Editorial

Therapeutic exercise for prevention, treatment and rehabilitation of musculoskeletal pain and function as well as general health and life quality: A call for papers

Musculoskeletal pain and impaired function present the most common chronic health disorders. They are a huge burden on society affecting the economy as well as having serious consequences for quality of life at the individual level. Musculoskeletal disorders are one of the largest work related problems. They interfere with both activities of daily living and work ability, and constitute large expense in relation to sickness absence and productivity.

Musculoskeletal pain and impaired function are, in the main, non-specific and fluctuating but, if left untreated, may develop into chronic conditions. In the health care system, impaired musculoskeletal health should be subject to screening for risk factors, prevention oriented interventions, ongoing monitoring and comprehensive care models as occurs with other chronic lifestyle diseases. Therapeutic exercise should be a safe first choice of early prevention of recurrence and treatment. This is a preferred position to the attitude, that nothing can be done until the pain or function is reaching a level where an implant and reconstructive surgery procedure is justified.

In the past few decades, physical exercise, from a public health perspective, has been shown to be beneficial for prevention, treatment and rehabilitation of a number of lifestyle diseases, such as obesity, cardiovascular diseases, metabolic syndrome and diabetes. In contrast, the role of therapeutic exercise as an efficient way to prevent and treat musculoskeletal disorders has, until recently, attracted much less attention. Nevertheless, using therapeutic exercise to preserve musculoskeletal health may potentially have a double effect. Apart from the direct beneficial effect on pain and function, preserved musculoskeletal health is crucial for the ability of individuals of all ages to perform the levels of physical activity needed to maintain cardiovascular health, and prevent lifestyle diseases by pursuing the recommended physical activity level. With increasing age, musculoskeletal disorders such as arthritis, frequently co-occur with other adverse health conditions. Therefore the adverse health effects of musculoskeletal disorders and contributions to health costs, are amplified if they hamper an ability to maintain physical activity levels.

Therapeutic exercise can play a role in musculoskeletal health in at least three different ways, 1) as prevention of occurrence/recurrence of new episodes of musculoskeletal disorders 2) as recovery to return an injured patient to a fully functioning, pain-free state or 3) as treatment to maintain current function and prevent further deterioration or impairment. Therapeutic exercise refers to a wide range of physical activities that are tailored to specific patient groups. The focus may vary from restoring and maintaining strength, endurance, flexibility, stability, and balance. Therapeutic exercise is not only relevant in a clinical setting but also as prevention and rehabilitation in the variety of physical therapy settings, including hospitals, rehabilitation centres, workplaces and fitness centres. A wide selection of exercise therapies is currently used even though for most body regions there is little evidence about which type is most effective.

The highest level in the evidence hierarchy for a type of treatment is the meta-analysis, but this requires a solid data input of randomized controlled studies. Even recent meta-analyses seem to show a lack of evidence for the effectiveness of exercise, mainly due to a lack of high quality studies rather than a lack of effect in the studies. Also a large amount of information on this topic is ignored if it is not performed as randomized controlled studies. Another obstacle is the many modalities of therapeutic exercise, the use of very diverse interventions regarding type of exercise, progression, adherence, as well as frequency and duration of sessions. To add to the challenges of providing sound guidelines based on existing evidence, specifications of the content and dose of the therapeutic exercises are seldom available in the literature.

Currently there is very limited evidence that any particular type of exercise is superior to another. It is not clear what type of exercise, intensity or duration may be effective for prevention in different body regions and in different groups of patients. However, in contrast to physical activity in a public health perspective, therapeutic exercise, probably to a much higher degree, must be tailored to the patient group. This is to be expected as the physiological mechanism behind the pain reduction and improved function may be different for different types of exercise and in different patient groups e.g. arthritis versus myalgia. In short, evidence is hampered by the lack of well-designed high quality studies with specified training regimes among well-defined patient groups.

Because of the recognised importance of therapeutic exercise a forthcoming special edition of Manual Therapy journal is planned. Its aim is to present current research on all levels of the evidence hierarchy, that contribute to increased knowledge on how fundamental exercise is to primary, secondary and tertiary prevention of musculoskeletal disorders.

In this Call for Papers we welcome submission of high quality contributions to provide evidence regarding the effect of specified
therapeutic exercise and general physical training specifically for musculoskeletal disorders and comorbidities. We hope to receive a broad selection of studies from any/all body regions which present the results of RCT designed interventions, as well as mechanistic studies, feasibility studies, systematic reviews and meta-analyses to investigate the state of the evidence of how therapeutic exercise is best used to prevent and rehabilitate musculoskeletal disorders.

We request authors to submit their papers for consideration of publication in the special issue to the editors by 1st September 2014. Papers should be submitted online at http://ees.elsevier.com/ymath, following the usual process and journal’s Guide for Authors (which can be found at www.elsevier.com/math) – please select SI: Therapeutic Exercise at submission stage.

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