

Participant Information Sheet Version 3 date 03/03/2009 ethics no: 08/H1011/80

Study Title: Pain control in patients with osteoarthritis, rheumatoid arthritis, fibromyalgia, irritable bowel syndrome and healthy volunteers.

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like any more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

What is the purpose of the study?

When we feel pain, whatever the cause, our bodies release pain killing chemicals called Endorphins. These chemicals help us to deal with the unpleasantness of pain. It is thought that patients with chronic pain such as fibromyalgia and abdominal pain due to irritable bowel may not release enough of these natural pain killing chemicals. The aim of this research is to find out if patients with chronic pain release these chemicals. We will establish if there is a link between the release of these chemicals and the amount of distress experienced as a result of pain, and also if a lack of these chemicals makes patients pay more attention to pain. The long term aim of this research is to investigate methods of boosting the release of these chemicals in patients who have chronic pain.

What will taking part in this study involve?

Once you are recruited into the study, we will assign you to one of two groups. One group will receive a local anaesthetic cream or an in-active cream and the other group will receive an in-active cream. So that the results cannot be biased in anyway both you and the experimenter will not be told as to which group you have been allocated and which cream you will receive. The local anaesthetic cream will be EMLA (Eutectic Mixture of Local Anaesthetics lidocaine 2.5% and prilocaine 2.5%). It is routinely used to numb the skin for minor skin operations and in children before they receive injections. The in-active cream will be a moisturising cream called Aqueous Cream BP.

The study will take place at Salford Royal Foundation Trust Hospital (Hope Hospital). You will be required to make three visits to the hospital (each visit lasting approximately 3 hours) with a minimum of 2 weeks

in between the visits. You will be asked to stop using any pain killing medication before each of the visits. Prior to your first visit we will discuss with you when you need to stop taking your pain killing medication, as this will vary depending on the type of pain killing medication you use. However you can take Paracetamol up to 12 hours before the time of your visit. As soon as you have completed your visit you can start taking your medication again.

First Visit

On arrival you will meet with the study research nurse or the study researcher, she will ask you to sign a consent form. You will be given a copy to keep. The research nurse will then perform a tender point check. This involves pressing on a number of points on your body to see how tender they are.

Cream Task

A laser heat stimulus will be used, the pain is very brief (less than a second) and feels like a pin prick; you will be in control of the level of pain you receive. We will not ask you to put up with an intensity of pain that you cannot easily tolerate, and the intensity of each painful pulse will be tailored to each person to ensure this. The cream you have been allocated will be applied to a small area of skin on your forearms. Brief heat pulses from the laser will be delivered to these sites on your forearms before and after application of the particular cream. The sensations you feel will be a mixture of moderately painful and non-painful heat, you will be asked to rate each heat pulse in terms of how painful it feels using a 0 to 10 pain scale.

During the task, we will be recording the electrical activity of your brain by a procedure known as electroencephalography (EEG). It will involve wearing a stretchy elastic cap (similar to a swimming cap) containing a number of electrodes that make contact with your scalp. This is a totally safe, non-invasive procedure. In order to make good contact with your scalp, each electrode will be filled with a type of gel and we will use a cotton-wool bud to massage the gel onto your scalp. This procedure can sometimes be a bit uncomfortable, and takes around 20 minutes to complete. The gel will be in your hair throughout the task, but we have the facilities for you to wash and dry your hair before you leave. To help obtain good recordings we ask you to have clean hair that day and not to use hair conditioning or styling products such as wax, gel or spray.

Second Visit

This will be a minimum of two weeks after your first visit. We will repeat the Cream Task so that we can check if the way you responded to the pain is the same.

On either your first or second visit, you will also be asked to perform a task to see how quickly you can identify different details within pictures that appear on a computer screen. This should take no longer than 10 minutes.

Third visit

Attention Tasks

The first task will measure how much attention you pay to different sensory stimuli. You will receive a mixture of pain sensations, flashes of light or a touch sensation in the form of a vibration on your arm. Each pain/light/vibration will appear on one of your forearms, either near your wrist or near your elbow. You will be asked to concentrate on where you thought the pain/light/vibration was, and to respond as quickly as you can using a foot pedal.

For the second attention task, we use the same laser heat pulses as we used in the first attention task to deliver moderately painful heat sensations on your arm. You will be asked to pay attention to the pain experience in two different ways. The first way is to try and locate the pain sensation on your arm. We will vary the location of the sensation between the left and right side of your arm at random, without you being able to see which side we've moved it to. We will ask you to indicate whether you thought the pain sensation was on the "left" or "right" side of your arm. The second way is to think about how unpleasant the pain is. We will ask you to rate how unpleasant the pain was on a 0-10 scale.

During the attention task we will also be recording the electrical activity of your brain using the stretchy elastic cap again as we did for the cream task.

Questionnaires

We will ask you to complete some basic questionnaires that ask you about your usual and current emotional state. This will allow us to measure the extent to which you associate certain emotions with yourself and how these affect the way you respond to pain.

What compensation will I be given for participating in this study?

In view of the time, travelling and inconvenience involved in taking part in the study, you will receive reimbursement of £10 per hour for completing the study (over the three visits you will receive approximately £90). We will also reimburse you for any travel expenses incurred in getting to and from our research laboratory.

Are there any reasons why I can't take part in this study?

We are specifically recruiting patients with chronic musculoskeletal pain (e.g. patients with osteoarthritis, rheumatoid arthritis, fibromyalgia and abdominal pain (eg irritable bowel syndrome). Patients must be over the age of 18. You will not be able to take part in the study if you are affected by the following medical conditions:

Neurological illness (such as multiple sclerosis)

Psychiatric illness (such as schizophrenia)

Peripheral vascular disease

Reflex sympathetic dystrophy

Uncontrolled high blood pressure (if it is controlled by medication that is fine)

If you are allergic to local anaesthetic creams (such as EMLA)

Healthy Volunteers must be over the age of 18 years, pain free and have no allergy to local anaesthetic creams (such as EMLA).

With your consent, your GP will be informed of your participation in this research study and may receive a copy of this information sheet.

As part of the study we will be asking you to complete a number of questionnaires to assess your emotional level. If you score highly on any of these, with your consent we will arrange for you to meet with Professor Anthony Jones (he is the Doctor in charge of the study) who will discuss the results of the questionnaires with you. With your consent we will also inform your GP of your results.

What are the possible risks of taking part?

After each experimental session there is a small possibility that you might experience some reddening of the skin on your arm due to the laser stimulator, but this should disappear within a few hours to days. There is a very small risk that you may have some superficial soreness of the skin, in which case advice will be given to you about this before you leave. There is also a very small risk that this area of skin may show a change in pigmentation, which should return to normal within 4-6 weeks. However in the 13 years that our group has been using this technique, one case has been brought to our attention where this pigmentation has persisted beyond 6 weeks.

The local anaesthetic used will be EMLA cream. EMLA cream is widely used on children and adults to anaesthetise the skin prior to minor surgical procedures. The inactive cream contains no local anaesthetic. As with all creams applied to the skin there may be a chance of some adverse effects. Your skin may become slightly red and puffy or turn pale in colour, but this should disappear within a few hours.

Do I have to take part?

Your participation in this study is entirely voluntary. If you decide to take part you are still free to withdraw at any time and without giving a reason. Your medical care and treatment will not be affected in any way.

Will my taking part in this study be kept confidential?

If you consent to take part in the research, your hospital medical records may be looked at by the medical staff involved in the study and by people from regulatory authorities to check that the study is being carried out correctly. Your name, however, will not be disclosed outside the hospital, other than to inform your General Practitioner that you are taking part in the study.

The information gathered during this study will have your name removed from it so that you cannot be identified from the information that is collected.

What will happen to the results of the research study?

The results of this study are likely to be published in 2012 and you will be able to obtain a copy of these results from your study doctor. You will not be identified in any publication of these results.

Who is organising & funding the research?

The study is being organised by the Human Pain Research Group, University of Manchester, at the Salford Royal NHS Foundation Trust, and is funded by the Arthritis Research Campaign (arc).

Who has reviewed the study?

The Local Ethics Committee has given the study ethical approval. The study protocol was approved by the arc projects committee, and the independent reviewers engaged by the arc.

What do I do now?

If you wish to volunteer for the study, please contact our research nurse **Ann Lenton** on **0161 206 4529** or at ann.lenton@manchester.ac.uk. She will firstly assess whether you are suitable for the study and then organise a time for you to visit our research laboratory. If you have any questions about what is involved in the study, please contact **Dr Alison Watson** on **0161 206 4529** or at alison.watson@manchester.ac.uk. If you would like to learn more about the activities of the Human Pain Research Group, please visit our website at www.hop.man.ac.uk/painresearch.

Further information: independent advice and complaint procedure

For access to independent advice regarding your participation in this study, you may contact the Patient Advisory Liaison Service (PALS) service at Salford Royal NHS Foundation Trust (Hope Hospital) also Bill Strettle, the Patient and Public Involvement in Research Co-Ordinator at Salford Royal NHS Foundation Trust (Hope Hospital). If you wish to make a formal complaint about your treatment during the study, please contact **Professor Anthony Jones** on **0161 206 4566**, at anthony.jones@manchester.ac.uk, or at the postal address at the head of this information sheet.