

## PENS Therapy

PENS Therapy stands for Percutaneous Electrical Nerve Stimulation and is a treatment very similar to TENS (Transcutaneous) treatment except that instead of electrode pads, PENS uses a needle electrode that is inserted through the skin and connected to a grounding pad. This enables to target specifically peripheral nerves (peripheral nerve stimulation) as well as directly stimulate the painful area (peripheral field stimulation). PENS Therapy is suitable for most peripheral nerve pains and the common conditions are listed below.

- Post-surgical scar pain: after thoracic and abdominal surgery, hernia repair, post-thoracotomy and post-mastectomy pain etc
- Peripheral neuropathic pain: Diabetes Mellitus, isolated nerve pains
- Neuralgia: Post-herpetic, Trigeminal, Occipital
- Neuropathic back pain

Nerve blocks are sometimes effective in blocking neural circuits and produce pain relief; however, if there has been nerve damage and the neural circuits are not functioning, electrical stimulation can be used to dampen down or mask the nerve pain. Once the needle is inserted it is connected to a specialised electrical stimulator device to deliver the stimulation. The stimulation can be customised to the patient and the condition – the most commonly used Protocol C alternates between 100 Hz and 2 Hz every 3 seconds which gives a buzzing sensation (or no sensation) and muscle twitching respectively. The treatment is given at a tolerable level reached in a gradual manner. It may make muscles contract. The treatment usually takes between 15 and 60 minutes and can be repeated as often as necessary depending on benefit. If the effect is positive but short-lived, these cases may be suitable for implantable neuromodulation options.

This is a NICE approved treatment for stubborn neuropathic pain and the document and full guidance aimed at patients and healthcare professionals are available at [guidance.nice.org.uk/IPG450](https://www.guidance.nice.org.uk/IPG450)