Communications

Exercise Patterns of an Elderly Population

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During the last decade the beneficial effects of aerobic exercise have been documented for all age groups including the aged.[1,2] Regular physical exercise reportedly increases aerobic capacity,[3] agility,[4] and muscular endurance[4] and may reduce the fat composition of the body,[5] improve mental well-being,[6] and reduce the risk of cardiovascular disease.[2] Because physical exercise may be beneficial to the aged, it is important for the family physician to be cognizant of the quantity and quality of exercise prevalent in elderly populations. A recent study in Seattle provides an initial glimpse of the amount of exercise performed by the elderly.

Methods

In the winter of 1980, 109 elderly residents of a high-rise apartment unit were contacted and 83 consented to be interviewed. The residents were predominantly white (89 percent) and female (75 percent) with an average age of 75 years. In the course of this study, the residents were asked if they participated in a "regular exercise program." This question was followed by open-ended questions probing the nature and extent of their predominant mode of exercise. Respondents also were specifically asked to quantitate the frequency and distance that they walked.

A random sample (10 percent) of respondents were reinterviewed two weeks later to assess reliability. No discrepancies were noted between the two interviews, suggesting the responses were reliable. No attempt was made to validate the responses with observations of subject behavior or measurements of physical exercise tolerance.

Results

Walking was the predominant form of exercise for this group of elderly subjects, with 47 percent stating walking as their usual form of exercise (Table 1). Remedial shoulder or back exercises for treatment of musculoskeletal problems constituted the predominant physical activity for eight subjects. Three subjects identified various types of calisthenics as their predominant activity, but these exercises were not strenuous, for example, "I touch my toes five times every morning."

In questioning the subjects about their exercise patterns, differences in perception about what an "exercise program" was became apparent. Several subjects stated they had a regular exercise program consisting of "staying active" by going to social activities such as church or bingo once a week. Other subjects denied having a regular exercise program, but when questioned further, mentioned regular walking programs. Indeed, ten subjects who initially denied having regular exercise programs in fact claimed to walk more than a mile more than twice a week, a program potentially leading to fitness.

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Table 1. Exercise Patterns of Elderly Apartment Residents	
Predominant Type of Exercise Reported	**No. (%)**
None	31 (37)
Walks	39 (47)
Twice a week or less	
Less than 2 blocks	6 (7)
2 blocks to 1 mile	2 (2)
More than 1 mile	1 (1)
More than twice a week	
Less than 2 blocks	7 (9)
2 blocks to 1 mile	7 (9)
More than 1 mile	16 (19)
Aerobic or swimming exercise classes	2 (2)
Physical therapy	8 (10)
Light calisthenics	3 (4)
Total	83 (100)

Comment

The elderly in this study have low levels of exercise, a conclusion supported by other researchers.[7] Thirty-seven percent of the subjects claimed to not exercise, and a sizable majority claimed only limited or brief, infrequent episodes of walking or light calisthenics.

Based on the suggestion in the literature that fitness occurs at an exercise frequency of at least three times a week and an exercise intensity which raises the pulse to 60 percent of maximum for 20 minutes,[2] aerobic fitness may be possible in those subjects who walked greater than one mile more than twice a week or who participated in aerobic exercise classes. Thus, based on these criteria, at most 18 subjects (21 percent) were exercising at a level sufficient to improve or maintain fitness. This estimate may be high, since the elderly have been reported to overestimate and overreport the extent of their activity and exercise.[5,7] Unfortunately, this study did not document the duration of exercise or its effect on heart rate.

The implications for the family physician are clear. The literature states that exercise is probably beneficial for older populations; however, if this study population is typical, the aged tend to be profound underexercisers. In addition, some elderly believe that staying socially active constitutes exercise, while others discount walking, a readily available form of exercise. Because the elderly may have misconceptions about exercise, a physician who tells his patients to "exercise more" may not achieve the intended impact. As with other therapeutic modalities, an exercise prescription should be specific as to the activity, the frequency, and the duration, being cognizant of the needs and abilities of the older person. Fortunately, useful texts are available to assist the physician in writing such prescriptions.[8,9]

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