

# Scientists discover new treatment for chronic pain condition

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Scientists at the University of Liverpool have discovered that treating the immune system of patients with Complex Regional Pain Syndrome (CRPS) leads to a significant reduction in pain.

CRPS is an unexplained chronic pain condition that usually develops after an injury or trauma to a limb, and continues after the injury has healed. CRPS I - formerly called Reflex Sympathetic Dystrophy - can arise after any type of injury. CRPS II, previously called causalgia (a term coined in the American Civil War when it was first diagnosed), follows partial damage to a [nerve](#). In some cases the pain can be so severe that patients request amputation, only to find that the pain returns in the stump.

CRPS pain can improve within one year after the injury, but if it is still unchanged after 12 months (longstanding CRPS), then it will often not improve at all. Longstanding CRPS affects about 1 in 5,000 people in the UK.

The team at the Pain Research Institute discovered that a single, low dose infusion of intravenous immunoglobulin (IVIG) significantly reduced pain in just under 50 per cent of patients treated, with few adverse effects. The [pain relief](#) lasted on average 5 weeks. The results of this study may change the future treatment of patients with CRPS, and have an impact on research in other severe chronic pain areas. Intravenous immunoglobulin treatment for CRPS is currently not available on the NHS.

Although the cause of the syndrome is unknown, precipitating factors include injury or damage to the body's tissue. Changes in the way nerves send messages to the brain about pain may occur at the injury site. These changes may then lead to more changes in the nerves of the spinal chord and brain. All these changes are thought to play a role in causing and prolonging the condition. Conventional pain drugs either don't work, or have considerable side effects.

Dr Goebel, Senior Lecturer in Pain Medicine, explains: "In CRPS, the real effect of this treatment in clinic may turn out to be even greater than what we have already seen, because IVIG can be given in higher doses, and repeated treatment may have additional effects. IVIG is normally repeated every four weeks and we are working to develop ways which would allow patients to administer the treatment in their own home."

"The discovery is expected to have a real impact on the treatment of other unexplained [chronic pain](#) conditions; if one [pain](#) condition can be effectively treated with an immune drug, then it is possible that other types will also respond."

The research is published in the journal *Annals of Internal Medicine*.

Provided by University of Liverpool

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