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EDITORIAL

Nordic walking in fibromyalgia: a means of promoting fitness that is easy for busy clinicians to recommend

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See related research by Mannerkorpi *et al.*, http://arthritis-research.com/content/12/5/R189

Abstract

A total of 67 women with fibromyalgia were recruited to an exercise study and were randomized to moderate-to-high-intensity Nordic walking (age 48 ± 7.8 years) or to a control group engaging in supervised low-intensity walking (age 50 ± 7.6 years). A total of 58 patients completed. Significantly greater improvement in the 6-minute walk test was found in the Nordic walking group ($P = 0.009$), compared with the low-intensity walking group. A significantly larger decrease in exercise heart rate ($P = 0.020$) and significantly improved scores on the Fibromyalgia Impact Questionnaire Physical function ($P = 0.027$) were found in the Nordic walking group as compared with the low-intensity walking group. No between-group difference was found for the Fibromyalgia Impact Questionnaire total or pain scores. The authors conclude that moderate-to-high intensity aerobic exercise by means of Nordic walking twice a week for 15 weeks was found to be a feasible mode of exercise, resulting in improved functional capacity and a decreased level of activity limitations.

The Nordic walking study by Mannerkorpi and colleagues [1] is the latest addition in exercise research now spanning three decades. Since 1988 over 90 exercise interventions have been published, testing nearly 5,500 persons with fibromyalgia. The studies have varied dramatically in terms of frequency, intensity, timing and type of exercise. Several conclusions, however, can be drawn from this body of work [2,3].

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Persons with fibromyalgia can enjoy the same improvements in strength, flexibility, aerobic capacity and perhaps postural control as can healthy persons. Symptom flares are commonly exacerbated, however, by exercise that is not modified for fibromyalgia. Specifically, aerobic activities that involve fast cycling, running, jumping, quick turns and certain dance moves may result in symptom flares, as can higher intensity exercise compared with lower intensity exercise [4,5].

What is less clear is how to design a 'start low and go slow' aerobic exercise protocol that is community based, of low cost, and does not require a high degree of specialized supervision. Moreover, the exercise should also provide significant fitness improvements without inducing a symptom flare. Ideally, this intervention would improve not only fatigue, sleep, mood/distress and quality of life, but also pain. Lastly, it should be easy for busy clinicians to recommend as a specific modality.

Mannerkorpi and colleagues may have designed such a program in Sweden. They randomized 67 women with fibromyalgia to a 20-minute, twice-weekly, 15-week program of either moderate-to-high-intensity walking (13 to 15 Rated Perceived Exertion) outdoors with Nordic walking poles or supervised low-intensity walking (9 to 11 Rated Perceived Exertion) without Nordic walking poles. Nordic walking poles activate muscles in the trunk and upper body while aiding balance. The poles also allow people to increase their stride length and employ a faster gait.

As expected, the group whose walking was supplemented with walking poles demonstrated significant improvements in a 6-minute walk test ($P = 0.009$) and the Fibromyalgia Impact Questionnaire Physical function ($P = 0.027$) compared with the group who walked without poles. What was novel was that significant fitness gains were garnered without inducing a symptom flare. In fact, both groups demonstrated clinically meaningful reductions in pain and fatigue. Nordic walking did not, however, produce greater symptom relief than lower intensity walking.

So where are we now? We have a safe, community-based intervention that will allow people with fibromyalgia to walk outdoors without avoiding hills and increasing the fall risk. People with fibromyalgia who walk with Nordic walking poles may experience greater fitness gains than those walking without Nordic walking poles. Clinicians have a specific intervention they can easily recommend that does not require proximity to a specialized academic center with extensive expertise in fibromyalgia exercise modifications. Patients have another form of exercise from which to choose that will help them regain significant loss of aerobic fitness while reducing fibromyalgia symptoms.

The physiologic effects of more intense exercise in fibromyalgia are being studied in an effort to better understand and manage exercise-induced symptom flares [6]. Of specific interest to an exercise program is how to modify exercise such that it reduces reducing peripheral pain generation from the muscle or myofascial trigger points within the muscle. Specifically, the milieu of myofascial trigger points have an acidic pH and contain elevated levels of bradykinin, calcitonin gene-related peptide, substance P, TNFα, IL-1β, serotonin, and norepinephrine [7]. It is further known that pain originating in the muscle, including latent or active myofascial trigger points, can induce or augment central sensitization in both healthy controls and persons with fibromyalgia [7,8]. This is especially true if adequate rest periods are not incorporated into more intense exercise in persons with fibromyalgia [9].

What is left to for clinicians to understand? Rarely can exercise alone adequately control fibromyalgia symptoms, especially pain. Access to a combination of fibromyalgia-specific analgesics and modified exercise are necessary to maximize functionality and symptom management [10]. Until the altered central and peripheral mechanisms in fibromyalgia can more fully understood and mitigated, exercise will continue to need to be modified for persons with fibromyalgia. Nordic walking, as tested by Mannerkorpi and colleagues, represents such a modification and offers patients a safe and effective means of regaining functionality and physical fitness.

Abbreviations

IL, interleukin; TNF, tumor necrosis factor.

Competing interests

The author declares that she has no competing interests.

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