

clinical relevance of long-term use of SERMS on prolapse and incontinence needs to be evaluated.⁶

Conclusions

Currently the evidence does not support the use of oestrogen replacement alone in the management of stress incontinence.

However topical vaginal oestrogen therapy for urogenital atrophy is considered safe with no discernable adverse events.

Oestrogen therapy is certainly efficacious for the management of irritative urinary symptoms, and for decreasing the incidence of urinary tract infections.

References available on request.

PRESCRIBING EXERCISE AT MIDLIFE

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Menopause causes a decrease in oestrogen levels owing to decreasing ovarian function, resulting in physiological changes and health risks. Exercise can help to relieve and reduce many problems or symptoms experienced by menopausal women. These include immediate symptoms, such as hot flushes, sleep deprivation, mood and behaviour changes, and the long-term risks of cardiovascular disease, osteoporosis, and obesity. Exercise is defined as 'any bodily movement by skeletal muscles leading to energy expenditure larger than that beyond resting expenditure'. Exercise helps to prevent primary and secondary disease, and studies show that menopausal women who exercise report fewer symptoms related to the menopause.

Vasomotor symptoms

Vasomotor symptoms include hot flushes, sweating, and dizziness, all of which can lead to sleep deprivation and mood and behaviour changes.

Exercise has not been proved to relieve these symptoms, but physically active post-menopausal women report fewer and milder symptoms than sedentary ones.

Exercise may also increase a woman's sense of well-being, making her feel stronger and more self-assured, enhancing mood states, as well as promoting daytime alertness and regular sleep patterns.

Weight gain and muscle weakness

Exercise is necessary to help with weight loss and to prevent loss of muscle tissue and strength as well as decrease in metabolic rate, due to the ageing process. The metabolic rate also decreases with age. Aerobic and resistive exercise burns immediate calories and increases the metabolic rate, increasing energy expenditure and lean body mass. Women who do resistive exercise help increase and maintain their muscle strength and remain functional and independent with age.

Cardiovascular disease

Risks of cardiovascular disease increase with age, especially after the menopause as oestrogen decreases, resulting in lipid and vascular changes. Aerobic exercise helps to promote cardiovascular fitness, improves oxygen uptake, reduces risks of cardiovascular disease, lowers blood pressure, and is beneficial in moderating increases in body fat percentage. Studies show risk reductions in women who became physically active in adult life compared with their sedentary counterparts.

Osteoporosis

Osteoporosis is defined as 'a generalised, progressive diminution of bone density (bone mass per unit volume), causing skeletal weakness, although the ratio of mineral to organic elements is unchanged'. Deficiencies in oestrogen and dietary calcium as well as lack of exercise all accelerate bone loss in menopausal women.

Management of osteoporosis comes down to preventing fractures, decreasing pain, and maintaining daily function. Exercise (walking and weight-bearing activities) helps to reduce the risk of fractures by reducing body weight and increasing stability. Ideally women should maximise their bone mass and minimise bone loss. Peak bone mass is attained around the age of 20, with a slow rate of bone loss until the menopause and an acceleration of bone loss up to 5% per year after the menopause

for a few years. It has been demonstrated that an increase in bone mass is the result of high-intensity, multidirectional activities at sites loaded by the exercise programme. While non-weight-bearing activities such as swimming or cycling have shown no effect on bone mass, weight-bearing activities (moderate exercise and strength training) have been effective in increasing bone mass and reducing the rate of bone loss in post-menopausal women. On the other hand, excessive exercise can prove to be detrimental to bone mass if associated with menstrual irregularity.

Exercise guidelines

Women should be encouraged to continue or commence exercise in the post-menopausal period. For any woman willing to start an exercise programme, a full pre-exercise assessment is advised. This should include a thorough history and examination, blood measurements (blood pressure, cholesterol, etc.), stress ECG (if any cardiovascular symptoms or family history), body composition, flexibility and strength. Every exercise programme should be tailored to the individual according to her medical condition (e.g. cardiovascular or orthopaedic), fitness and strength levels, flexibility, stability, and enjoyment. The American College of Sports Medicine (ACSM) recommends exercise involving large muscle groups, such as walking, swimming, or cycling. This type of aerobic exercise should be performed between 3 and 5 times per week for 20 - 60 minutes, aiming to maintain 60 - 70% of maximum heart rate for beginners or de-conditioned women and 70+% for more active women ($220 - \text{patient's age} = \text{maximum heart rate}$). The intensity and duration will vary according to fitness of the woman and the activity chosen.

Weight-bearing activities should be performed 2 - 3 times a week, with progressive strength training to prevent muscle weakness. Each resistance workout should consist of 1 - 3 sets of each exercise, with up to 15 repetitions per set, depending on the strength of the woman and previous activity levels. Each session should comprise 8 - 10 different exercises targeting major muscle groups. Research has shown similar or greater strength gains in older women given an adequate training stimulus compared with younger individuals. A warm-up of 5 -

10 minutes, joint motion and stretching should be done at the beginning of every session, with a 5 - 10 minute cool-down and stretch period at the end of the session. Attention must be paid to exercise form to help to prevent any injuries.

References available on request.