

## Introduction

Fibromyalgia (FM), or fibromyalgia syndrome (FMS), is a chronic disorder characterized by pain, fatigue, depression, anxiety, sleep disorders, memory, and cognitive dysfunction sometimes referred to as 'fibrofog'. The disease affects both men and women however approximately 80% of women are afflicted with FM and between the ages of 20 and 55.

Persons with FM are mostly sedentary and deconditioned due to associated pain, chronic fatigue, and altered perception of physical exertion.

## Recommendations

Because of the symptoms of FM, the timing of exercise may play a critical role in the success of prescribing an exercise program. Typical morning stiffness occurs with persons with FM, exaggerated delayed onset of muscle soreness (side effect of repair process after eccentric exercise), poor exercise recovery, difficulty with use of the arms in elevated positions, and high-impact or vigorous activity is poorly tolerated. Persons with FM can benefit from exercise related improvement in cardiorespiratory function, reduced risk factors to heart disease, and improved psychosocial function. The main goal however in persons with FM is to restore and maintain functional ability:

- reduced myalgic score (reduced number of tender points and associated pain)
- decreased general pain
- improved sleep
- decreased fatigue
- decreased feelings of depression
- increased meaningful social interactions
- improved activities of daily living

Due to the sedentary and deconditioned nature of persons with FM, exercise testing may be appropriate. Exercise programming should begin at lower levels of intensity, duration, and frequency with gradual progression as tolerated. The MyFitScript™ exercise prescription for FM consists of low-to-moderate-intensity aerobic activity; strength training that minimizes eccentric contractions; no sustained overhead activities and lower body exercise. An ideal program for persons with FM is water exercise, walking, or cycling. Keep in mind that persons with FM often experience symptom exacerbation brought on by physical activity. Therefore, consideration should be given to the following when prescribing exercise.

- the gluteal trigger point may limit cycling activity
- morning exercise should be avoided
- group exercise may improve adherence
- avoid sustained overhead activities
- minimize eccentric movements

Eccentric muscle use is defined as muscle lengthening against resistance. It is the lowering phase of the bicep curl, or the lowering phase of the leg extension. In order to minimize eccentric contraction, for example, the person with FM should lift, or push the weight (concentric) at a count of 1-2-3-4-5-6 and lower it (eccentric) for a count of 1-2-3, thereby decreasing the eccentric phase. Walking on a treadmill should be on a flat surface as opposed to a downward slope, which is considered the eccentric phase of

exercise. In weight training exercise keeping movements close to the midline of the body and minimizing repetitive overhead movements is recommended.

Aerobic activity in persons with FM is best carried out by moving the large muscle groups of the legs and hips such as walking or cycling, with lesser involvement of the upper extremities. However with upper body exercise, alternating limbs, building in rest periods, and changing movement patterns frequently may help avoid symptoms associated with repetitive movements.

### **MyFitScript™**

Exercise prescription for persons with FM should include components of aerobic conditioning, strength exercises, flexibility, and functional fitness for improved activities of daily living.

The MyFitScript™ F.I.T.E. acronym is the guideline-based prescription and stands for frequency of exercise, intensity of exercise, time or duration of exercise, and type or mode of exercise as it pertains to aerobic and strength components of the exercise program.

### **References:**

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Fibromyalgia Information Foundation, <http://www.myalgia.com>.