

Keele Critically Appraised Topic (CAT Form)



Clinical Question

In adults with Diffuse Idiopathic Skeletal Hyperostosis (DISH) is exercises more effective in improving outcomes compared to usual care?

Clinical bottom line

There was no high quality research to answer this question. One small case report, involving 17 patients, indicated that exercises was beneficial. However, results should be viewed with caution due to the small numbers.

Why is this important?

Patients with DISH are seen within musculoskeletal physiotherapy clinics. Versus Arthritis suggested there aren't any treatments which are known to stop the calcification of ligaments, so treatments are aimed at improving any symptoms. Surgery around the spine isn't usually helpful, unless the bony overgrowth is pressing on nerves. These patients are usually referred via GP or spinal specialist following investigations for rehab if pain management is not sufficient. Guidance is needed on conservative treatment e.g. exercises therapy to assist patients to manage their symptoms.

Search timeframe (e.g. 2013-2013)

2002 - 2022

Search criteria

| Population Intervention Comparison Outcomes (PICO) themes | Description | Search terms |
|--|--|--|
| Population and Setting E.g. adults with OA, primary care | Adults 18 years old and above with diagnosis of DISH | Adults, over age 18, diffuse idiopathic skeletal hyperostosis, chronic, degenerative, Forestier Disease |
| Intervention or Exposure (i.e. what is being tested) e.g. manual therapy | Any form of education and exercises | Strengthening exercises, exercise regime by physiotherapist, physical activity, graded loaded exercises program |
| Comparison, if any e.g. usual care, leaflet | Usual care including pain relief and advice | Usual care, analgesic, stretches, advise, pacing, heat, massage, electrotherapy, ultrasound, acupuncture, dry needling, weight control |
| Outcomes of interest e.g. Visual analogue scale, Range of motion | Pain and function | Improve function, improve quality of life, reduced pain, return to sport, return to work |
| Types of studies e.g. Randomised Controlled Trails, Systematic reviews | Non specified | Systematic Reviews, RCTs |

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 discuss and Pub Med

Date of search

28/08/22

Results of the search: include the number in each box

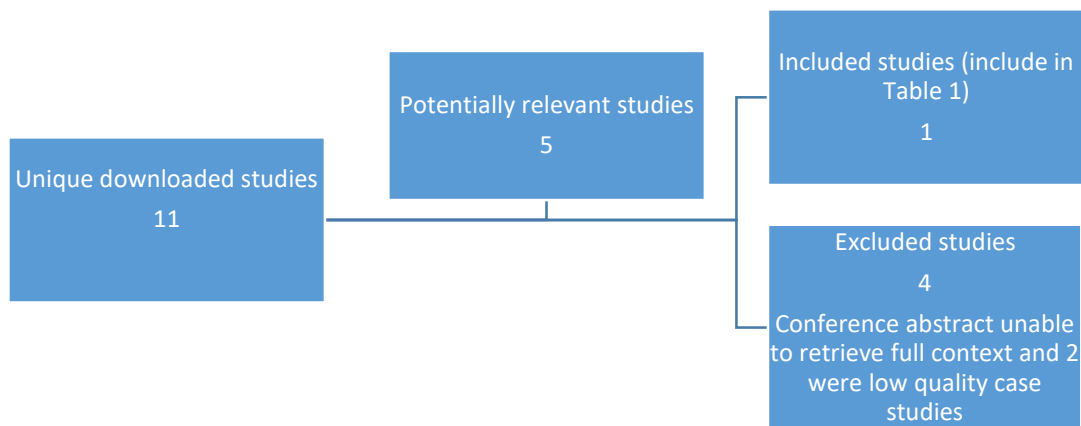


Table 1- Detail of included studies

| First author, year and type of study | Population and setting | Intervention or exposure tested | Study results | Assessment of quality and comments |
|---|--|---|--|---|
| Al-Herz 2007 Case report | Seventeen adult patients with DISH Canada | Strengthening for core and lower limb, mobility, spinal and hip and stretching exercises hamstring and back | Improved modified Schobers test, improved fingers to floor test. Improved VAS stiffness severity scale. Improved VAS back pain. Not improved VAS neck pain. Minimal changes to disability scales | There was no blinding or control group and the sample size is small to generalise result. |

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Summary

There is limited, low quality evidence in recommending exercise for adults with DISH in improving outcomes. Patel et al. 2020 and Al-Herz et al. 2007 suggested a combined approach of education, heat and frequent supervised and unsupervised exercises. Mears et al. 2020 suggested acupuncture may be useful.

Implications for practice

High quality RCTs e.g. with larger sample sizes are needed in this area to provide better implications for practice.

What would you post on X (previously Twitter)?

There is no high quality evidence to support or refute the use of exercise treatment in the management of DISH.




References

Al-Herz A, Snip JP, Clark B, Esdaile JM. Exercise therapy for patients with diffuse idiopathic skeletal hyperostosis. *Clin Rheumatol.* 2008 Feb;27(2):207-10. doi: 10.1007/s10067-007-0693-z. Epub 2007 Sep 21. PMID: 17885726.

Mears T. Acupuncture for back pain in a patient with Forestier's disease (diffuse idiopathic skeletal hyperostosis/DISH). *Acupunct Med.* 2002 Aug;20(2-3):102-4. doi: 10.1136/aim.20.2-3.102. PMID: 12216596.

Patel, Hemal & Patel, Daminivinod. (2020). Effectiveness of physiotherapy treatment in a case of diffuse idiopathic skeletal hyperostosis (DISH) in 65 year old male. 14. 50. 10.4103/PJIAP.PJIAP_30_19.

Please tick the box that best reflects your clinical bottom line and include the picture on page 1

| CAT image | Evidence quality | Checkbox |
|---|---|-------------------------------------|
|  | Good quality evidence to support use.... | <input type="checkbox"/> |
|  | Insufficient or poor quality evidence OR substantial harms suggest intervention used with caution after discussion with patient... | <input type="checkbox"/> |
|  | No good quality evidence, do not use until further research is conducted OR Good quality evidence to indicate that harms outweigh the benefits.... | <input checked="" type="checkbox"/> |

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