

When setting up electrical stimulation treatments, there are several factors to take into account. The final determination of the treatment set up will depend on the procedures in your clinic and what the chiropractor prescribes. Review the 7 basic points to think about when setting up a treatment regimen on **pages 175-176**.

Clinical Applications of Electrical Stimulation

Electrical stimulation is a therapeutic modality frequently used in the chiropractic office setting. Some forms of electrical stimulation include high-volt stimulation, low-volt galvanic, interferential stimulation, Russian stimulation, microcurrent, and T.E.N.S. units.

STUDY TIPS

Safety Check

Make sure to check the following steps before applying an electrical stimulation treatment.

1. No damage or fraying of the lead wires.
2. The skin of the area to be treated is clean.
3. All controls are in the off position before applying electrodes.
4. Electrodes do not show sign of damage or wear.
5. Parameters are properly set before increasing the intensity of the machine.

Below is a general description of the different types of electrical stimulation. Your coordinating chiropractic physician will determine which treatment to use but it is important to understand the differences between the treatments available.

- **High-volt stimulation** uses a direct current flow and has the option of picking the use of a positive or negative polarity. Use in a pulsed setting for muscle re-education, nerve stimulation, edema reduction, and pain control.
- **Low-volt stimulation** also uses a direct current that flows in one direction. It can be used in a pulsed setting that has benefits similar to high-volt stimulation or in a continuous setting that can change the pH of an area. This is used most commonly for iontophoresis treatments but has a risk of creating severe skin burns.
- **Interferential stimulation** is one of the most widely used forms of electrical stimulation. It uses an alternating current and two channels. It is used for pain control, muscle contractions, and edema reduction. Pad placement is very important and should be set in a criss-cross area over the desired treatment area.
- **Premodulated currents** are similar to interferential stimulation but only use one channel to create the interferential current. Premod is used when the treatment area does not allow for the correct set up of 2 channels.
- **Russian stimulation** is an alternating current that produces a strong muscle contraction. Used for muscle reeducation, prevention of atrophy, and spasm reduction.
- **Microcurrent stimulation** is used to help promote healing. The patient often feels no sensation but this treatment can help increase the rate of healing in fractures, wounds, and injured tissues.
- **T.E.N.S.** units are small battery operated devices that are primarily used for pain reduction. These units are portable and can be worn by the patient throughout the day to help reduce the pain sensations in the body.