Getting Evidence into Clinical Practice:
Musculoskeletal Research Facilitation Group (CAT Group)
Date: June 2017

Specific Question:
Is graded exercise beneficial in improving function, mobility, quality of life in adult patients with chronic musculoskeletal pain?

Clinical bottom line

There is limited evidence of poor quality to answer this question with confidence. The studies that were identified were of poor quality and therefore results should be viewed with caution.

Why is this important?

Exercise is generally considered an important part of chronic pain management. Much evidence exists empirically to support the benefits of activity / exercise in the management of chronic pain. However many patients struggle to exercise / increase activity levels because of their pain. In pain management clinical practice, a graded approach is often used and incorporated in individual care pathways and group programmes to try and help overcome some of the difficulties experienced i.e. underactivity, over activity and doing too much too soon.

It is important to establish the evidence base around the use of graded exercise in chronic musculoskeletal pain to help determine best clinical practice for this cohort of patients.

Inclusion Criteria

	Description	Search terms
Population and Setting	Adults with chronic/ persistent musculoskeletal pain	Chronic pain Musculoskeletal pain
Intervention or Exposure	Graded exercise approach	Graded exercise Paced exercise Manageable exercise Constant exercise Regular exercise Steady exercise Progressive exercise Graded activity

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Comparison, if any	Usual care	Usual care
Outcomes of interest	Function, mobility, quality of life	Function Mobility Quality of life
Types of studies	Randomised Controlled Trials, Systematic reviews.	

Routine Databases Searched

Clinical Knowledge Summaries, PEDro, BMJ Updates, Clinical Evidence, TRIP, Database, NICE, HTA, Bandolier, The Cochrane Library, Medline, Cinahl, Embase, PsycInfo, Professional websites. Joanna Briggs Institute, Web of science, Sports discus and Pub med

Date of search- 5/2/16

Results of the search

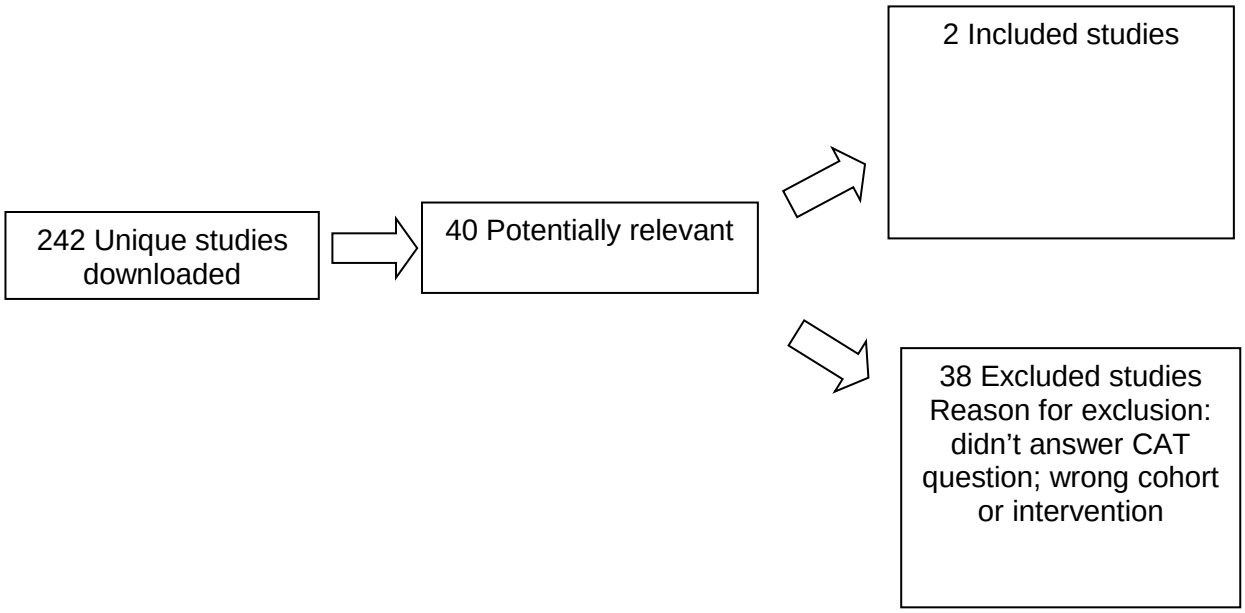

Table 1- Detail of included studies

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First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
Emilson et al 2015 RCT	10 year follow up of tailored behavioural treatment and exercise based physiotherapy for persistent musculoskeletal pain 97 adults 92 included (eligible for follow up) Primary care setting in Sweden Persistent Musculoskeletal pain 4/52 < And completed RCT 2005	Survey – postal or web based 10 year follow up to 2 active treatments 1)Tailored behavioural intervention 2)Exercise based physiotherapy intervention	43 responded to survey (44%) 20 to tailored behavioural intervention, 23 to exercise Groups did not differ in terms of change of scores for primary outcome (disability) or secondary outcomes (control, fear of movement and maximum pain intensity)	There was a large loss to follow up (56%). The study was unable to determine meaningful change due to being insufficiently powered
Asenlof et al 2005 RCT Individually tailored behavioural intervention v exercise based physiotherapy	122 adults recruited 97 completed intervention Primary Healthcare setting Sweden. Persistent MSK pain for 4/52<	Two active treatment arms 1)Tailored behavioural medicine treatment protocol 2)Exercise based physiotherapy protocol	97 completed intervention. Experimental group (1) Showed lower disability, lower maximum pain intensity, higher level of pain control and lower fear of movement. Self efficacy and physical function increased in both groups.	The main emphasis of study was not on 'graded exercise'. Experimental group in this original study is 'Individually targeted on goals, beliefs etc' Relevant cohort and outcomes

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Summary

There was limited evidence of poor quality available to answer this question. There was a lack of statistical power and a significant loss to follow up in the evidence reviewed.

Implications for Practice/research

Due to the lack of evidence no changes to current clinical practice are recommended.

Searching for evidence related to exercise and a specific condition i.e. fibromyalgia, OA may produce a better quality evidence base to review. Thus a more condition specific CAT question would be recommended when looking at best practice for exercise / activity in a chronic pain population.

What would you tweet? (140 characters)

Graded Exercise for chronic musculoskeletal pain – no evidence of sufficient quality available. Current clinical practice unchanged.

References

Asenlof P, Denison E, Lindberg P (2005) Individually tailored treatment targeting activity, motor behaviour and cognition reduces pain- related disability: a random controlled trial in patients with musculoskeletal pain. Journal of Pain 6 (9) 588-603

Emilson C, Demmelmaier I, Bergmen S, Lindberg P, Denison E, Asenlof P (2015) A 10 year follow up of tailored behavioural treatment and exercise-based physiotherapy for persistent musculoskeletal pain. Clinical Rehabilitation 31 (2) 186-196

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