

**Cacchio A. Mirror Therapy for Chronic Complex Regional Pain Syndrome Type 1 and Stroke. N. Engl J Med 2009;361:634-636.**

Design: Randomized clinical trial

Population/sample size/setting:

- 24 patients (11 men, 13 women, median age 62) treated for CRPS-I following stroke in a university setting in Rome
- CRPS in a paretic arm was diagnosed following IASP criteria

Main outcome measures:

- Randomized to one of three groups: active mirror box therapy (n=8), covered mirror box (n=8), and mental imagery training (n=8)
- Both active and covered mirror box groups performed proximal to distal movements of the affected arm 30 minutes daily for 4 weeks
- Primary end point was pain severity on a 100 mm VAS after 4 weeks of therapy; secondary measures were motor function, allodynia, and edema
- Active mirror group reported reduced pain in 7 of 8 participants (median change in pain VAS was 51 mm, range from 18 to 70 mm)
- In covered mirror group, only 1 of 8 participants reported reduced pain; 2 patients had no change, and 5 had increased pain
- In the mental imagery group, 2 of 8 patients had reduced pain and 6 had increased pain
- After the end of 4 weeks, 12 participants in the covered mirror and mental imagery group crossed over to receive active mirror box therapy; 11 of 12 had significant reduction in pain

Authors' conclusions:

- Mirror therapy effectively reduces pain in CRPS-1 in the arm following stroke

Comments:

- The mental imagery intervention is not described
- It is said that the mirror box groups did movements of the affected arm for 20 minutes daily, but mirror box therapy generally involves active movement of the asymptomatic extremity contralateral to the involved limb; there may have been miscommunication about the nature of the intervention
- Although the report is sparse in detail, the effect size is large and probably robust

Assessment: Adequate for evidence that mirror box therapy 30 minutes per day for 4 weeks is likely to reduce pain in CRPS