

Department of anaesthesia and pain medicine

## **Percutaneous Electrical Nerve Stimulation (PENS)**

Pain is transmitted by nerves so it is often possible to reduce pain by blocking signals from affected nerves.

### **What is percutaneous electrical nerve stimulation (PENS)?**

PENS therapy does not destroy the affected nerves but makes them less sensitive to pain. A low voltage electrical current is delivered through a specially designed needle to the fatty layer just below the surface of the skin close to the specific nerve, or to the nerve endings situated in the local area. This stimulation is intended to induce a pain-relieving effect by altering the state of the nerves.

### **Why is the procedure done?**

PENS therapy is used to treat chronic nerve pain including areas of hypersensitivity, headache and chronic post-surgical pain. Occasionally PENS is used as a diagnostic tool.

### **How is the procedure done?**

We will ask you to come to the surgical day case unit (SDCU, Department 4) and a nurse will escort you to the operating theatre. The procedure will be carried out whilst you are lying on a theatre trolley, either on your back, side or front depending on the area to be treated. During the procedure, the doctor will mark the area to be treated. He or she will inject local anaesthetic to numb the area before inserting one or two thin probes under your skin. A grounding plate (a sticky patch) will be applied to an area of skin near to the treatment site. A very low voltage electrical current will be delivered through the probe/s for between 20 and 30 minutes.

A member of the theatre staff will be with you throughout the treatment. When the treatment is complete, the probes and grounding pad will be removed and a small sterile dressing placed over the probe insertion sites for 24 hours. You will be escorted back to the SDCU and will be allowed to go home shortly after the procedure. You can eat and drink as normal.

### **What are the beneficial effects?**

Some patients will have total pain relief, others experience prolonged pain relief for 3 months or more and others get relief for shorter periods of time. Some may not get any benefit at all from the procedure.

### **Can I have further PENS therapy?**

PENS can be repeated at intervals if you and your doctor feel this is appropriate and effective for you.

**What are the side effects?**

There may be some local bruising and tenderness at the probe insertion site/s. There is a very small risk of infection and nerve damage.

**Advice and precautions**

- You can go home immediately after the PENS therapy and you can drive.
- You can resume your normal daily activities.
- If the probe insertion site/s is sore take your regular painkillers as needed.
- Keep the dressing/plaster in place for 24 hours.
- A follow-up appointment will be made for you by the pain clinic secretary and sent to you in the post.

**It is very important to tell your doctor or the secretary of the pain clinic, at least a week before the treatment if:**

- you are allergic to any medications
- you are on blood thinning medication such as Warfarin, Fondaparinux, Nicoumalone (Sinthrome<sup>®</sup>), Aspirin, Clopidogrel (Plavix<sup>®</sup>)
- you have an infection at the treatment site
- you think you might be pregnant
- you have a demand type cardiac pacemaker
- you have epilepsy
- you have had a recent heart attack, or vaccination, if so, please contact the pain clinic.

**Contacts**

Pain secretary on **0161 446 8493**

**Pain team**

Dr Julian Scott-Warren, consultant in pain medicine & anaesthesia

Jennifer Nuttall, pain nurse specialist

Shiji Thomas, acute pain nurse

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

We try to ensure that all our information given to patients is accurate, balanced and based on the most **up-to-date** scientific evidence. If you would like to have details about the sources used please contact [patient.information@christie.nhs.uk](mailto:patient.information@christie.nhs.uk)

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**The Christie Hotline:  
0161 446 3658**

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