

**Specific Question:**

Is resistance exercise beneficial to improve function, mobility, quality of life in adult patients with fibromyalgia?

**Clinical bottom line**

There is low quality evidence to support that moderate and moderate to high intensity resistance exercise can be safely performed and is beneficial for women with fibromyalgia to help with pain, tenderness, strength and multidirectional function.

This evidence supports the use of exercise in the treatment of fibromyalgia and can help inform treatment decisions. However clinicians must remain mindful that this review was based on evidence deemed low quality and only involved women participants.

**Why is this important?**

Fibromyalgia is a common condition seen in physiotherapy and pain management. Empirically exercise is understood to be a valid treatment for rehabilitation and pain management. It is known that exercise and/or keeping active can improve health, function, mobility and/or quality of life in many musculoskeletal conditions. However patients with fibromyalgia often struggle to remain active and exercise at all or consistently. It is important to determine whether the evidence base supports exercise /activity for this cohort of patients. Knowing what exercise type is most supported by the research available will help clinicians to include and develop targeted treatments, programmes and advice to maximise compliance, efficacy and outcome for patients with fibromyalgia

**Search timeframe 2000 and 2017**

**Inclusion Criteria**

|                                 | Description  | Search terms   |
|---------------------------------|--|--|
| <b>Population and Setting</b>   | Adult patients with fibromyalgia   | Fibromyalgia in adults. Can include adolescents overlapping with 'adult, 18+   |
| <b>Intervention or Exposure</b> | Any form of exercise including therapeutic exercise and leisure activities such as walking | Exercise, therapeutic exercise, walking, running, aerobic exercise, tai chi, exercise therapy, exercise movement techniques, aquatic exercise. |
| <b>Comparison, if any</b>       | Control group  | No exercise  |

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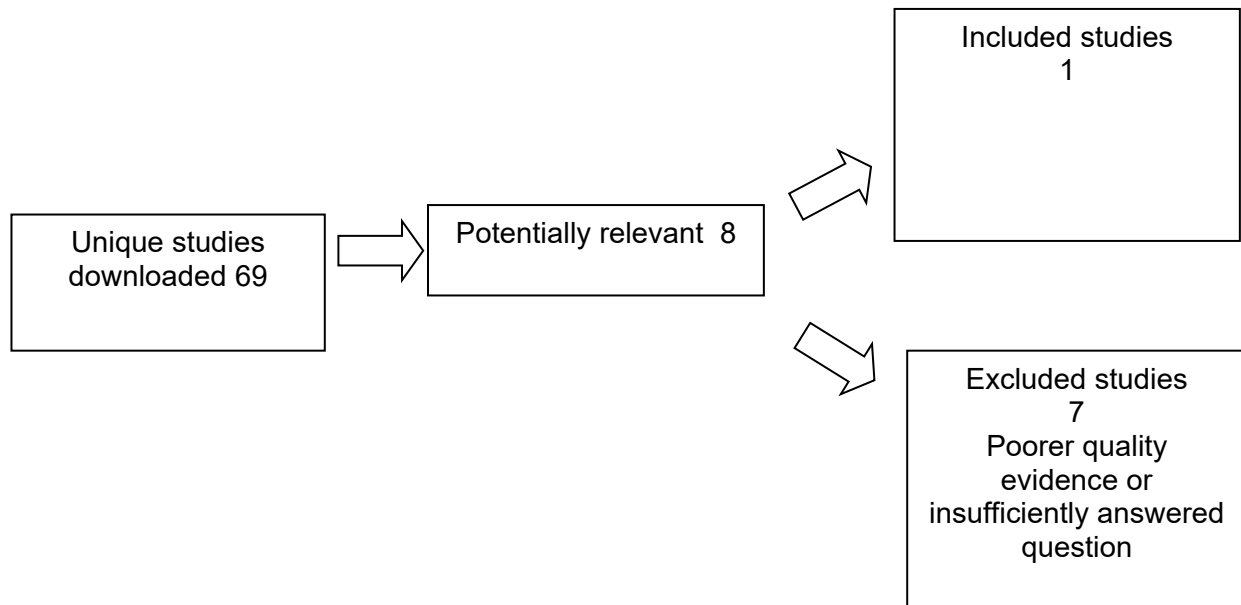
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|-----------------------------|--|--|
|                             | with no exercise   |  |
| <b>Outcomes of interest</b> | Improvements in any mobility, function and quality of life | Improved mobility, improved function, improved quality of life |
| <b>Types of studies</b>     | Systematic reviews , randomised controlled trials(RCT)     |  |

**Routine Databases Searched**

PEDro, Clinical Evidence, NICE, The CochraneLibrary, Medline, Cinahl, Embase, NHS Evidence, Epistemonikos- systematic reviews

**Date of search- 2/2/2017**

**Results of the search**



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Table 1- Detail of included studies

| First Author, year and type of study   | Population and setting   | Intervention or exposure tested   | Study results   | Assessment of quality and comments  |
|--|--|---|---|---|
| <p>Busch Angela J et al 2013<br/>Resistance exercise training for fibromyalgia</p> <p>Cochrane Database Systematic Review of RCTs.</p> | <p>Adult patients with a diagnosis of fibromyalgia based on published criteria</p> <p>There were 1865 citations and 5 studies met the selection criteria</p> <p>Of the included studies all the participants were women.</p> | <p>To evaluate the benefits and harms of resistance training in patients with fibromyalgia.</p> <p>219 women with fibromyalgia participated. 95 assigned to resistance groups.</p> <p>Included Studies compared:<br/>16-21 weeks of moderate to high intensity resistance training v control<br/><b>Or</b><br/>8/52 progressive resistance training (intensity as tolerated) free weights or body weight resistance v aerobic training (progressive walking- treadmill , indoor or outdoor)<br/><b>Or</b><br/>12/52 low intensity resistance training (hand weights / elastic tubing) v flexibility exercise.</p> | <p>Low quality evidence suggests moderate / moderate to high intensity resistance training improves function, pain, tenderness muscle strength and can be safely performed in women with fibromyalgia.</p> <p>Low quality evidence also suggested 8/52 aerobic exercise (progressive walking) was superior to resistance training for improving pain in women with fibromyalgia</p> <p>Low quality evidence that 12/52 low intensity resistance training was superior to flexibility exercise for improving pain and function</p> | <p>This was a well performed Cochrane systematic review that mediated for the low number of studies, risk of bias and methodological flaws in the evidence it found by downgrading the evidence to low quality.</p> <p>No specific quality of life measure was used though aspects of quality of life were considered through 'wellness' outcomes such as self report function, multidimensional function, self efficacy, sleep and mood.</p> |

**Summary**

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Date CAT completed: November 2017  
Date to be reviewed: November 2021

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There is low quality evidence to support that moderate and moderate to high intensity resistance exercise is beneficial for women with fibromyalgia to help with pain, tenderness, strength and multidirectional function; and is superior to flexibility exercise training. There is also low quality evidence to suggest aerobic exercise (8 weeks progressive walking) is superior to moderate resistance exercise for improving pain in this cohort.

### **Implications for Practice/research**

Evidence to support the use of resistance exercise (moderate and moderate to high) and aerobic exercise (progressive walking) in the treatment of women with fibromyalgia supports current clinical practice

For resistance exercise more research including male participants and of better quality would be beneficial to inform practice more definitively. Further research expanding on the benefit of aerobic exercise could be helpful to clinicians treating this cohort of patients.

### **What would you tweet? (140 characters)**

Low quality evidence shows moderate and moderate to high resistance exercise is beneficial for women with fibromyalgia; improving pain, tenderness, strength and multidirectional function.

### **References**

Busch AJ, Webber SC, Richards RS, Bidonde J, Schachter CL, Schafer LA, Danyliw A, Sawant A, Dal Bello-Haas V, Rader T, Overend TJ Resistance exercise training for fibromyalgia. Cochrane Database of Systematic Reviews, the Cochrane Library 2013; 12, 1-87.