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Original article

Protocol for physical assessment in patients with fibromyalgia syndrome

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ABSTRACT

Introduction: Fibromyalgia syndrome (FMS) is a chronic disease that causes pain and fatigue, presenting a negative impact on quality of life. Exercise helps maintaining physical fitness and influences directly on the improvement of quality of life.

Objective: Develop a protocol for health-related physical fitness assessment of patients with FMS with tests that are feasible and appropriate for this population.

Method: An exploratory and analytical literature review was performed, seeking to determine the tests used by the scientific community. With this in mind, we performed a literature revision through the use of virtual libraries databases: PubMed, Bireme, Banco de Teses e Dissertações da Capes and Biblioteca Digital Brasileira de Teses e Dissertações, published in between 1992-2012.

Results: A variety of tests was found; the following, by number of citations, stood out: Body Mass Index (BMI) and bioimpedance; 6-minute walk; handgrip strength (dynamometer, 1RM [Repetition Maximum]); Sit and reach and Shoulder flexibility; Foot Up and Go, and Flamingo balance.

Conclusion: These are the tests that should make up the protocol for the physical evaluation of FMS patients, emphasizing their ease of use.

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Protocolo para avaliação física em portadores de síndrome de fibromialgia

RESUMO

Introdução: A síndrome da fibromialgia (SFM) é uma doença crônica que provoca dor e fadiga e apresenta impacto negativo na qualidade de vida. O exercício auxilia na manutenção da aptidão física e influencia diretamente na melhoria da qualidade de vida.

Objetivo: Elaborar um protocolo para avaliação física relacionada à saúde de portadores da SFM com testes que sejam viáveis e apropriados para esse público.

Método: Foi feita uma revisão da literatura de forma exploratória e analítica, para determinar os testes usados pela comunidade científica. Com isso, fez-se um levantamento bibliográfico por meio do banco de dados das bibliotecas virtuais PubMed, Bireme, Banco de Teses e Dissertações da Capes e Biblioteca Digital Brasileira de Teses e Dissertações publicados entre 1992 e 2012.

Palavras-chave:

Fibromialgia

Protocolo

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Resultados: Demonstraram uma variedade de testes, em que se destacaram, em número de citações, os seguintes: Índice de Massa Corporal (IMC) e Bioimpedância; Caminhada de 6 minutos; Força de preensão manual (dinamômetro), 1 RM [Repetição Máxima]; Sentar e alcançar e Flexibilidade de ombro; Levantar e ir – *Foot Up and Go* e Equilíbrio do flamingo. **Conclusão:** Estes são os testes que devem compor o protocolo para avaliação física de portadores de SFM. Ressalte-se que esse protocolo é de fácil utilização.

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Introduction

Fibromyalgia syndrome (FMS) is a chronic disease of unknown origin characterized by diffuse muscle pain, sleep disturbances, fatigue and presence of multiple painful points, the so-called tender points.^{1,2} Many patients with FMS express anxiety and depression, that affect their quality of life.³

Exercise is an important factor for improving the quality of life of the patient, but it should be designed not to be strenuous.² The exercise is responsible for acquiring and maintaining physical fitness, which is defined as the set of attributes that people have or develop related to the ability to perform physical activities.⁴ Because of the pain, many patients with FMS have great difficulty in starting an exercise program.⁵ Thus, it is imperative that we specify exercises that influence the improvement of physical conditioning, but without causing pain.⁵

This facilitates the adhesion of FMS patients to an exercise program and minimizes the negative impact of lack of conditioning. It is important to note that untrained muscles are more prone to injury during activities,⁶ and this can result in more pain, making these patients more sedentary individuals (i.e. who do not engage in exercise regularly) and deconditioned.⁶

To maintain a good health/quality of life, it is necessary for the individual to keep on good levels the four physical capacities related to health: cardiovascular fitness, muscular strength and endurance, flexibility and appropriate body composition.⁴ This strategy should be considered for all individuals, including those with FMS. Sedentary people tend to have progressively lower levels of physical fitness, health and quality of life.⁷

One of the critical objectives of exercise intervention programs is the promotion of health, and they should focus on the improvement of physical fitness-related components. For that to happen, it is necessary to measure and monitor the fitness levels.⁸

Thus, the physical educator who works with patients with FMS needs to know about the fitness level of those patients needing help, performing a physical assessment. The measurement of fitness levels is done through tests and physical evaluations specific to each tested component that vary according to the approach, purpose and target population.⁸

Thus, the purpose of this narrative review is to identify the most commonly applied tests in the literature for the physical evaluation of patients with FMS, with the objective of developing a protocol for specific physical assessment for this population. Considering that, although there are evalu-

ating methods for FMS,⁹ until now no protocol or guideline for the evaluation of physical capacity of this target population has been developed.

Materials and methods

This research is characterized as a narrative review, because it describes and discusses the development of the topic from a theoretical and contextual points of view.¹⁰ Ours is not a systematic review because, although we clearly present the stages of the research, the data is not interpreted in order to assess the applicability of the results, as dictated by the systematic review.¹⁰

A literature search, using the databases PubMed (<http://www.pubmed.com.br>), Bireme (<http://brasil.bvs.br/>), as well as the Banco de Teses e Dissertações da Capes (<http://capesdw.capes.gov.br/capesdw/>) and the Biblioteca Digital Brasileira de Teses e Dissertações (<http://bdtd.ibict.br/>), was conducted.

During the article selection, the terms “flexibilidade”, “composição corporal”, “capacidade cardiorrespiratória”, “capacidade aeróbica” and “força muscular” (Brazilian Portuguese) and its English versions, i.e. “flexibility”, “body composition”, “cardiorespiratory fitness”, “aerobic fitness” and “muscle strength”, were used. To these terms the words “fibromialgia” and “fibromyalgia” (for the English versions) were added to the data entry field. In the research of dissertations, only the term fibromyalgia was used.

After the research material collection (articles, dissertations and theses), an exploratory analysis of the collected documents was conducted, by reading the abstracts in order to identify those who have had some kind of test for fitness assessment in patients with FMS.

Regarding dissertations and theses, at first the selection was made by title and then, if in doubt, by summary analysis. When, even after reading the summaries, the relevance of the document was unclear, our procedure was: for articles the full text was read, and for the theses its study methodology was read. Usually this strategy brought us more detailed information regarding the use, or lack, of the standardized tests.

Our inclusion criteria were: the articles should contain, in their methodology, a clear description of the tests applied, and should have been published from 1992-2012 (corresponding to the last 20 years). The articles reporting that a physical assessment had been carried out without mentioning the test used were discarded, as well as those that did not provide any information on physical assessment by using tests, rather by questionnaires instead.

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