



Pain Relief Foundation

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## Complex Regional Pain Syndrome

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### ***Quicker diagnosis and a new computer treatment for people with CRPS***

Complex Regional Pain Syndrome (CRPS) is a rare condition which can develop after an injury to an arm or a leg – even a very minor injury. Not only is CRPS an extremely painful condition, but it can also leave the affected hand or foot totally useless (see pictures 1 and 2 below) and many people have lost their job as a result. For reasons which are not completely understood, the condition is often diagnosed late and as a result, the affected men and women may live for some years in uncertainty about their condition. We do not know why some patients develop this disabling syndrome after injury. Even if the correct diagnosis is made promptly, for some people, treatment is not effective.

A new Northwest project has been set up, centred at the Walton Centre Pain Clinic. We hope to achieve two important goals. We aim to shorten the time between the onset of CRPS and the right diagnosis, and we will make sure that all diagnosed patients in the Northwest region receive the right treatment, with the most modern methods available. This has not been done before and is a worldwide first.

#### ***Patients in the greater Liverpool region will be diagnosed sooner.***

To achieve this goal we have contacted physiotherapists (because persistent limb pain, including CRPS is almost always treated by physiotherapists), occupational therapists and specialist doctors in the region. The interest we encountered was very encouraging. We have started to provide retraining for these professionals in CRPS diagnosis and we shall continue to do so at yearly intervals. In order to further support these professionals, we have also started a hot-line to a Pain Specialist at the

Walton Centre which can be called when in doubt. Once a patient with CRPS is identified anywhere in the region, by physiotherapists and occupations therapists, we have established a fast track arrangement for this patient to be seen by a doctor with expertise in making the right diagnosis.

#### ***Patients with CRPS in the greater Liverpool region will be the first In the UK to receive computer guided brain training.***

Computer guided brain training was developed in Sydney, Australia 3 years ago and is effective in many patients and has very few side effects. In CRPS the control by the brain of the affected limb is disturbed. This causes pain, muscle wasting, swelling and colour change, although we do not yet fully understand how. This new computer based treatment restores the control of the brain over the CRPS affected limb and when the control is restored then the swelling, colour change and pain can disappear. We have collaborated with the scientist who pioneered this treatment in Australia and together with him have developed a treatment pathway so that patients in the greater Liverpool area can receive this treatment quickly.

We have also started a dialogue with the pain specialists in the region to make sure that all specialists agree about which drug treatments will be given to patients with CRPS.

We will conduct additional research to find out just how effective these new changes are to improve our patient's quality of life. We hope that later we may be able to convince others in the UK and the world to follow our example.

*A new laboratory project has been started to better understand what causes*

***CRPS in those patients who do not benefit from computer brain training***

We already know that the immune system plays a role in CRPS. The Academic Pain Unit at the Walton Centre has now started a laboratory based research project together with researchers at Liverpool University which will help us to better understand how the immune system is involved in causing CRPS. We expect that in the future, this will help those patients who do not benefit from either the computer training described above or from other medical treatments.



Photograph 1 shows typical, severe swelling and shiny skin. The hand was red and hot at the time when this photograph was taken.

***Conclusion***

Liverpool Academic Pain Unit, supported by the Pain Relief Foundation is amongst those centres worldwide to lead the way in improving the clinical care for patients with the severe persistent pain condition, CRPS. The researchers involved with the project wish to thank the Pain Relief Foundation for their support of these important new approaches to diagnosis and treatment. force the affected limb to take on an abnormal position which makes it impossible to use the limb normally.



Photograph 2 shows this patient with CRPS of the right hand had only minimal swelling or colour change. He had an abnormality of the muscles in the hand, a condition called dystonia. In CRPS with dystonia, the muscles force the affected limb to take on an abnormal position which makes it impossible to use the limb normally.