quality, cost-effective systems with built-in continuous quality improvement represents the real priority in the modern United States.

With aging and disease comes functional impairment. The ability of the nation, in general, and health care professionals, in particular, to respond to the needs of functionally impaired seniors represents one of the major challenges of the twenty-first century. In the end, the mark of a truly successful civilization is not its high technology successes but its ability to care for its disabled and disenfranchised members. Quality care for those with functional impairment requires the skills of an interdisciplinary team. High quality health care and supportive services are inalienable rights for all in society. In their own way, each of the books reviewed here looks for ways to prevent disability and gives a clarion cry for more intervention. However it appears that this "yellow-brick road" has many side trails and that the need for appropriate research into the cost-effective care of the functionally impaired is one of our highest priorities.

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RUN (OR WALK BRISKLY) FOR YOUR LIFE: EXERCISE IN LATER LIFE


There is now convincing evidence that exercise is important to health and well-being for older individuals. Documented benefits include improved health status, reduction in symptoms for an array of health conditions (e.g., osteoporosis, heart disease), and enhancement of quality of life (sense of well-being, life satisfaction, happiness). And the evidence is overwhelming that such benefits accrue even for the very old, formerly sedentary, and frail. The potential for enhancement of health and function for older adults is no small matter. The demo-
graphic realities of aging suggest that even modest improvements in the health status of this population could minimize health care costs to society and increase the number of productive citizens. There has been debate about the status of older adults at the end of life; some epidemiologists hold that there has been a compression of morbidity and mortality, and others theorize that extended life typically adds dysfunctional time at a rate two to three times that of added functional time. Clearly, it is desirable to ensure that the actual course of later life reflects compression of morbidity and mortality, because healthy older adults drain fewer resources and add considerable value to their communities.

*Aging, Physical Activity, and Health*, edited by Roy J. Shephard, summarizes extant data regarding exercise and its outcomes for older adults, as well as the demographic and societal context that makes examination of exercise important. Shephard also focuses on some of the perceived benefits of exercise that are beyond simple increased physical capacity, emphasizing the potential for improved quality of life and the potential for longer participation in the workforce. In addition, he provides a careful, thoughtful critique of current research methods.

This critique is of vital importance, given the known limitations of research examining later life. As Shephard notes, methodological problems abound in research conducted on physical activity and aging. The nature of interventions varies widely; one study’s “moderate” exercise is another study’s “gentle” exercise. Forms of exercise, intensity, frequency, and duration all vary considerably, making it difficult to amass sufficient evidence to ensure the efficacy of particular exercise protocols.

Further, the vast majority of exercise studies in gerontology are cross-sectional. Cohort effects reduce the long-term value of such research. For example, women from pre-Title IX days may believe that exercise is unfeminine, or lack lifelong experience of physical activity as part of daily occupation. Even if cohort effects could be controlled for, cross-sectional research leaves unanswered questions of permanence of particular behavior changes and their long-term impacts.

Then there is the issue of selection bias. Physical activity, or lack thereof, may be associated with particular kinds of individuals, who also might be more or less likely to volunteer for research. Large-scale epidemiological investigations offer one option for addressing this concern; however, they present others. Such studies often rely on data that are imprecise and require substantial interpretation on the part of the researcher. Note, for example, the recent study of activity and well-being (Herzog, Franks, Markus, & Holmberg, 1998), in which volunteer activities and report recommendations that have the greatest research support. They are replete with charts, tables, graphs, and pictures that provide considerable information to the care provider. And although the ACSM guide was not developed specifically for older individuals, the fact that so many elders have chronic diseases makes it highly appropriate to review the carefully crafted suggestions.

Despite their many positive attributes, all three volumes are plagued by difficulties that are in large part no fault of the authors, but rather reflect the gaps in our current understanding of later life. An immediate and obvious problem relates to definition, both for intervention and outcome. Physical activity is not synonymous with exercise. The term *physical activity* suggests movement that might be purely for the sake of movement or might occur in the course of accomplishing some other goal, whereas *exercise* is most often understood to be physical activity undertaken specifically for the purpose of enhancing physical capacity. These books address exercise, as opposed to physical activity, in spite of the variable use of terminology in the titles. The absence of discussions of physical activity, particularly in the context of activities important to the individual, ultimately reduces the value of these books.
Definitions of outcomes are even more perplexing. Each of these volumes discusses improvements in health as one result of exercise. Health, however, is a surprisingly slippery notion. It is well known that most older adults have two to three chronic conditions, yet most gerontologists would consider such older adults “healthy” if they can accomplish the activities that are necessary or desired in the course of daily life. Is health in the sense of absence of disease the outcome of interest, or is it health in terms of ability to accomplish daily activities? Given the realities of the aging process, it is most likely the latter that should be the primary focus of intervention.

If we are interested in ability to accomplish activities, then we are really considering function, as opposed to health. Function is also difficult to define, both because of the complexity of human performance in the environment and the multitude of disciplines that contribute to the study of gerontology. Whereas biologists examine cellular aging, sociologists explore the interaction between the individual and his or her surroundings, rather than the cellular changes that might, in fact, alter that interaction.

One strategy for defining the construct of function is to focus on independence, most often reflected in the ability to undertake basic activities of daily living (ADLs), such as dressing and eating, and instrumental activities of daily living (IADLs), such as shopping and maintaining the house (Baum & Law, 1996). The emphasis on ADLs and IADLs as comprising independence has considerable appeal, particularly in the public policy arena, because of cost issues such as the need for personal attendants and environmental modifications. However, in adult rehabilitation, an entire consumer movement—the independent living movement—emerged because health care professionals were slow to acknowledge that “there is more to life than putting on your pants” (Radomski, 1995). Relatively healthy older adults sometimes assert that they pay attention to self-care primarily as a means to an end (Bonder & Martin, 1997), and may not identify ADLs and IADLs as central to the meaning of their lives. Although such individuals might report different feelings if they could no longer accomplish these activities, it is also possible that they would continue to identify ADLs as something to be done to get to what really matters.

If, as Shephard suggests, physical activity contributes to maintenance of independence (read: ADLs), it is a stretch to infer that maintenance of such ability will by extension contribute to enhanced quality of life. A research participant once told me with no small amount of disgust that he wished his daughter could get over her insistence that he dress himself. “Who cares?” he said. “My wife always dressed me so we could get on with important things.”

Quality of life includes such constructs as life satisfaction, sense of well-being, and happiness, all of vital interest to elders. Positive quality of life is more than the presence of physical health, the absence of illness, or the ability to function. The human animal strides toward something beyond simple existence. Frankel (1962) suggests that something is “meaning.”
the issue of motivation, most readers will recognize fairly standard recommendations (e.g., setting goals, rewarding progress) that draw heavily on behavior modification theory. No evidence is presented that such interventions actually increase exercise participation.

There is evidence, however, to suggest that there are alternatives to behavior modification that can increase the number of older adults who exercise. We know that meaningful occupation will be undertaken more frequently than rote activity (Nelson, 1988). This would strongly suggest that health care providers would do well to identify occupations that are meaningful to the individual and that include physical activity in their accomplishment, rather than recommend exercise routines. One has only to watch mall-walkers to know that for many individuals it is more pleasurable, and therefore more sustainable, to walk with one’s friends while looking in store windows than to walk on a track at the gym.

Gerontologists are in the business of understanding and enhancing the experience of later life, no small undertaking. Significant progress is being made daily. A decade ago, none of these volumes could have made the recommendations that appear today. And yet significant progress remains to be made if we are to realize the promise of later life, both for individuals and society more broadly. As Shephard notes, individuals who are healthy physically and emotionally can contribute to the world around them and reduce their consumption of expensive resources. It is evident that physical activity is a component of maintaining or restoring relative health. We can only hope that researchers will read these volumes with a critical eye toward what is missing, as well as what is present, to ensure that the second editions will answer some of the remaining questions. After all, with any luck, such questions will be increasingly important to each of us with every passing year.

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