

### **Short Question:**

**Specific Question:** In patients with Benign Joint Hypermobility Syndrome (BJHS) is targeted physiotherapy more effective than generalised Physiotherapy.

### **Clinical bottom line**

There is insufficient evidence to answer whether targeted physiotherapy is more effective than generalised physiotherapy in treating patients with BJHS

Although the current evidence base for the clinical and cost effectiveness of exercise is limited in size and quality, it provides some suggestion that exercise may have therapeutic value for people with Benign Joint Hypermobility Syndrome. However there is insufficient evidence to determine the type, frequency, dosage or means of delivery. There is insufficient evidence to inform any change in current practise.

### **Why is this important?**

Although exercise is widely regarded as a core component of the management of joint hypermobility syndrome, there appears to be no clear consensus about the best type of exercise or dosage required.

Identification of clinical and cost effective treatments is essential for evidence based quality care. This enables patients to make informed decisions about their care and ensures appropriate use of valuable NHS resources

### **Inclusion Criteria**

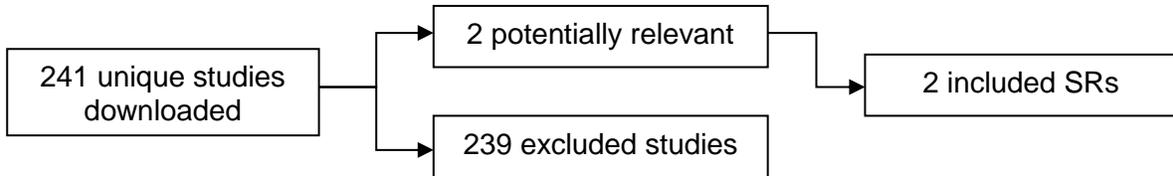
	Description	Search terms
<b>Population and Setting</b>	Patients with joint hypermobility syndrome	Patients Hypermobility Joint laxity Benign Joint Hypermobility Excessive joint mobility Generalised laxity

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Date CAT completed: July 2015  
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<b>Intervention or Exposure (ie what is being tested)</b>	Physiotherapy	Physiotherapy. Physical therapy, Exercise, Targeted exercise therapy, proprioception, strengthening, stability, taping, strapping, correcting motion control, range of motion, individualised, tailored, individualised, progressed, personalised.
<b>Comparison, if any</b>	Generalised exercise advice	General exercise advice
<b>Outcomes of interest</b>	Pain, joint stability, function, cost effectiveness, short/long term, quality of life, patient satisfaction	
<b>Types of studies</b>	Systematic Reviews & RCTs	

## Results



First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
Palmer et al 2013, Systematic review which included 1 RCT, 1 Randomised comparative trial and 2 cohort studies	Adults and children. Convenient sampling from single rheumatology and specialist centres. Three UK sites one in Turkey	General exercise, v targeted functional stability, joint specific  Proprioceptive exercises v no intervention  Proprioceptive, balance and strengthening	Overall patients who received an exercise intervention improved over time with no adverse events.  No convincing evidence for type of exercise	Databases searched along with hand searching and snowballing. Limited to English language, published research. Appraised individually and collectively; disagreements resolved by debate. Synthesis of results not possible due to heterogeneity of study designs and outcome measures. Methodological quality of included studies generally lacking, particularly statistical power and adequate control conditions. Some issues with sampling, diagnostic criteria and sample sizes, increasing likelihood of type II errors and reducing external validity.  <b>Further robust studies are required to determine the effectiveness of</b>

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				<b>therapeutic exercise</b>
Smith et al 2014, Systematic review 3 studies 2RCTs and 1Crossover trial	Adults and children. Convenient sampling from single rheumatology and specialist centres. Two UK sites and one in Turkey	General exercises v targeted functional stability, joint specific exercise  Knee proprioception exercises v no intervention Use of custom made wrist splints	Current evidence base for physiotherapy and occupational therapy management of BJHS is limited in size and quality  Some support for exercise based interventions but insufficient evidence to determine the type, frequency, dosage or means of delivery.	Published, unpublished and trial databases searched. CASP critical appraisal for risk of bias. Synthesis of results not possible due to heterogeneity of study designs and outcome measures. Current evidence base for PT & OT interventions is severely limited in size and quality. <b>Further study is essential to improve the current evidence base.</b>

## Summary

Methodological quality of the included studies is generally lacking, particularly statistical power and adequate control conditions. There were some issues with sampling, diagnostic criteria and sample sizes, increasing likelihood of type II errors and reducing external validity. Synthesis of results is not possible due to heterogeneity of study designs and outcome measures.

Overall patients who received an exercise intervention improved over time with no adverse events, however the current evidence base for PT & OT interventions is severely limited in size and quality. Further study is essential to improve the current evidence base and determine the effectiveness of therapeutic exercise

## **Conclusions**

It has been suggested that patients with BJHS have proprioceptive deficits and significantly decreased maximal exercise capacity compared to age and gender matched control subjects. Therefore clinical indication for exercise for this population seems appropriate. Although the current evidence base for the clinical and cost effectiveness of exercise is limited in size and quality, it provides some suggestion that exercise may have therapeutic value for people with BJHS. However, there is insufficient evidence to determine the type, frequency, dosage or means of delivery. Further longer term rigorous multicentre trials are essential, confirming diagnostic criteria and specific detail regarding exercises in order to assess the clinical and cost-effectiveness of clearly defined interventions for this group of patients.

## **What would you tweet?**

Is targeted exercise better than generalised exercise for BJHS. No good quality evidence found and more research is needed

## **References for included studies**

Palmer S, Bailey S, Barker L, Barney L, Elliott A (2013). The effectiveness of therapeutic exercise for joint hypermobility syndrome: a systematic review. *Physiotherapy* 2013 <http://dx.doi.org/10.1016/j.physio.2013.09.002>

Smith T, Bacon H, Jerman E, Easton V, Armon K, Poland F, Macgregor A. (2014) Physiotherapy and occupational therapy interventions for people with benign joint hypermobility syndrome: a systematic review of clinical trials. *Disability and Rehabilitation. An International multidisciplinary journal* 36(10): 797-803