FRI0710-HPR EFFECTIVENESS OF EXERCISE IN THE MANAGEMENT OF FATIGUE AND SLEEP QUALITY IN FIBROMYALGIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Non-pharmacological interventions are the mainstay of treatment for fibromyalgia, however, current evidence-based guidelines report that the only therapy supported by 'strong for' evidence is exercise intervention for pain in fibromyalgia [1]. While increased fatigue and poor sleep quality are among the most burdensome symptoms in fibromyalgia, there remains limited evidence for the effectiveness of exercise in the management of these symptoms [2,3].

Objectives: To determine the effectiveness of exercise in the management of fatigue and sleep quality in fibromyalgia.

Methods: A systematic search was conducted using PubMed and Web of Science in October 2018 (Prospero Registration No. CRD42018118005). Eligible studies were randomised controlled trials (RCT) including adults with fibromyalgia (population), who received exercise (intervention) compared to usual care (comparator). Outcomes of interest were fatigue and/or sleep quality. No restrictions were applied for language nor for publication date. Random effects meta-analyses were conducted. The Cochrane Collaboration's tool was used for assessing risk of bias in the included studies. The quality of evidence was evaluated using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework.

Results: Twenty RCTs were included, 17 included measures of fatigue (n=1003) and 12 measures of sleep quality (n=731). In comparison to usual care, exercise had beneficial effects on fatigue (Figure 1, P<0.001) but not on sleep quality (Figure 2, P=0.06). The most beneficial interventions for fatigue and improving sleep quality, were those in which fatigue was the primary outcome and those based on body-mind interventions, respectively (both, P<0.001). A moderate risk of bias was present in most of the included studies.

Conclusion: According to the GRADE framework, this review provides low-to-moderate quality evidence that exercise is moderately effective for improving fatigue, and moderate evidence of no/meaningless effects of exercise to improve sleep quality. Further high quality RCTs are required to determine the effectiveness of exercise on fatigue, and in particular, sleep quality in fibromyalgia.

REFERENCES:

- Macfarlane GJ, et al. Ann Rheum Dis 2017;76:318–28. Doi:10.1136/annrheumdis-2016-209724
- Bidonde J, et al. Cochrane Database Syst Rev 2017;2017. Jun 21;6: CD012700 doi:10.1002/14651858.CD012700
- Busch AJ, et al. Cochrane database Syst Rev 2013;CD010884. doi:10.1002/14651858.CD010884

Figure 1. Pooled effects of randomised controlled trials analysing the effectiveness of physical exercise on reducing fatigue in people with fibromyalgia.

Figure 2. Pooled effects of randomised controlled trials analysing the effectiveness of physical exercise on enhancing sleep quality in people with fibromyalgia.

Analyses were conducted using a random effects model. CI, Confidence Interval; df, degrees of freedom; Std, Standardised; SD, Standard Deviation; IV, Inverse Variance; Co-, Co-intervention (Photo, phototherapy; edu, education); C, Cardiorespiratory exercise; F, flexibility exercise; S, Strength training; TC, Tai Chi; QG, Quigong; Y, Yoga; L- and W-B, land- and water-based exercise, respectively.

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FRI0711-HPR PATIENT PERSPECTIVES ON HOW TO IMPROVE MEDICATION EDUCATION

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Background: EULAR recommends that people with inflammatory arthritis should have access to and be offered patient education throughout the course of their disease (1). The content and delivery of patient education should be individually tailored (2). Patients should be educated on their medication and know its purpose, mode of action, possible side effects and monitoring guidelines (3). Improving patients' ability to make informed choices and to use medication effectively and safely should result in significant benefits for the health service and improve patient well-being (4). Our institute's yearly Consumer Quality Index (CQI) revealed that our current medication education needs improvement.

Objectives: To improve medication education from the patient perspective.

Methods: A representative cross-sectional sample of 100 rheumatoid arthritis patients was invited to complete a specially designed questionnaire, based on the Satisfaction with Information about Medicines Scale (SIMS) questionnaire (5). All caregivers at our Rheumatology unit (rheumatologists, trainees, rheumatology nurses) participated in single-blinded structured observational sessions of their regular patient consultation with the patient's consent. Data was collected on the type and content of medication information that was given during the consultation. Local ethical approval was obtained and patient confidentiality was assured.

Results: At present 40 (40%) patients returned the questionnaire. Overall, patients are satisfied with the medication education provided (average overall satisfaction score of 7.4 (0-10). However patients experienced insufficient education on the following topics;

- whether the medication has influence on sex life
- the risk of having side effects
- how to act when side effects occur
- possible interaction with concomitant medication
- whether the medication can cause drowsiness

Between December 2018 and January 2019 caregivers at our unit (4 rheumatologists, 2 trainees, 1 nurse) participated in multiple single-blinded observational sessions. In 100% of observed consultations medication information was provided. However, most caregivers did not address the topic of side effects during their consultation. Furthermore, in all cases caregivers failed to document in the electronic patient file which information was provided.

Conclusion: Rheumatoid arthritis patients express overall satisfaction with medication education but experience an unmet need for information on possible medication effects on their sex life, medication side effects and on interaction with concomitant medication. Further analysis of the questionnaires will be performed and a plan of improvement will be implemented to meet the patients need for more and better education on medication. Patient medication education will be implemented in a continuous cycle of improvement.