

## Interventions for treating pain and disability in adults with complex regional pain syndrome- an overview of systematic reviews

NICE has developed the Cochrane Quality and Productivity topics to help the NHS identify practices that could be significantly reduced or stopped completely, releasing cash and/or resources without negatively affecting the quality of NHS care. Each topic has been derived from a Cochrane systematic review that has concluded that the evidence shows that the practice is harmful or ineffective and should not be used, or that there is insufficient evidence to support widespread use of the practice.

Unless otherwise stated, the information is taken with permission from the Cochrane systematic review.

### **NICE summary of Cochrane review conclusions**

Complex regional pain syndrome (CRPS) is characterised by pain and a variety of other local symptoms that are disproportionate to the injury sustained. This comprehensive review identified a number of systematic reviews of clinical evidence. However, despite the identification of numerous papers in the area, there was insufficient evidence to recommend an effective treatment approach. There is low quality evidence for several treatment options and no firm recommendations could be made about their efficacy and use. However, moderate quality evidence suggests intravenous regional blockade with guanethidine is not effective and may be associated with complications.

### **The 'Implications for practice' section of the Cochrane review stated:**

'There is insufficient high quality evidence on which to base comprehensive clinical guidance on the management of CRPS. However, there is moderate quality evidence that intravenous regional blockade guanethidine is not effective. There is low or very low quality evidence relating to the efficacy of a range of therapies in CRPS although all of this evidence, both positive and negative, should be interpreted with caution and does not reliably aid clinical decision making. Until further larger trials are undertaken an evidence-based approach to managing CRPS will remain difficult.'

### **Details of Cochrane review**

#### **Cochrane review title**

**Interventions for treating pain and disability in adults with complex regional pain syndrome- an overview of systematic reviews (Review)**

#### **Citation**

[O'Connell NE, Wand BM, McAuley J, Marston L, Moseley GL. Interventions for treating pain and disability in adults with complex regional pain syndrome- an overview of systematic reviews. \*Cochrane Database of Systematic Reviews\* 2013, Issue 4. Art. No. CD009416. DOI:](#)

# Cochrane Quality and Productivity topics

[10.1002/14651858.CD009416.pub2](https://doi.org/10.1002/14651858.CD009416.pub2)

When the review content was assessed as up to date

1 March 2013

Quality and productivity category

Right care, Long-term conditions

Relevant codes	OPCS U51.3	ICD10 R529	HRG M2550 and VC10Z
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Programme budget:

Neurological

## Evidence

### Relevance to the NHS

Complex regional pain syndrome (CRPS) is an umbrella term for a variety of clinical presentations, characterised by chronic persistent pain, usually in the hands or feet, that is disproportionate in severity to any underlying injury. It often involves a variety of other symptoms such as swelling, discolouration, stiffness, weakness and changes to the skin. As there is no strong consensus regarding the optimal management of this condition, a range of different therapeutic interventions are currently utilised. The objective of this Cochrane review was to summarise the evidence from Cochrane and non-Cochrane systematic reviews of the efficacy of any therapeutic intervention used to reduce pain, disability or both in adults with CRPS.

Six Cochrane reviews and 13 non-Cochrane systematic reviews, that included evidence relating to a broad range of treatments, from drugs to surgical procedures, rehabilitation and alternative therapies, were included in this review. Participants of the trials reviewed were adults 18 years or older described as suffering from CRPS or an alternative descriptor for this condition (for example reflex sympathetic dystrophy, causalgia). Studies also included participants with post-stroke shoulder-hand syndrome, which is considered a form of CRPS and is distinct from mechanical post-stroke shoulder pain.

Cochrane reviews demonstrated better methodological quality than non-Cochrane reviews. For most treatments, there were only a small number of published trials and the quality of these trials was mixed. As such, most of the evidence for different therapeutic interventions is of low or very low quality and cannot be regarded as reliable.

None of the studies included demonstrated a significant effect on pain of using an intravenous regional blockade (IVRB) using guanethidine compared with placebo. Ramamurthy (1995) found no difference between groups receiving varying numbers of guanethidine blocks. Adverse events were reported in studies included in the reviews by Jaded (1995) and Tran (2010).

Moderate quality evidence suggests that an IVRB using guanethidine is not effective and that the procedure appears to be associated with a risk of significant adverse events. For a wide range of other interventions, there is either no evidence, low quality or very low quality evidence available from which no conclusions should be drawn.

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Based on the existing evidence it is difficult to draw firm conclusions as to which interventions should be offered to patients with CRPS. There is a clear need for further research for most existing treatments for CRPS as reasonably confident conclusions can only be drawn for the ineffectiveness of IVRB guanethidine.

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## Relevant NICE guidance and products

[Neuropathic pain- pharmacological management: The pharmacological management of neuropathic pain in adults in non-specialist settings](#)

November 2013

[Ultrasound-guided regional nerve block \[IPG285\]](#)

January 2009

## Other accredited guidance and products

Royal College of Physicians: [Pain: Complex regional pain syndrome guideline](#)

May 2012

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## Estimate of current NHS use

- Approximately 1 in 3,800 people develop CRPS each year. In England this equates to approximately 7,100 people aged 40 years and over (NHS Choices, accessed 2015).
  - In 2012/13 there were 7,700 finished consultant episodes (primary diagnoses ICD10 codes -M89.0 and G56.4) of complex regional pain syndrome in the NHS in England.
  - Specific numbers of people receiving the different types of interventions for the condition are not available. (The Health and Social Care Information Centre, 2013).
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## Level of productivity savings anticipated

- This Cochrane review is not saying do not use the interventions but that until further larger trials are undertaken an evidence-based approach to managing CRPS will remain difficult. However, organisations using these interventions may save if they were to stop them. The Cochrane review highlights use of IVRB guanethidine as the key recommendation to stop.
  - The tariff for IVRB using is likely to be included in minor pain procedures. This is equal to £522 (NHS National Tariff Payment, 2013).
  - The cost of admitted patient rehabilitation of pain syndromes varies depending on the level of pain (level 3, 2 and 1) from £279 to £1646 (Department of Health, 2013a).
  - Community occupational therapist services cost £70 and £66 (currency code A06A1 and A06AG) for one to one and group respectively. Community physiotherapist services cost £50 and £39 (A08A1 and A08AG) for one to one and group respectively (Department of Health, 2013b).
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## Type of saving

- Savings are likely to be productivity savings to providers rather than cash savings.
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## Any costs needed to achieve the savings

- No costs required to achieve change.
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## Other information

- There is potential saving if the interventions such as neurostimulation, rehabilitation of pain, occupational therapy and physiotherapy are discontinued.
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## Potential impact on quality of NHS care

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### Impact on clinical quality

Potential to improve clinical quality to a slight extent by ending ineffective treatments.

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### Impact on patient safety

Stopping the use of IVRB using guanethidine would be expected to improve patient safety as the risk of associated adverse events is reduced.

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### Impact on patient and carer experience

Not anticipated to have any impact on patient and carer experience.

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## Likely ease of implementation

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### Time taken to implement

Can be achieved quickly: 0-3 months.

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### Healthcare sectors affected

Affects one department or team.

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### Stakeholder support

Likely to achieve good buy-in from key influencers.

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## References

Jadad AR, Carroll D, Glynn CJ, McQuay HJ. (1995) Intravenous regional sympathetic blockade for pain relief in reflex sympathetic dystrophy: a systematic review and a randomized, double-blind crossover study. *Journal of Pain and Symptom Management* 10(1):13–20.

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Department of Health (2013a) [National Schedule of Reference Costs 2012-13 for NHS trusts and NHS foundation trusts. Complex specialised rehabilitation level 1, 2 and 3, Admitted Patient Care - Rehabilitation for pain syndromes \(currency code VC10Z\)](#)

Department of Health (2013b) [National Schedule of Reference Costs 2012-13 for NHS trusts and NHS foundation trusts. Community Health Services - Allied Health Professionals](#)

NHS National Tariff Payment 2014-15 (Dec 2013) [Annex 5A: National prices \(Admitted patient care & outpatient procedures: HRG code AB06Z – Minor pain procedures\)](#).

NHS Choices: [Complex Regional Pain Syndrome](#) Accessed 9 June 2015

The Health and Social Care Information Centre (Nov 2013) [Hospital Episode Statistics for England. Inpatient statistics, 2012-13.](#)

Tran DQH, Duong S, Bertini P, Finlayson R.(2010) Treatment of complex regional pain syndrome: A review of the evidence. Canadian Journal of Anesthesia 57(2):149–66