Chronic pain update

New device offers relief

Chronic pain is a common problem that can take a significant toll on your mental and physical health. There are various of causes of chronic pain, and a variety of strategies may be employed to manage pain or treat the cause.

These methods can be effective for some, particularly when combined into a comprehensive pain rehabilitation plan. However, it's clear that additional therapy options are sorely needed.

Thankfully, one new therapy can be added to the list — at least for neuropathic pain that's caused by faulty nerve signals. Called scrambler therapy, it's a novel form of electrical stimulation applied to the skin. It involves sending scrambled electrical signals along nerve pathways to the brain in an attempt to retrain the brain to perceive the area of pain as normal, not painful.

Retrain the brain

With many types of chronic pain, normal nerve signals go haywire. There are multiple ways this can occur. Nerve endings may become damaged. Sensations of pain may continue to be transmitted by nerve endings even after healing of nearby tissues. Or nerve endings or nerves in the spinal cord may become somehow sensitized so that even normal sensations — such as touch — cause the feeling of pain.

With the pain scrambler, the goal is to hijack the nerve pathways sending pain signals, and override the pain signals with normal, nonpain signals. It's believed that this can retrain the brain to recognize the area of pain as normal, not painful.

Wires from the pain scrambler machine run to electrode pads attached to points on the skin that are near, but not on, the site of pain. The scrambler electrodes are turned on, and the intensity of the electrical signal is gradually increased to where you can feel sensations, but not pain. The treatment continues for about 30 to 45 minutes. When successful, the pain is at some point replaced by the scrambler device sensation, which is often described as a buzzing sensation. It's believed that best results occur when the pain is completely replaced by the buzzing sensation during every scrambler session.

If the treatment is successful, the pain is usually greatly diminished or gone when the machine is shut off. This benefit may only last a few minutes to a few hours after the first session. But the process is repeated daily, and the post-treatment period of benefit usually gets longer after each session until the pain relief lasts for a day or more. Ten sessions is the standard number needed, but it can be more or less than 10, depending on how things go.

Pain relief can persist for weeks to months after treatment is stopped. When pain returns, sometimes as few as one or two booster sessions can restore the benefit, and that benefit may last months or longer.

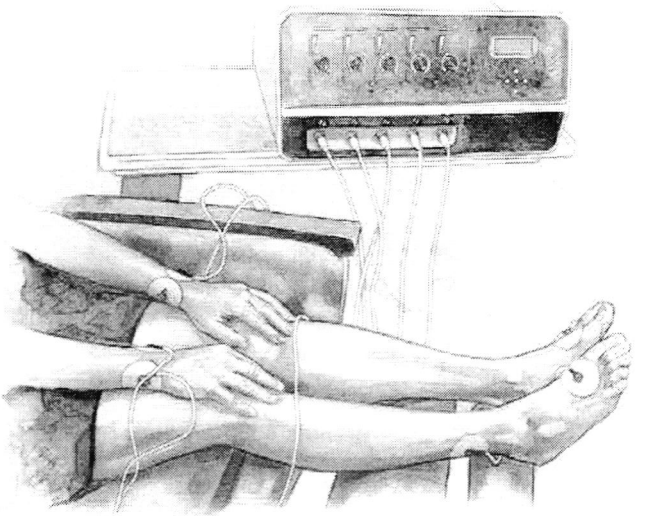
Mayo Clinic doctors are optimistic about the pain scrambler. Based on research and their own experience treating people at Mayo Clinic with the device, it appears that the scrambler therapy can have good to sometimes dramatic results in people with select types of chronic pain who have reached the end of the line in terms of options. Importantly, it's generally well-tolerated.

The device appears to work best for chronic pain that is fairly isolated to one area, and due to faulty nerve signals. For example, research has shown good results for conditions such as nerve pain (peripheral neuropathy) caused by chemotherapy, pain after a bout of shingles (postherpetic neuralgia), cancer-related pain, low back pain and numerous other pain syndromes.

It's less clear if any benefit could be derived for other common causes of chronic pain, such as osteoarthritis, fibromyalgia, irritable bowel syndrome or headache.

The downsides

Although the pain scrambler appears to reduce pain in most people, not everyone will benefit, and some people see only a modest benefit. In addition, it's not widely available in the U.S. Another potential downside is that it takes a skilled operator for best results. That learning curve may skew research results or make it difficult for the device to be more widely adopted. ¬



Scrambler therapy is a form of electrical stimulation applied to the skin for neuropathic pain that's caused by faulty nerve signals.