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Percutaneous Electrical Nerve Stimulation (PENS)

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Percutaneous electrical nerve stimulation (PENS) involves attaching electrodes to acupuncture needles that are placed into soft tissues around the spine. A controlled electric current is then applied to the needle that transmits the electrical stimulus to the targeted regions of the back or spine. Electrical stimulation is applied to help prevent pain messages from traveling to the brain and to induce a local tissue response. The primary difference between traditional acupuncture and the use of PENS is that with the latter needles are placed more in line with spinal nerves than traditional acupuncture meridians. PENS may incorporate the application of needles along the involved area of the back, as well as in an involved extremity along the path of the spinal nerve. The electrical current is generally maintained at a comfortable intensity level for 15 to 20 minutes during the treatment session. PENS treatment application may have a therapeutic response similar to intra-operative spinal cord stimulators. The primary theory behind the use of PENS is that stimulation will facilitate the release of chemicals in the central nervous system (neuro-transmitters) that contribute to the suppression of pain.