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### **Effects of visual illusions on chronic pain patients' proprioception**

Self-localisation (i.e. the ability to locate one's own body part) is often disrupted in chronic pain patients [1]. Previous research (e.g. [2-4]) showed that it is possible to manipulate the ability of localise one's own hand by using some bodily illusions. During one of these illusions (i.e., the Disappearing Hand Trick, DHT [4]), healthy participants, when asked to localise their hands, tended to rely initially on visual (even when inaccurate) cues, but, over time, the proprioceptive cues were weighted more [2, 3].

The aim of the present research is to investigate the relationship between spatial aspects of body representation, such as self-localisation, and pain. In order to do so, we will compare the performance in self-localisation during bodily illusions and control conditions between:

1. Participants with upper limb Complex Regional Pain Syndrome (CRPS), (a painful disorder associated with multiple system dysfunction, e.g. disturbances of blood flow, sweating, hair and nail growth, and motor dysfunction). At least some of CRPS symptoms (e.g. pain) seem to be related to disruption of body-centred frame of reference, i.e. to the spatial position of the limb in space.
2. Healthy (pain free) participants.
3. Participants with non-CRPS type unilateral upper limb chronic pain (e.g., osteoarthritis type).

#### *References*

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