

COCHRANE CORNER



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This update to Cochrane Corner finds only a few orthopaedic systematic reviews that have been added to the Cochrane Library over the last four months. We eagerly await the results of a protocol published in April assessing surgical interventions for treating humeral shaft fractures,¹ with the hope of putting some quality evidence behind the plate *versus* nail debate. This sits alongside another interesting protocol published in August, evaluating physical interventions to treat plantar heel pain.² All of the new and updated reviews, however, focus on rehabilitation.

Two reviews of manual and electrotherapy for rotator cuff disease form part of an update to a previous review from 2003, and a new and important review evaluating physical and occupational therapies for preventing dislocation following total hip arthroplasty have all reached the Cochrane library.

MANUAL THERAPY AND EXERCISE FOR ROTATOR CUFF DISEASE

The spectrum of rotator cuff disease encompasses a multitude of sins. Ranging from from tendinopathy through partial thickness and on to full cuff tears with associated symptoms, often impacting on even basic activities of daily living, this is one of the broadest areas of disease within the shoulder and the one with arguably the most disability. This review update from **Monash University, Australia** looks at the effects of physiotherapy in adults with these disorders.³

While the authors for this review identified 60 eligible trials amassing 3620 patients, they curiously conclude that only one trial (reporting the outcomes of 120 patients with chronic rotator cuff disease) contained a combination of manual and exercise therapy that resembled common practice, and this was compared in this trial with a placebo of inactive ultrasound. The authors deemed the study as having high-quality evidence, and unfortunately found no clinically important differences in scores at 22 weeks for overall pain, function and reports of treatment success.³ The authors also identified some trials of low-quality evidence but did not find much difference between physiotherapy and steroid injection (five trials) or arthroscopic subacromial decompression (one trial). Sadly, given the work that must have gone into producing them, 52 trials were deemed to have very low-quality evidence which really was insufficient to warrant inclusion in the review. So it seems that, as it is, there is little evidence for the use of physiotherapy in rotator cuff disease. Given the frequency of patients presenting with rotator cuff pathology, it isn't exactly ideal to have little idea as to the effectiveness of physiotherapy despite 60 studies on the topic!

ELECTROTHERAPY MODALITIES FOR ROTATOR CUFF DISEASE

This review update from the same **Malvern, Australia** group focussed specifically on electrotherapeutic modalities for treating rotator cuff disease.⁴

Perhaps not surprisingly, given the findings of the review above, there was only a single trial with low-quality evidence which looked at pulsed therapeutic ultrasound *versus* placebo for calcific tendinitis. Despite the poor-quality evidence, this study demonstrated benefits in overall pain and function at six weeks. In eight trials evaluating electrotherapy performance in rotator cuff disease, comparing therapeutic ultrasound with other physical interventions, the authors found low-quality evidence which did not suggest any clinically important additional benefit with the ultrasound therapy. Further low-quality trials for low-level laser therapy may suggest some short-term benefit over placebo, but no additional benefits against other physical interventions.⁴ The authors only found single and 'very low-quality evidence' trials for the use of transcutaneous electrical nerve stimulation (TENS) and pulsed electromagnetic field therapy.⁴

ASSISTIVE DEVICES, HIP PRECAUTIONS, ENVIRONMENTAL MODIFICATIONS AND TRAINING TO PREVENT DISLOCATION AND IMPROVE FUNCTION AFTER HIP ARTHROPLASTY

One of the most important roles for directed rehabilitation is in the prevention or treatment of hip dislocation after total hip arthroplasty.⁵ If residual instability develops, this is a catastrophic complication that leads to significant consequences for the patient, and can result in revision surgery. While there are often contributory surgical factors for this dreaded complication, physical and occupational interventions do exist to prevent placing the prosthesis in a position of risk. This new review from **London (UK)** assesses the effects of such interventions on dislocation and function.⁵

The authors unfortunately only identified single trials for comparisons with very low-quality evidence.⁵ Three studies evaluated different comparisons of the prescription of hip precautions, provision of post-operative equipment and functional restrictions, as well as an enhanced post-operative education programme. With insufficient evidence for the benefits of these interventions, the best practice remains the surgeon's preference; however, again given the importance of these interventions, and the relative ease of study, it seems odd that they have not been subjected to formal randomised trials.

REFERENCES

1. **Rogers JA, Wilson A, Laslett LL, Winzenberg TM.** Physical interventions (orthoses, splints, exercise and manual therapy) for treating plantar heel pain (Protocol). *Cochrane Database Syst Rev* 2016 <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD012304/pdf> (date last accessed 16 August 2016).
2. **Zhao JG, Wang J, Huang WJ, Zhang P.** Surgical interventions for treating humeral shaft fractures in adults. *Cochrane Database Syst Rev* 2016 <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD012174/full> (date last accessed 16 August 2016).
3. **Page MJ, Green S, McBain B, et al.** Manual therapy and exercise for rotator cuff disease. *Cochrane Database Syst Rev* 2016 http://www.cochrane.org/CD012224/MUSKEL_manual-therapy-and-exercise-rotator-cuff-disease (date last accessed 16 August 2016).
4. **Page MJ, Green S, Mrocki MA, et al.** Electrotherapy modalities for rotator cuff disease. *Cochrane Database Syst Rev* 2016 http://www.cochrane.org/CD012225/MUSKEL_electrotherapy-modalities-rotator-cuff-disease (date last accessed 16 August 2016).
5. **Jepson P, Beswick A, Smith TO, et al.** Assistive devices, hip precautions, environmental modifications and training to prevent dislocation and improve function after hip arthroplasty. *Cochrane Database Syst Rev* 2016 <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010815/full> (date last accessed 16 August 2016).

© 2016 The British Editorial Society of Bone & Joint Surgery. DOI: 10.1302/2048-0105.55.360473

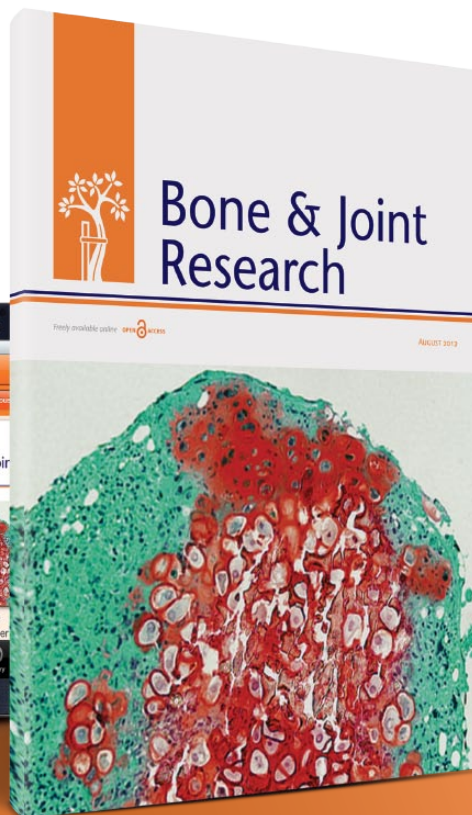


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