

# COMPLEX REGIONAL PAIN SYNDROME WHAT IS THE OUTCOME? - A SYSTEMATIC REVIEW OF THE COURSE AND SEVERITY OF CRPS SYMPTOMS AT 12 MONTHS AND BEYOND

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## Background :

To improve CRPS treatment, it is imperative to understand the **degree, nature, and relative importance** of any ongoing CRPS related problems.

An earlier systematic review comprehensively discussed CRPS **symptom recovery** in 2012 (1). Information regarding the **functional and occupational impact of CRPS** is needed to understand the individual health economic impact of CRPS, and ensure **treatment supports recovery that is meaningful to patients**. Therefore, there was good rationale to update the previous review to provide specific information regarding the physical and social/occupational impact of CRPS symptoms.

**Aims:** This systematic review aimed to summarise the published data concerning the **impact of CRPS symptoms, specifically the physical and occupational impact** of symptoms, at 12 months from symptom onset and beyond.

## Methods:

Systematic review of the literature

Ovid MEDLINE®

Embase®

PsycINFO®

Study Inclusion/ exclusion



Inclusion	Exclusion
Studies of adults (18+)	Paediatric cohort
Primary pain complaint= CRPS, algodystrophy, sudecks, and reflex sympathetic dystrophy (RSD).	Not CRPS
CRPS ≥12 months duration or which included cohorts followed up for ≥12 months from symptom onset	≤ 12 months
Primary study aim=investigation the outcome, course, severity, and prognosis of CRPS.	Follow-up or response rates <50%

## Quality assessment

Joanna Briggs Institute (JBI) critical appraisal prevalence study checklist  
Assessment by 2 authors and discrepancies resolved by a 3<sup>rd</sup>.

## Data extraction

Study type, sample and method, diagnostic criteria, duration of CRPS at baseline, duration of CRPS at follow-up, timing of assessments, and outcome measures (CRPS Signs and symptoms, and physical and social disability).

## Data Synthesis

data were synthesised according to study type and findings of the relevant outcome measures were reported.

## Results 2:

**Overall:** Pain and motor dysfunction were found to be the most prevalent ongoing symptoms affecting between 51-89% of all patients at longer term follow up. These features dramatically impact on a person's physical and social abilities. The measurement of physical and social disability was highly variable. Results indicate CRPS is associated with 25% - 66% reduction in grip strength and prevents return to work for 30-40% of cases of at ≥ 12 months. The current review provides first time quantitative data on function and work status for CRPS ≥12 months and builds on evidence provided by review.

## Motor Function:

51-89% of patients experience weakness, stiffness, and reduced range of movement at ≥ 12 months (14 studies)

Prospective studies show 20%-25% reduction in range of movement  
25% - 50% reduction in grip strength at ≥ 12 months

*The impact of such losses will have varying significance dependent on factors including occupation.*

## Work status:

30-40% of working people Who develop CRPS DO NOT return to work (7 studies)

27-35% of those who DO return to work require some form of work role adaptation

*The current health economic impact in terms of occupational recovery is not yet fully understood and what factors return to work.*

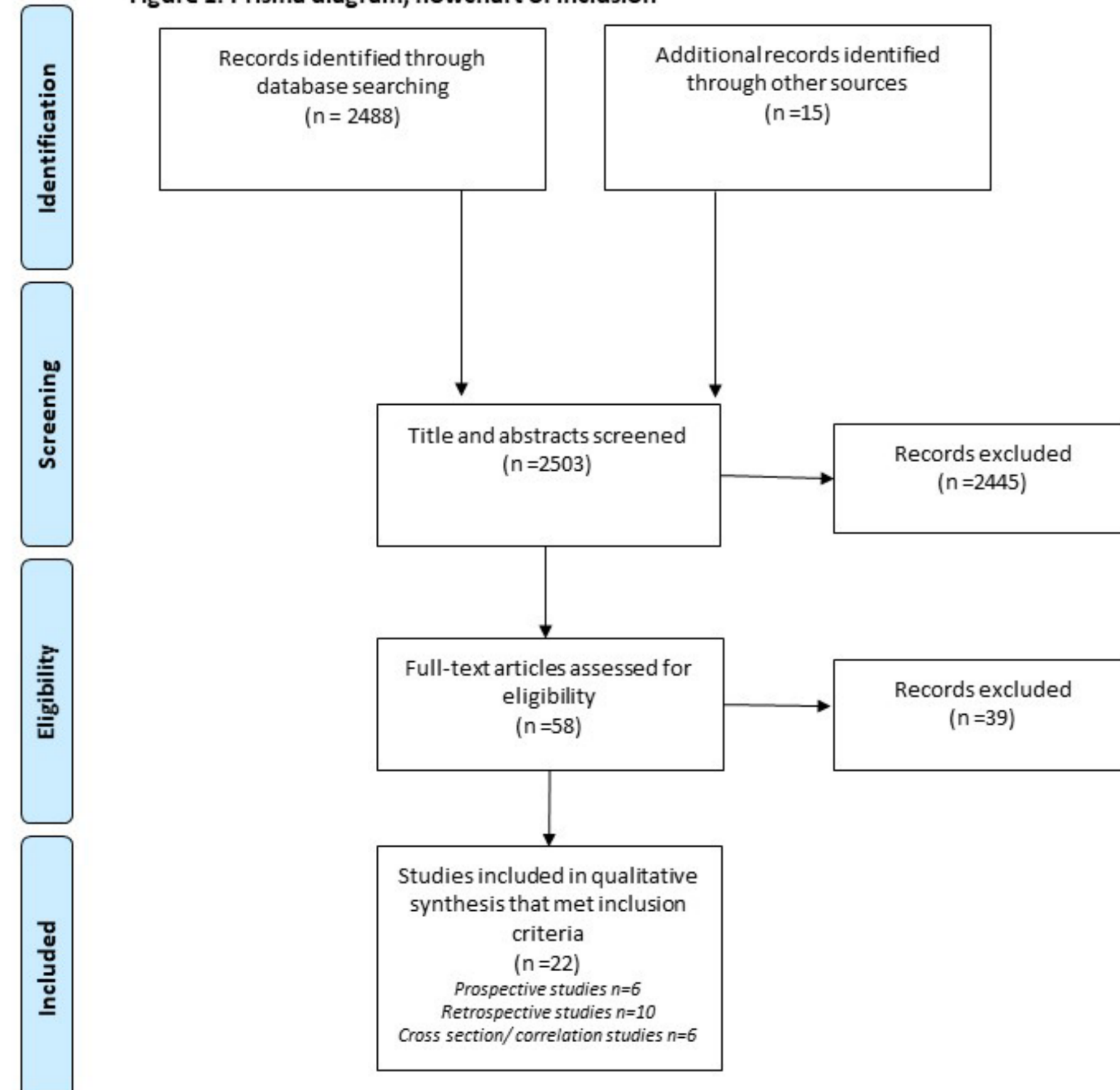
## Physical and social disability:

62%-86 % patients report CRPS affects their Activities of daily life

Heterogeneity in outcomes reflects wide ranging impact of disability.

## Results 1:

Figure 1: Prisma diagram, flowchart of inclusion



## Conclusions

Results from this review concur with review (1) 10 years ago indicating pain and motor dysfunction are the most persistent disabling features of ongoing CRPS.

We now also report **first time quantitative data specific evidence about losses to motor function, long-term compromises to work status**.

Results indicate despite general improvements in features of CRPS, the ongoing impact of CRPS on hand function and work status is relatively high.

Future research should explore what drives limitation to function and work status and if and how these limitations can be prevented.

## REFERENCES:

1. Bean DJ, Johnson MH, Kydd RR (2014b). Critical Review the Outcome of Complex Regional Pain Syndrome Type 1: A Systematic Review. J Pain, 15(7):677–90. <http://dx.doi.org/10.1016/j.jpain.2014.01.500>  
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