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Review

The exercise prescription for enhancing overall health of midlife and older women

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ABSTRACT

Background: For midlife and older women, this period of their life is associated with an increase in risk factors for the development of chronic medical conditions. Data confirms the importance of regular exercise for both prevention and management of cardiovascular and other non-communicable diseases, unwanted weight gain, worsening metabolic profile and osteoporosis. However, in most clinical practices, midlife and older women patients are not offered specific exercise guidance.

Objectives: This review assessed the current environment of what exercise advice is being offered to women at clinical encounters and suggests ways of incorporating an exercise prescription into clinical practice.

Materials and Methods: A PubMed review of the literature from the past 20 years was conducted.

Results: A universal template for an exercise prescription for aging women does not exist. Globally, there are scant programs that offer exercise advice and interventions to patients at the end of clinical encounters.

Conclusions: Although most aging women know the benefits of engaging in a regular exercise program, many do not establish a regular routine. By the clinician offering an exercise prescription, this not only reinforces the importance of exercise but also provides simple guidelines on how women can commence an exercise routine in their life.

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Contents

1. Introduction	00
1.1. Exercise and disease prevention	00
1.2. Exercise and managing disease	00
1.3. Barriers to exercise	00
2. Materials and methods	00
3. Results	00
3.1. Existing prescription programs	00
3.2. Potential prescription model	00
3.2.1. Patient Evaluation	00
3.2.2. An exercise prescription	00
4. Conclusion	00
Contributors	00
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1. Introduction

Physical activity and exercise are widely recognized healthy lifestyle interventions. They are recommended for prevention and management of a number of conditions, and are known factors in improving quality of life. Unfortunately, most patients do not put enough emphasis on making adequate exercise a part of their daily routines. Physicians can proactively address this problem by providing a simple exercise prescription at the end of non-emergency encounters that would guide their midlife patients on exercise and reinforce the fact that an exercise prescription is as important as a drug prescription in contributing to overall well-being.

1.1. Exercise and disease prevention

Midlife women particularly benefit from an exercise prescription, since engaging in routine exercise addresses a number of issues commonly presenting during the peri- and post-menopausal years. Unwanted weight gain, decreasing muscle mass and bone density, and an increasing risk of diabetes, hypertension, cardiovascular disease, cancer and arthritis can often be ameliorated or prevented with exercise [1,2]. Exercise, specifically weight bearing exercise, increases bone density as well as muscle strength, both of which are areas many women struggle with during these years [3]. Bone density is of particular importance because it affects their likelihood of developing postmenopausal osteoporosis. Additionally, exercise is a key component in any weight maintenance or weight loss program, and so can contribute to the dramatic reduction in risk status of other medical conditions associated with obesity.

The myriad benefits of physical activity also are reflected in enhanced quality of life, and decreased all-cause mortality, especially decreased cardiovascular mortality [4]. Adult cardiac health can benefit significantly from exercising even in limited amounts [5]. Furthermore, significant improvements in cardiovascular health from exercise can be seen even among women who do not experience significant weight loss or body composition changes [6]. Additionally, the health benefits of exercise have been shown to result in lowered medical expenses in those who exercise as compared to sedentary individuals [7].

1.2. Exercise and managing disease

Regular exercise cannot only contribute to disease prevention, but also can help manage existing medical conditions. Data shows that diabetes, depression, hypertension, and arthritis are better managed in those who exercise. Since women have depressive disorders significantly more often than men, methods of addressing depression, such as with exercising, are especially relevant to female patients [8]. Research suggests that exercise and physical activity can be comparable in effectiveness to anti-depressant medication use, and in some instances capable of enhancing the positive effects of this class of medications [8,9].

No matter what the midlife woman's current capacity is for physical activity, studies have shown that low-intensity exercise can be as effective as high-intensity exercise in maintaining or increasing fitness [10].

1.3. Barriers to exercise

In the average US state, data shows that only 51.6% of the population engages in the recommended amount of aerobic exercise per week, and only 20.9% achieve the recommended amount of weekly aerobic and muscle-strengthening exercise [11]. In addition, only 34% of all US adults talk about exercise with their physicians [12]. Women may not independently ask their doctor about exercise and physicians do not appear to routinely discuss this aspect of the patient's wellness. Even motivated midlife women may be reluctant to speak to their physician about exercise issues. An exercise prescription given by the woman's clinician would verify the importance of this preventive strategy in the same manner as suggesting an adequate intake of calcium and vitamin D for maintenance of bone health.

2. Materials and methods

A literature review was conducted using PubMed which examined publications from over the past 20 years. Key search words used included: exercise, physical activity, menopause, women's health, exercise prescription, exercise program, exercise prescription review, recommendations, and aging. In addition, guidelines from professional organizations and governmental agencies were reviewed (see Fig. 1).

3. Results

3.1. Existing prescription programs

Currently, there are a number of initiatives that have the goal of encouraging patients to lead more active lives. In the UK, the National Health Service's "Exercise on Prescription" program uses a referral program in which physicians can direct patients to a discounted or free fitness program. In order to get this exercise prescription, patients usually have a condition that is known to benefit from exercise intervention—such as depression, obesity, or cardiovascular disease. One of the community activities the program encourages is walking groups, which have been shown to be a safe and effective health behavior intervention [13]. The program uses self-assessment questionnaires given to patients to rapidly assess its effectiveness, and this method has been shown to have test-retest reliability, and could therefore be used to assess participants in similar exercise programs effectively [14].

New Zealand has an exercise program aimed at increasing physical activity called the "Green Prescription" (GR_x) program [15]. Unlike the "Exercise on Prescription" program, the GR_x promotes exercise as a preventative measure as well as one for intervention. The GR_x program's professional staff provides advice (often via educational pamphlets) and suggests local activities which can be used by patients, such as walking groups, to get the daily amount of recommended exercise. A useful additional GR_x service which could be used by other clinical offices is their follow up procedure. Those in the program have the option to receive ongoing support and encouragement through regular monthly phone calls, face to face meetings, or community support groups [16].

The American College of Sports Medicine (ACSM) has developed a basic program, referred to as the "Exercise is Medicine" program.

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