

Chronic Pain Research

1. Understanding sensorimotor integration and its role in pain– Principle investigator Sharon Grieve – Research Nurse

We know that the symptoms of Complex Regional Pain Syndrome are broadly similar across the CRPS population but there are actually quite a lot of differences between individuals. We want to find out how these differences between individuals match up with changes we see in the brain. This research study aims to find out the best way of collecting this information.

Taking part in the study involves two or three visits to a brain imaging centre in Cardiff. At each visit the participant will have two different types of brain scan (a MRI and a MEG). There are also some assessments which don't involve a scan.

This study is a collaboration between CUBRIC (Cardiff University Brain Imaging Centre) and The Royal National Hospital for Rheumatic Diseases. **The Chief Investigator is Professor Candy McCabe** and this project is funded by the National Institute of Health Research (NIHR).

2. Facilitating Activity and Self-Management in Arthritis (FASA) - Dr Nicola Walsh, UWE Bristol (Research fellow and physiotherapist -collaborator with the RNHRD research network)

Osteoarthritis and degenerative joint conditions are major healthcare issues affecting millions of people over-50 in the UK. The hip, knee and lower back are mainly affected leading to pain, reduced function and feelings of anxiety and depression. We are investigating the benefits of group exercise and self-management delivered by a physiotherapist to people with one or more of these joint problems, and are comparing levels of pain and function to people who continue to be managed by their GP. We hope that participating in exercise and learning about joint pain will help people to manage their condition better in the long-term.

We are currently recruiting 352 people from BANES and Wiltshire to take part in the study. This study has been funded by the Chartered Society of Physiotherapy Charitable Trust (£250,000)

3. Developing new models of care for people with osteoarthritis - Dr Nicola Walsh, UWE Bristol (collaborator with the RNHRD research network)

In the UK, the growing numbers of older people, increases in obesity and decreased activity levels mean that many more people are affected by osteoarthritis. This disease is expensive to manage and places considerable burden on health and social care budgets, as such we need to find cheaper ways to manage the disease in the long-term. This series of studies will look at the role exercise professionals (fitness and leisure, gym instructors) play in helping people manage their disease. We hope to develop National standards and educational packages to ensure that exercise professionals feel appropriately trained to manage people with OA, and patients are confident that the advice they receive will help their joints in the long-term.

We are currently working with colleagues at Bristol City Council developing this work. This work has been funded by Arthritis Research UK (£342,000)

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4. Sensory-motor conflict and chronic pain: Principle investigator Dr Jacquie Bailey CPsychol.

This is a study looking at brain activity: - in patients with complex regional pain syndrome (CRPS), fibromyalgia and arthritis; and in people who are not living with a chronic pain condition. We will be using a machine called an electroencephalograph (EEG) and carrying out other tests as well as using psychological self-report measures. The purpose of the study will be to discover if there are any differences between the patient groups in the way they respond to tasks; and to see if there are any similarities between patients and healthy volunteers. At present we have ethical approval and are due to start collecting data very soon. This study is run in conjunction with the University of the West of England (UWE) and the University of Manchester; **the chief investigator is Professor Candy McCabe** and this project is funded by the National Institute of Health Research (NIHR).

5. Measuring appearance concern and social dysfunction in chronic pain

Patients with complex regional pain syndrome (CRPS) often undergo physical changes to their body and some also experience something called body perception disturbance where they may express feelings of disgust and hatred towards their affected limb. We don't know how many people with CRPS have worries about their appearance or how this may affect their social life and relationships. We know of one existing appearance questionnaire that looks at how people adjust to a change in their appearance and how this affects their social functioning. However, this questionnaire was not specifically designed for people who have CRPS and may not capture the things that are important or relevant to someone with this condition. Therefore, we are asking patients with CRPS and health professionals with experience of working with people who have CRPS, what they think about this questionnaire and will use these views to help us develop a new questionnaire. We have ethical approval and are currently recruiting patients and staff. The study is collaboration between The University of the West of England (UWE), Bristol and the RNHRD. The Chief investigator is **Dr. Sara Nelson a Research Fellow from UWE.**

6. A Multi- centre international study exploring the patient's definition of recovery from Complex Regional Pain Syndrome

This is a 3 year study sponsored by the Reflex Sympathetic Dystrophy Syndrome Association (RSDSA) to include an international team of clinical researchers who will be looking to define recovery from CRPS and the priorities of recovery, from the perspective of the patient's point of view.

The aim of this three year study is to help healthcare professionals understand what is important from the patient's perspective, in terms of treatment outcomes. This will enable us to better evaluate the efficacy of current treatments and help design new ones in order to aid patients with their condition in the future.

Participants who are currently on the CRPS UK Clinical Research Network database will be sent a set of questionnaires to complete in order to answer this question.

This study is led by **Prof Candy McCabe and Yvette Hibberd** in collaboration with colleagues from Europe and North America.