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Improving Your Health at 75 – Part III

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Your Life Your Health

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This is the third part of our review of The American Heart Association's Scientific Statement from the Council on Clinical Cardiology Subcommittee on Exercise, Cardiac Rehabilitation and Prevention published in 2002. Entitled, "Secondary Prevention of Coronary Heart Disease in the Elderly (With Emphasis on Patients >75 Years of Age)," the statement includes secondary prevention efforts which have benefit for those in their eighth decade of life and who already have heart disease.

Obesity

Obesity is a risk factor for second coronary events in older men and women with heart disease (CHD), according to data from the Framingham Study which is an on-going study of the residents of Framingham, Massachusetts. It has gone on through several generations and has looked at the cardiovascular risk factors. From the Framingham data a calculation of your cardiovascular disease risk can be done. SETMA does this on all adult patients.

Obesity's cardiovascular risk is due primarily to elevated cholesterol, hypertension, and insulin resistance (for more on this subject see Your Life Your Health at www.jameslhollymd.com) in older overweight individuals and particularly in individuals with abdominal obesity. Weight loss, therefore, has the potential to act as a multifactorial risk reduction intervention in this population.

The effect of exercise training alone, without a nutritional intervention, on measures of obesity and abdominal fat in older coronary patients has been only minimal. Body weight, body fat percentage, fat mass, and waist circumference have been shown to improve only slightly. However, significant correlations between changes in body mass and fat mass with risk factors such as cholesterol, glucose, and insulin measures have been observed. The relatively minimal effect of exercise alone on body weight is probably due to the low exercise-related energy expenditure accomplished by patients with CHD in general and particularly by older patients. An alteration of the exercise prescription to include more frequent and more prolonged bouts of walking as a means to increase exercise-related energy expenditure is promising as an aid to dietary therapy in older obese patients with CHD.

Management

Although older CHD patients have a lower rate of obesity than do their younger counterparts, weight loss induced by exercise or low calorie diets in older patients is associated with similar improvements in cardiac risk factors such as cholesterol and

measures of insulin resistance. Thus, there is reason to expect a reduction in secondary coronary events.

Diabetes

The presence of diabetes mellitus is a powerful predictor for the occurrence of secondary coronary events in older CHD patients. The prevalence of insulin resistance and diabetes mellitus increases with age, particularly in the presence of abdominal obesity. Exercise training is well known to improve insulin resistance and diabetic control in healthy older persons.

In middle-aged CHD patients, even short-term exercise training improves elevated insulin levels (hyperinsulinemia). In older coronary patients, glucose and insulin levels are more closely related to total body fat mass rather than to measures of fitness or exercise training response. This suggests that the effect of exercise programming on glycemic (sugar) control in older diabetic patients may relate more to its favorable effects on fat mass or body fat distribution than to its effect on fitness per se. Thus, the treatment of obesity in overweight, older diabetic patients assumes a particularly prominent role.

Management

The management of diabetes mellitus in older CHD patients should extend beyond exercise programming and weight management programs to include blood glucose screening for undiagnosed patients and surveillance of individuals already on treatment. The assessment should include measurement of fasting glucose as well as glycosylated hemoglobin at the time when lipid and other risk factors are being assessed. Patients with diabetes need to be informed about the short-term hypoglycemic (low blood sugar) effects of exercise.

Frequent fingerstick measurements before and after exercise can help guide therapy. Appropriate hypoglycemic therapy to achieve near-normal fasting plasma glucose with the goal of a glycosylated hemoglobin level <7% is recommended. Treatment of other risk factors is also essential. Nutritional counseling, particularly as it relates to the treatment of obesity, should be provided, and treatment plans should be coordinated with primary care physicians. Affiliation with a diabetic treatment center is useful, particularly as it relates to educational issues and comprehensive care of newly diagnosed individuals.

Psychosocial Interventions

Few studies have examined the particular psychosocial needs of elderly patients with CHD who are participating in secondary prevention and cardiac rehabilitation programs. However, research from younger populations and elderly populations with noncardiac illnesses helps to define those psychosocial issues important to older cardiac patients. Although there are many psychosocial problems that could be addressed, general domains that need assessment or intervention include socioeconomic status, depression, social

support/isolation, cognitive functioning, and issues related to work, sexual activity, and well-being.

Depression

Studies indicate that depression has a major impact on morbidity, mortality, and functional recovery in patients with cardiovascular disease; 10% to 15% of older patients are depressed, with as many as 20% showing significant signs of anxiety. Because safe and effective treatments for reducing depression are available, all elderly patients should be evaluated for depression and offered treatment as appropriate. Elderly individuals, especially those ≥ 75 years of age, suffer significant personal, financial, and other types of losses.

For instance, among those over the age of 65 years, 51% of women and 13% of men are widowed. These losses may lead to depression, isolation, and other problems. Lack of social support and social isolation have been associated with increased morbidity and mortality in elderly men and women after MI. Of note, social support/isolation is a complex phenomenon involving emotional and social aspects, mediated through family, friends, and religious networks.

The level of interest that elderly cardiovascular patients exhibit in working or participating in physical and social activities, including remaining sexually active, is an important consideration in assessing and maintaining quality of life. To the degree possible, elderly patients should be encouraged to remain active, not just for the physiological benefit, but for psychosocial well-being as well.

Management

Assessing desires for physical functioning, including helping individuals continue to remain sexually active, is an important part of the psychosocial assessment and intervention. A general psychosocial assessment may be helpful in routine evaluation of participants. Simple screening tools can help identify most major problems and can be followed up with more sophisticated instruments or assessments as required and referral for treatment as needed. Finally, healthcare providers need to be familiar with and address end-of-life issues in patients with terminal CVD illness, including determination of patients' advanced directives.

Physical Activity

The prescription of exercise for increasing physical activity and fitness for elderly patients with heart disease has been an essential component of secondary prevention for at least two decades. The basis for an exercise intervention in these patients includes improved functional capacity with reduced activity-related abnormal signs or symptoms. Increases of 10% to 60% in functional capacity and 10% to 25% reduction of myocardial work at standardized exercise workloads have been observed after 12 weeks of early exercise training after hospitalization. Extended periods of training have resulted in

further gains, although modest, in these parameters. Expected outcomes are similar to those for younger patients, although absolute levels of functional capacity in the elderly are less, and results may require longer program participation in this age group, particularly for those patients ≥ 75 years of age. As with younger patients, a multidisciplinary approach to secondary prevention that includes exercise may positively impact other heart disease risk factors, including hypertension, obesity, elevated blood glucose level, and various psychosocial parameters, particularly quality of life, while combating feelings of isolation and depression.

One study of older patients with heart disease and several others of older persons without known heart disease have suggested a positive impact of physical activity on mortality. In the British Regional Heart Study (5934 men with established CHD; mean age, 63 years), results suggested that light-to-moderate activity is associated with a significantly lower risk of all-cause mortality over the 5-year follow-up. Lastly, results from the Cardiovascular Health Study (5201 men and women; mean age, 73 years) suggested that level of physical activity was an independent predictor of 5-year mortality.

Management

The recommendations for increasing participation in programs of physical activity should not be limited to structured exercise but should also include a broader interpretation of exercise programming, including consideration of differences in needs between women and men, occupational and leisure activities and simple acts of daily living, the importance of socialization, and diversity of exercise activities. It is incumbent on clinicians to strongly and repeatedly encourage exercise participation, while carefully considering the appropriate and individualized recommendations for the exercise prescription.

Methods for prescribing exercise for cardiac patients have been published and generally do not require significant modification for elderly patients. The exercise prescription should define individual patient guidelines for activity while allowing for, and encouraging, variation in the exercise regimen. The exercise program should promote all aspects of physical conditioning, including aerobic capacity and muscular endurance, range of motion and flexibility, and muscular strength.

Modification of the components of the exercise prescription should be considered for elderly patients, particularly those ≥ 75 years of age and those with significant comorbidities that limit mobility, eg, arthritis, pulmonary disease, and peripheral arterial disease. Increasing caloric expenditure and enhancement of functional mobility should be emphasized, as well as participation in activities that increase socialization with others. The latter is paramount to combating feelings of isolation and depression. Increasing frequency and duration of exercise sessions should supersede increases in intensity and progression to reduce the potential for overuse injuries.

Strength training for elderly patients as a component of the overall exercise prescription should improve neuromuscular function, muscular strength, and endurance. Such training

is essential to improving responses to the various physical demands of daily living as well as occupational and recreational activities. Furthermore, it is likely to improve functional independence and self-esteem, while reducing the risk of injury associated with musculoskeletal overuse and falls.

Secondary Prevention

The American Heart Association concludes with the statement, “Secondary prevention interventions to impact and control risk factors in older patients with CHD, including habitual cigarette smoking, hypertension, abnormal blood lipids, elevated blood glucose, obesity, various psychological concerns, and physical inactivity, appear effective to an extent similar to that observed in younger patients.”

It is never too late to start to get healthy. Remember, it is your life and it is your health.