

TENS vs PEMF: What's the Difference?

If you've been exploring drug-free ways to manage pain, you've likely come across two similar-sounding options: TENS and PEMF. Both are forms of "electrotherapy" — treatments that use electrical or magnetic energy to help the body — but they work in quite different ways. Let's walk through what sets them apart, in plain terms.



What is TENS?

TENS stands for transcutaneous electrical nerve stimulation. That's a mouthful, but "transcutaneous" simply means "through the skin". So, a TENS machine sends mild electrical currents through the surface of your skin.

In practice, small sticky pads called electrodes are placed on the sore area, and the machine sends gentle pulses of electric current through them. The idea is that these pulses stimulate your nerves and encourage your body to release endorphins — your body's own natural painkillers. In doing so, TENS helps block or "drown out" the pain signals travelling to your brain, giving you some relief.

What is PEMF?

PEMF stands for pulsed electromagnetic field therapy. Instead of electric currents on the skin, it delivers brief bursts of low-frequency, low-intensity magnetic energy. This energy is very similar to the natural energy already present in your cells, which is why the body responds to it so well.

Rather than merely masking pain, PEMF supports your body's natural healing. It encourages cells to regenerate (repair and renew themselves), improves circulation, and helps mend damaged tissue. Because it also boosts blood flow to the area, it can speed up nerve repair and help flush away built-up toxins — the kind that can cause pain from nerve damage (neuropathy), wear-and-tear conditions like osteoarthritis, or general cellular damage.

The main differences at a glance

- **How they're applied.** TENS uses electrical pulses placed directly on the skin. PEMF uses magnetic fields that can even work through your clothing.
- **What kind of healing they offer.** TENS gives short-term relief by triggering your body's natural pain-blocking pathways. PEMF goes deeper, working on the underlying cause of the pain.
- **How quickly they work.** TENS is usually faster at easing pain in the moment. PEMF can be slower because it's addressing the root cause — but it has the potential for greater, longer-lasting benefits.
- **Portability.** TENS devices need pads attached directly to your skin. Some PEMF devices, like the Oska Pulse, can be worn discreetly under or over your clothes.
- **Focused vs. whole-body.** TENS tends to target one specific spot, while PEMF takes a more holistic, whole-body approach.

The reassuring news is that both TENS and PEMF are safe to use. TENS has very few side effects and suits most people well. PEMF has no reported side effects, and it's designed to tackle the root cause of pain by helping damaged cells regenerate — rather than simply blocking pain signals along the nerves.

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